Mission and Vision Statements for the
Department of Pediatrics, UC San Diego,
Rady Children’s Hospital-San Diego and
Rady Children’s Specialists of San Diego

**DEPARTMENT OF PEDIATRICS, UC SAN DIEGO**
We will dedicate ourselves to: Providing the highest quality clinical care; conducting cutting-edge biomedical research targeting diseases that impact infants, children and adolescents; and training the next generation of pediatricians by fostering education at all levels and by integrating the latest scientific and medical advances into the curriculum.

**RADY CHILDREN’S HOSPITAL-SAN DIEGO**
To restore, sustain and enhance the health and developmental potential of children through excellence in care, education, research and advocacy.

We will be a leader, recognized nationally and internationally for excellence in patient care, education, research and advocacy.

**RADY CHILDREN’S SPECIALISTS OF SAN DIEGO**
To provide specialty services that are state-of-the-art, comprehensive, and family centered in order to improve the health and well-being of infants, children, adolescents and mothers with high risk pregnancies.

To be the premier provider of healthcare to infants, children, adolescents and mothers with high-risk pregnancies, through excellence in clinical care, research, teaching and advocacy.
DEAR COLLEAGUES AND FRIENDS

The past two years have been a time of great achievement and advancement for the Department of Pediatrics at the University of California, San Diego (UC San Diego) and Rady Children's Hospital-San Diego (RCHSD). We are pleased to share with you the details of these milestones and celebrate the meaningful contributions of our physicians, physician-scientists and scientists in this 2010-2011 report.

For years, the Department of Pediatrics at UC San Diego and RCHSD have shared a commitment to the health and well-being of children in San Diego County and beyond. The collaboration among physicians, Rady Children's and UC San Diego unified patient care, research, education, community service programs, and advocacy. It has opened the door for the two organizations to achieve national recognition for world-class pediatric care and research and the potential to change the course of pediatric medicine everywhere. This exciting work is highlighted in the report.

With the October 2010 opening of its Acute Care Pavilion, RCHSD became the largest children's hospital in California and the sixth largest in the country. The Hospital followed that celebration with the acquisition in December 2010 of the buildings at 7910 and 7920 Frost Street, which will provide much-needed space for research and medical offices. In February 2011, RCHSD and UC San Diego opened the only child and adolescent medical/psychiatric inpatient unit in San Diego. In May 2011 (and again in 2012), the Hospital was ranked in all 10 pediatric specialties surveyed by *U.S. News & World Report*. Those rankings place the Hospital among the nation's elite children's hospitals, and are even more remarkable considering the relative youth of RCHSD compared to other children's hospitals that have built their reputations over many more decades. Together, we are committed to delivering excellence in care through research that is recognized nationally and around the world.

Sincerely,

Gabriel G. Haddad, MD  
Kathleen A. Sellick  
Herbert C. Kimmons, MD, MMM

Distinguished Professor of Pediatrics and Neurosciences  
President and CEO  
Executive Director  
Chairman, Department of Pediatrics, University of California, San Diego  
Rady Children's Hospital-San Diego  
Rady Children's Specialists  
University of California, San Diego
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Outreach. Research into the genetics of congenital heart and valvular diseases continues to make progress.

Critical Care has continued to exemplify excellent critical care for the infant, child and adolescent under the leadership of Dr. Bradley Peterson. Expansion of its research portfolio continues by the recruitment of a physician-scientist into the Division.

Other faculty with major research interest are also being considered.

General Pediatrics/Adolescent Medicine has been combined into the Division of Child Development and Community Health and has moved to a new location near RCHSD. Dr. Sheila Gahagan is now the Chief of the entire Division, one of the largest in the Department. Additional faculty are being recruited and research programs are being strengthened in various ways.

Dermatology, under the leadership of Dr. Lawrence Eichenfield, has continued to be eminent in pediatric dermatology and has opened the Eczema Center at RCHSD. The clinical service continues to grow, with a rate of more than 17,000 ambulatory visits a year at the Rady Campus office as well as the Encinitas, Escondido and Murrieta satellites, with more than 600 surgical and laser procedures. Two new faculty with research programs have joined the Division recently.

Dysmorphology/Teratology continues active participation in clinical activities at birthing hospitals throughout San Diego County and at a twice-weekly clinic at RCHSD. The Division continues to work actively on fetal alcohol spectrum disorders research throughout the world. The Division leads the National Children’s Study site for San Diego County and at the end of 2010 received NIH authority to launch recruitment for this
landmark study. The Center for the Promotion of Maternal Health and Infant Development has moved onto the RCHSD campus and occupies part of the Clinical and Translational Discovery Center at RCHSD. The Division is currently recruiting a nationally recognized individual in Epigenetics.

Emergency Medicine, under the interim leadership of Dr. Jim Harley, has further developed a system to decrease its ER wait time remarkably and to decrease the percentage of children who leave without being seen to below 2 percent of children who seek ER care. Dr. Bema Bonsu has joined us recently as the Division Chief of Emergency Medicine. This Division continues to grow clinically and will grow academically in the near future.

The Endocrine Division has seen an important expansion in its clinical and research activities in the past two years under the leadership of Dr. Michael Gottschalk. Recently, a diabetes high-risk clinic was started to assist those patients with very poor diabetes control. A number of clinical trials have also started in the past few years. Drs. Maike Sander and Michael Gottschalk have also assumed their new responsibility of being Director and Associate Director, respectively, of the Pediatric Research Diabetes Center, focusing mostly on childhood diabetes.

Gastroenterology has also expanded its clinical service and research portfolio with the recruitment of additional faculty during this past year. Dr. Ariel Feldstein joined the Department of Pediatrics from the Cleveland Clinic as Division Chief. Under Dr. Feldstein’s leadership, the Division will continue to expand its clinical services including the development of two new Centers of Excellence: a Motility Center and an Inflammatory Bowel Disease Center. Research in this Division will continue to grow in various areas, including NASH, IBD, luminal and other GI and nutritional diseases.

In the Division of Genetics, we are recruiting major geneticists/genomics investigators, as well as to the Genomics ORU at UC San Diego using FTEs from the Department of Pediatrics. Under the leadership of Al La Spada, this Division will also grow academically and in training and teaching. The clinical activity of the Genetics Division has made it one of the most popular electives for rotating residents. Dr. La Spada, along with Dr. Gabriel Haddad, organize and lead the teaching of the Medical Genetics course for medical and pharmacy students.

The Division of Genome Information Sciences was recently established under the leadership of Dr. Kelly Frazer. Major recruitments into this Division in Bioinformatics are presently taking place. In addition, a major effort is underway to establish a clinical sequencing program and a Bioinformatics Center aimed at delivering personalized medical care to patients at RCHSD.

In Hematology/Oncology, we have entered into an alliance with St. Jude Children’s Research Hospital that has boosted our clinical trials capacity, assuring cutting-edge care of cancer patients. Three new pediatric hematology/oncology faculty members started in August and September 2011. Dr. Durden, a physician-scientist, is leading the research endeavors in this Division and also serves as Vice Chair of Research in the Department of Pediatrics.

The Hospitalist Division has also expanded its research programs and has assumed responsibilities in outlying hospitals for its inpatient care. They have one of the first fellowship programs in the country in Hospital Medicine. Child abuse and maltreatment activities are also part of this Division.

The Infectious Disease Division, under the leadership of Drs. John Bradley and Stephen Spector, continues to be a first-rate division at RCHSD with clinical and research activities spanning medical care, molecular bio-
logical research, population research and CDC clinical research. A national search is also underway to recruit a physician-scientist in this area.

The Divisions of Neonatology at RCHSD and UC San Diego, under the leadership of Drs. Gail Knight and Neil Finer, form a large division collaborating on clinical and research activities. In anticipation of Dr. Finer’s retirement, a major national search is underway to recruit a Chief for the combined Neonatology program and enhance the clinical, teaching and research activities.

Nephrology, under the leadership of Drs. Robert Mak and Peter Yorgin, has witnessed a large expansion. In April 2011, the Division took a major step towards the development of the Comprehensive Kidney Care Center by moving into their new clinical space adjacent to the planned hemodialysis and apheresis center. Dr. Liz Ingulli has reorganized the medical/surgical transplantation program at RCHSD. She is also the new fellowship Director in the Division. Major recruitments are underway for clinical and physician-scientists fac-
ulty. This Division has also been ranked in the top 20 in the *U.S. News & World Report*.

Neurology, under the leadership of Drs. William Lewis and Doris Trauner, has also recruited first-rate individuals and, with the large clinical need, is recruiting additional clinicians and researchers. A separate neonatal neurology service has been created, providing coverage for three major NICUs in San Diego. This division has also been ranked in the past two years in the *U.S. News & World Report*.

Under the leadership of Dr. Victor Nizet, the Division of Pharmacology and Drug Discovery is increasing its research activities and recruiting faculty, in collaboration with the School of Pharmacy and the Scripps Institute of Oceanography. In addition, Dr. Nizet heads a new center at UC San Diego, I3 or Immunology, Inflammation and Infection, and will be housed in the new research building next to the School of Pharmacy.

Dr. Andrew Skalsky heads the Division of Rehabilitation Medicine. Due to overwhelming demand for patient services, the Division anticipates adding additional faculty members.

The Division of Respiratory Medicine has been ranked in the *U.S. News & World Report* for the third year in a row. Dr. Jim Hagood, the Division Chief, is launching a new Diffuse/Interstitial Lung Disease Referral Program beginning in 2011. RCHSD will be among the first U.S. sites to participate in a national data registry for childhood interstitial lung disease (chILD). Clinical and research activities are also being strengthened in various ways.

The Department of Pediatrics continues to expand the clinical, teaching and research activities. We are fully committed to improving care for the children of tomorrow through research and teaching today. Indeed, RCHSD is the only hospital in the San Diego area dedicated exclusively to pediatric healthcare and the region's only designated pediatric trauma center. In fiscal year 2011, RCHSD cared for more than 154,000 children.

With the addition of the Acute Care Pavilion, RCHSD became the largest children's hospital in California (440 beds) and the sixth largest hospital in the country. This state-of-the-art facility, which includes the Peckham Center for Cancer and Blood Disorders, the Warren Family Surgical Suites, and a family-centered neonatal intensive care unit, helps to ensure that RCHSD will always be able to admit a child in need of hospitalization.

Until recently, San Diego has not had a medical psychiatric inpatient program for children, adolescents and young adults (up to age 30). RCHSD and UC San Diego have joined forces to open the only child and
RCHSD PROVIDES THE MAJORITY OF ACUTE AND SPECIALTY CARE FOR CHILDREN IN SAN DIEGO COUNTY

<table>
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<tr>
<th>County</th>
<th>Age Group</th>
<th>RCHSD Pediatric market share</th>
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<tr>
<td>SAN DIEGO COUNTY</td>
<td>0-5</td>
<td>88.2%</td>
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<tr>
<td>SAN DIEGO COUNTY</td>
<td>0-14</td>
<td>86.8%</td>
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<tr>
<td>SOUTH RIVERSIDE COUNTY**</td>
<td>0-14</td>
<td>49.5%</td>
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<tr>
<td>IMPERIAL COUNTY**</td>
<td>0-14</td>
<td>33.8%</td>
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** RCHSD is a major out-of-region referral recipient.
† Includes Temecula, Murrieta, Lake Elsinore, Menifee & Wildomar.
Source: Office of Statewide Health Planning and Development hospital discharge data
adolescent medical/psychiatric inpatient unit in San Diego. The primary purpose of this unit is to provide multidisciplinary treatment to children and adolescents with co-morbid medical and psychiatric conditions. Medical West at RCHSD is staffed by professionals with medical expertise and mental health and behavioral experience, including specialized experience with eating disorders. Its staff includes nurses, social workers, licensed psychiatric technicians, dietitians and physicians from the hospital, adolescent medicine and child psychiatry services.

The new patient care facility in Oceanside, a partnership between RCHSD and Sanford Health, enables RCHSD to serve more children and families in the North County coastal area. The variety of services offered, including developmental evaluations, occupational therapy, urgent care, trauma counseling from the Chadwick Center for Children and Families, and various medical specialties, provides parents and children living in these communities with vitally needed care.

Through its collaboration with UC San Diego, RCHSD continues to strengthen its reputation as an
academic medical center. For the first time, RCHSD was ranked in all 10 pediatric specialties surveyed by *U.S. News & World Report*. This is a tremendous achievement, as many of the top-ranked children’s hospitals are more than 100 years old and have built their reputation over generations.

Through the purchase of the 7910 Frost Street building, home of RCHSD’s and UC San Diego’s new Clinical and Translational Research Center, RCHSD will usher in a new era of pediatric medicine. The Center will focus on Genomics (Systems Medicine) and Epigenomics research and bring together top physician-scientists, clinical investigators, scientists, and bioinformaticists. We believe that these areas will be crucial for our continuous quest to further improve patient quality care and innovation.
The General Academic Pediatrics/Adolescent Medicine Division staffs the only academic primary care pediatric office for children residing in San Diego County and provides the main clinical general pediatric teaching site for UC San Diego (UCSD) medical students and pediatric residents.

The UCSD Adolescent Medicine health care team recognizes that adolescence is a special time that brings about particular concerns in young men, women, and their parents. Teenagers are often confronted with certain medical needs and emotional stresses that require the expertise of specially trained professionals. The physicians in the Adolescent Medicine Program are distinguished by their specialty interest and training. All faculty are adolescent medicine experts with several years of specialty adolescent medicine training beyond general pediatrics.
FACULTY

Bretten D. Pickering, MD, *Interim Chief*, Division of General Academic Pediatrics/Adolescent Medicine; Clinical Professor of Pediatrics

Joyce A. Adams, MD, Professor of Clinical Pediatrics/Adolescent Medicine

Eyla Boies, MD, Clinical Professor of Pediatrics

Janet Crow, MD, Associate Clinical Professor of Pediatrics

Nancy Graff, MD, Clinical Professor of Pediatrics; Medical Director, Polinsky Children’s Center Clinic

Kim Houkom, MD, Assistant Clinical Professor of Pediatrics

Leah Kern, MD, Assistant Clinical Professor of Pediatrics

Michelle Leff, MD, Assistant Clinical Professor of Pediatrics

Karen S. Loper, MD, Associate Clinical Professor of Pediatrics; Medical Director, Adolescent Medicine

Lori Wan, MD, Associate Clinical Professor of Pediatrics; Medicine-Pediatrics Residency Director

Lindia J. Willies-Jacobo, MD, Assistant Dean for Diversity and Community Partnerships; Clinical Professor of Pediatrics

CLINICAL ACTIVITIES

INPATIENT/OUTPATIENT

The General Academic Pediatrics Division is responsible for the primary health care of all children seen at the UCSD Pediatric Clinic. The Pediatric Clinic is combined with Adolescent Medicine at an office across the street from Rady Children’s Hospital-San Diego (RCHSD). With over 20,000 visits from children residing throughout San Diego, Riverside and Imperial Counties, the division strives to provide all patients with a medical home that is accessible, continuous, comprehensive, culturally effective, compassionate, and family-centered.

The clinical services offered include: primary care and sports physicals; immunizations; assessment for behavioral problems, learning difficulties and eating disorders; pregnancy prevention/family planning; domestic/interpersonal violence; STD/HIV testing and counseling; evaluation and intervention with drug/alcohol problems; depression/suicide interventions; and referrals to specialists and community services.

The Adolescent Medicine Program founded the Teen Mobile Van, which provides medical services to homeless and runaway youth. The van is a collaborative effort with the San Diego Health Department, San Diego Youth and Community Services and Family Health Centers of San Diego.

Joyce A. Adams, MD

• Attends in the UCSD Adolescent Medicine Office
• Medical attending for RCHSD inpatient eating disorder unit
• Attends at the Chadwick Center, RCHSD, providing medical evaluations for children who are referred with suspected sexual or physical abuse
• Participates in monthly abuse-related peer review sessions at the RCHSD Chadwick Center and Palomar Hospital

Eyla Boies, MD

• Attends in the UCSD General Academic Pediatrics Office
• Directs and attends the Premature Infant Nutrition Clinic
• Integrates medical student and resident education, as well as clinical research on breastfeeding
• Course Coordinator for PEDS 431 Ambulatory Pediatric Sub-internship

Janet Crow, MD

• Attends in the UCSD General Academic Pediatrics Office
• Attends in the UCSD Medical Center, Newborn Nursery
• Continuity Clinic Director for UCSD Pediatric Clinic
• Clinic Co-coordinator for EMR Conversion

Nancy Graff, MD

• Attends in the UCSD General Academic Pediatrics Office
• Medical Director at Polinsky Children’s Center, San Diego County’s emergency shelter facility for abused and neglected children
• Child abuse consultant to the UCSD Regional Burn Center
• Course Coordinator for Community Pediatrics Block Rotation

Kim Houkom, MD
• Attends in the UCSD General Academic Pediatrics Office and Adolescent Clinic
• Pediatric Resident Supervising Coordinator

Leah Kern, MD
• Attends in the UCSD General Academic Pediatrics Office
• Third-Year Medical Student Clinic Coordinator

Karen S. Loper, MD
• Attends at the UCSD Adolescent Medicine Office
• Medical attending for RCHSD inpatient eating disorder unit
• Medical Director, UCSD Adolescent Medicine Office
• Participates in a multidisciplinary clinic for adolescents and young adults living with HIV infection
• Pediatric consultant for CAPS, UCSD’s inpatient child and adolescent psychiatry service
• Provides care at Mid City Community clinic, an ethnically diverse clinic serving patients from low socioeconomic households. In conjunction with the clinic, she supervises a nurse practitioner and provides direct patient care at Rosa Parks Elementary School in City Heights

Bretten D. Pickering, MD
• Interim Division Chief, General Academic Pediatrics/Adolescent Medicine
• Medical Director and Attending/UCSD General Academic Pediatrics Office
• Medical Director, Special Needs Clinic at RCHSD
• Attends at Helen Bernardy Center for Medically Fragile Children, providing long-term sub-acute and skilled nursing care

Lori Wan, MD
• Director, UCSD Medicine-Pediatrics Residency Program
• Attends in the General Academic Pediatrics Office

Lindia Willies-Jacobo, MD
• Attends in the UCSD General Academic Pediatrics Office

RESEARCH ACTIVITIES

Joyce A. Adams, MD is primarily focused on sexual abuse and eating disorders and has a large population of these patients. In collaboration with faculty in the Department of Psychiatry, Dr. Adams is developing a pilot study to assess acceptability of otherwise “unpalatable” foods among patients with anorexia nervosa.

For the past several years, Dr. Adams has also been involved in a follow-up study evaluating normative anogenital anatomy in preschool children. The research has been partially funded by National Technological University of Norway. She and her collaborators will follow up children examined at age 5-6 to document normal anatomic variations in the appearance of genital and anal tissues. Thirty girls agreed to return for follow-up examinations at age 10-13 to document developmental changes.

Eyla Boies, MD is actively involved in breastfeeding clinical research. Dr. Boies works in conjunction with the UCSD Neonatology and Newborn Service SPIN program. Her Premature Infant Nutrition Clinic (PINC) provides nutritional, medical, and lactation follow-up for breastfed premature infants.

Leah Kern, MD works with and is supported by the UCSD Adult Infectious Disease Program providing pediatric program development services on their PEPFAR grant to Ethiopia.

Michelle Leff, MD is actively involved in the UCSD Study Center as part of the National Children’s Study.

Karen S. Loper, MD is a member of the UCSD Adolescent HIV team and is actively involved in several clinical trials through this program.

TEACHING ACTIVITIES

Joyce A. Adams, MD
• Teaches in the UCSD Adolescent Medicine Clinic (residents and medical students), Teen Mobile Van, and Journal Club
• Teaches Introduction to Adolescent Medicine
• Moderated simulated patient encounters in her Introduction to Clinical Medicine for MS-2 students
• Teaches medical students and residents at RCHSD
Major Goals and Plans

General Academic Pediatrics

- Continue search for a new Division Chief in General Academic Pediatrics.
- Recruit faculty at RCHSD to develop programs in all areas of teaching, clinical care and research.
- Continue collaborating with University of San Diego Department of Marriage and Family Therapy to provide marriage and family therapy to patients and families referred by the faculty and trainees. It is hoped this collaboration will facilitate communication between physical and mental health providers to improve patient’s health.
- Continue to be at the forefront of breastfeeding promotion, not only in application, but in teaching and clinical research.
- Offer training experiences for students and residents in caring for medically fragile, technology-dependent children at Rady Children’s Hospital-Helen Bernardy Center for Medically Fragile Children.
- Continue working with the Community Pediatrics Section to offer residents opportunities to engage in cross-cultural projects, including visits to Tijuana, Mexico, where they learn about their health care needs and opportunities for involvement.

Adolescent Medicine

- Continue focusing on current areas of expertise: general adolescent health and preventive care; eating disorders; abuse; behavioral and adjustment disorders; and HIV/AIDS.
- Pursue clinical, teaching and research excellence while working closely with colleagues in general and community pediatrics.
- Adjust the curriculum and clinical experiences to maximize the teaching experience.
- Work collaboratively with the Department of Psychiatry to establish a medical component of an outpatient eating disorder program – both clinical and research. This is a project of Dr. Joyce Adams.
- Help develop research projects at the Chadwick Center, including plans to study examiner agreement on interpreting medical findings from photographic images (Dr. Joyce Adams.)

- Lectures locally, nationally, and internationally on topics in adolescent medicine and child abuse

Eyla Boies, MD

- Teaches general pediatric residents, continuity clinic residents and medical students in the General Academic Pediatrics office with emphasis in breastfeeding
- Course Coordinator, MS-4 Pediatric Ambulatory Sub-internship, Peds 431
- Small group leader, MS-4 course Principles to Practice
- Pediatric resident CPC lecture supervisor

Janet Crow, MD

- Teaches in the UCSD General Academic Pediatrics Office supervising medical students, general and continuity clinic residents in direct patient care, journal club and small discussion groups
- Regular Lecturer, UCSD/San Ysidro Family Medicine Residency
- Continuity Clinic Co-Director and Director of Curriculum Development

Nancy Graff, MD

- Teaches courses in the classroom and clinically on medically evaluating the abused child
- Teaches medical students, residents and continuity clinic residents in the UCSD General Academic Pediatrics office
- Participates in the MS-2 course Introduction to Clinical Medicine
- Small group leader for MS-4 course Principles to Practice
Leah Kern, MD
• MS-3 coordinator for UCSD General Academic Pediatrics office
• Teaches medical students, residents and continuity clinic residents in the UCSD General Academic Pediatrics office

Karen S. Loper, MD
• Director of the Adolescent Medicine Training program, where all pediatric interns and medicine-pediatric residents are required to do a rotation. Periodically, the program serves internal medicine and family medicine residents, as well as women’s health fellows from the VA San Diego training program
• Coordinates a popular Adolescent Medicine MS-4 elective
• Provides the introductory lecture in Adolescent Health for Pediatrics, the core rotation for MS-3s
• Small group facilitator for Primary Care, a year-long core course for MS-3s and a small group facilitator in the Violence prevention seminar for MS-4s
• ISP Chair and trainee advisor
• Teaches in the Teen Mobile Van
• Lectures locally and regionally
• UCSD School of Medicine Problem-Based Learning Faculty
• Pediatric resident CPC lecture supervisor

Bretten D. Pickering, MD
• Teaches students and residents pediatric primary care of medically fragile children in the office and in institutional settings
• Participates in the MS-2 Introduction to Clinical Medicine course
• Faculty supervisor, UCSD School of Medicine MSTP OSCE Program
• UCSD PACE Program, Pediatric Coordinator
• San Diego Hospice Fellowship Pediatric course supervisor
• Pediatric resident CPC lecture supervisor

Eyla Boies, MD
UCSD Academy of Clinician Scholars
San Diego Top Doctors 2010
Poster Presentation: Postdischarge Lactation Support for High-Risk Preterm Infants, Academy of Breastfeeding Medicine 2009
Poster Presentation: Breastfeeding Premature Multiples After NICU Discharge, Academy of Breastfeeding Medicine 2010

Bretten D. Pickering, MD
UCSD Academy of Clinician Scholars
San Diego Top Doctors, 2010

Lindia Willies-Jacobo, MD
• Assistant Dean for Diversity and Community Partnerships
• Interests are in teaching culturally competent pediatric health care
• Teaches clinical pediatrics to medical students, residents and continuity residents in the General Academic Pediatrics office
• UCSD PRIME curriculum development and course director
• Currently directs the following five courses:
  - SOMI 233 Influences on Health: From Genes to Communities
  - SOMI 234 Beyond the Bench and Bedside: Partnering with Communities
  - SOMI 235 Healthy Minds, Healthy Bodies
  - PEDS 229 Cognitive Strategies
  - SOMI 230 DOC-for-a-Day
• Small group leader, MS-4 course Principles to Practice

Joyce Adams, MD
UCSD Academy of Clinician Scholars
Board Certified Child Abuse Pediatrics
Board of Directors and immediate past-president, San Diego County Breastfeeding Coalition
President, San Diego County Breastfeeding Coalition, 2009, 2010

AWARDS, HONORS AND MAJOR PRESENTATIONS

Lori Wan, MD
• UCSD Medicine-Pediatrics Residency Director
• Attends in the UCSD General Academic Pediatric Continuity Clinic
• Serves as faculty supervisor to medicine-pediatric residents

The Division of Allergy and Immunologic Diseases provides comprehensive clinical services for children with allergic, immunologic, rheumatologic diseases, and Kawasaki disease in outpatient and inpatient settings at a variety of venues throughout San Diego County. The division also maintains an internationally recognized research program in the areas of translational and clinical research in autoinflammatory disorders, genetics of rare inherited diseases, Kawasaki disease, the genesis and treatment of allergic diseases, and basic research in T cell immunology.

The Pediatric Rheumatology Program began in 1994 with the establishment of a multidisciplinary team trained to care for children with chronic, disabling rheumatic conditions. In addition to three experienced physicians, the division includes a pediatric clinical nurse specialist, a pediatric physical and occupational therapist, a social worker, a nutritionist, and a parent consultant. The team is the only provider recognized by California Children's Services in San Diego County.
FACULTY

Jane C. Burns, MD, Co-Director, Professor of Pediatrics in Residence
John F. Bastian, MD, Co-Director, Clinical Professor of Pediatrics
Seema S. Aceves, MD, PhD, Assistant Adjunct Professor of Pediatrics
Alessandra I. Franco, MD, PhD, Assistant Adjunct Professor of Pediatrics
Hal M. Hoffman, MD, Associate Professor of Pediatrics
Anthony A. Horner, MD, Associate Adjunct Professor of Medicine and Pediatrics
Karin Peterson, MD, Associate Clinical Professor of Pediatrics
Robert M. Sheets, MD, Assistant Clinical Professor of Pediatrics
Chisato Shimizu, MD, Associate Project Scientist
Ilona S. Szer, MD, Clinical Professor of Pediatrics

INPATIENT/OUTPATIENT

Seema S. Aceves, MD, PhD
- Directs a weekly combined pediatric allergy, immunology-gastroenterology clinic for the evaluation, treatment, and research of patients with eosinophilic gastrointestinal disease (EGID), evaluating approximately 70 new patients per year
- Conducts a food allergy clinic once weekly
- Conducts three half-day allergy clinics every other week in Murrieta and Rady Children’s Hospital-San Diego (RCHSD)

John F. Bastian, MD
- Conducts six half-day clinics per week, (approximately 250 patients a month) for the care of children with a wide variety of allergic and immunologic diseases and asthma

Jane C. Burns, MD
- Directs the Kawasaki Disease Research Center at RCHSD that provides comprehensive inpatient and outpatient care for approximately 90 new inpatients per year. The dedicated Kawasaki Disease Clinic, directed by Dr. Burns, provides outpatient follow-up care for over 1,200 children who have recovered from Kawasaki disease

Hal M. Hoffman, MD
- Conducts pediatric allergy and immunology clinics in Encinitas and at RCHSD (over 400 patients per year)
- Special interest in periodic fever disorders
- Consults and acts as teaching attending

Anthony A. Horner, MD
- Conducts pediatric allergy and immunology clinics in Encinitas, Oceanside, Murrieta, and at RCHSD (over 700 patients per year)
- Consults and acts as teaching attending for 6-10 weeks a year

Karin Peterson, MD
- Conducts biweekly rheumatology clinic in Encinitas and several weekly allergy/immunology clinics at both RCHSD and in Encinitas

Robert M. Sheets, MD
- Conducts pediatric rheumatology clinics 3 times per week in the RCHSD campus, and weekly outreach clinics in Murrieta, Escondido, and El Centro

Ilona Szer, MD
- Conducts four clinics at RCHSD and four clinics at Encinitas providing care to children from Orange County and North San Diego County

RESEARCH ACTIVITIES

Seema S. Aceves, MD, PhD
- NIH funded study (R01) on the mechanisms of tissue remodeling in eosinophilic esophagitis (EoE) (the role of pro-inflammatory and pro-fibrotic molecules), diagnosis (biomarker discovery), and treatment options and their effects on disease complications such as esophageal remodeling
• DOD funded study of the genetics of food allergic EoE
• Multi-center clinical trial on the use of anti-IL-5 in pediatric eosinophilic esophagitis
• Principal investigator, San Diego County study of the clinical characteristics of eosinophilic esophagitis
• Executive Council member, The International Gastrointestinal Eosinophil Research network
• Editorial Board of Journal of Allergy and Clinical Immunology

John F. Bastian, MD
• Difficult asthma
• Immunodeficiency disorders
• Kawasaki disease

Jane C. Burns, MD
• The pathophysiology, immunology, diagnosis, etiology, treatment, genetics, epidemiology and history of Kawasaki disease
• A multicenter, randomized placebo-controlled clinical trial of infliximab plus IVIG for primary treatment of Kawasaki disease
• Call-back study of adolescents and young adults with a history of Kawasaki disease in childhood

Alessandra M. Franco, MD, PhD
• Cytotoxic T cell biology
• Carbohydrate T cell recognition
• Designer glycopeptides containing tumor-associated carbohydrate antigens as vaccines for prevention/treatment of epithelial cancer
• Epitope glycosylation to bypass the effects of viral mutations (HIV and HBV as models) in antiviral vaccines
• T-cell repertoire in Kawasaki disease

Hal M. Hoffman, MD
• Role of innate immunity in autoinflammatory disorders
• Genetic basis of familial cold autoinflammatory syndrome (FCAS) and other cryopyrinopathies
• Role of IL-1 targeted therapy in cryopyrinopathy patients (has resulted in an effective new therapy for these patients)
• Characterization of cryopyrin function using a number of experimental models, including in vitro cell lines, ex vivo monocytes and genetically modified mice
• Primary consultant, a multicenter, phase III trial of IL-1 TRAP, a novel IL-1 blocker in 40-50 FCAS patients in North America
• Genetic basis of rare inherited disorders including congenital diarrheas, rare urticarial disorders, and autoinflammatory disorders
• Inflammatory mechanisms involved in periodic fever disorders of childhood

Anthony A. Horner, MD
• Characterization of the molecular content and immunological activities of sterile house dust extracts to better define the immunomodulatory role living environments have on the genesis of allergic diseases
• Translational studies to determine if house dust extract bioactivities are predictive of the intrinsic allergic risk associated with being raised in their homes of origin
• Treatment of allergic diseases with toll-like receptor ligands and other immune-modulatory molecules

Robert M. Sheets, MD
• Clinical trials of new treatments for pediatric rheumatologic diseases, currently involved in the TREAT study

Chisato Shimizu, MD
• Genetics and molecular pathogenesis of Kawasaki disease

Ilona S. Szer, MD
• Conducts several clinical trials of new treatments for juvenile arthritis and pediatric rheumatologic diseases
• As member of CARRA, Dr. Szer participates in the evaluation and implementation of multicenter studies in Pediatric Rheumatology
• Chair of DSMB for two current trials

TEACHING ACTIVITIES

Seema S. Aceves, MD, PhD
• Director of the pediatric allergy, immunology, rheumatology specialty rotation (for allergy/immunology fellows from UCSD and Scripps Clinic, and pediatric residents from UCSD)
• Teaches UCSD and Scripps allergy fellows, UCSD medicine and pediatric residents in allergy, EGID clinics three half-days per week
• Mentors UCSD undergraduate, medical students, and residents in laboratory studies on eosinophilic esophagitis

John F. Bastian, MD
• Teaches UCSD and US Navy residents in allergy and immunology clinics
• Teaches allergy fellows from UCSD and Scripps Clinic

Jane C. Burns, MD
• Mentors junior faculty in the development of clinical and translational research careers
• Mentors high school students, undergraduates, medical students, graduate students and postdoctoral fellows in projects on the epidemiology, treatment, and pathophysiology of Kawasaki disease
• Supervises residents and medical students in the care of Kawasaki disease patients

Hal M. Hoffman, MD
• Teaches and mentors allergy/immunology fellows
• Supervises and teaches medical students and residents in the pediatric allergy and immunology clinics concerning appropriate diagnosis and treatment of allergic and immunologic disorders
• Teaches medical students and residents in the hospital as teaching attending every year on the general pediatric inpatient service at RCHSD, and lectures regularly at resident conferences
• Teaches medical students and graduate students in Immunology and Genetics classes
• Proctors the Objective Structured Clinical Examinations (OSCE) and participates in the pediatric section of the Principles to Practice course
• Supervises undergraduates who work in the lab, Independent Study Projects (ISP) students, and supervises medical students

Anthony A. Horner, MD
• Provides clinical training at RCHSD and its affiliated clinics for medical students, pediatric residents, and allergy/immunology fellows

• Provides mentorship for ISP projects, a Master’s student, and a UCSD medical student in the CREST program
• Teaches noon conference to the UCSD pediatric house staff each year
• Directs a basic science journal club that presently has 23 members, including undergraduates, MD and PhD students, postdoctoral fellows and UCSD faculty members
• Co-directs and lectures for the Gene Therapy and Molecular Medicine course at UCSD Medical School each year

Robert M. Sheets, MD
• Supervises AIR lecture series on the third Wednesday of every month for pediatrics residents, and lectures every other month
• Teaches a monthly elective course in rheumatology for UCSD pediatric residents
• Presents a monthly noon conference for UCSD pediatric residents

Chisato Shimizu, MD
• Supervises undergraduate and medical students in the laboratory in projects related to molecular pathogenesis of Kawasaki disease

Ilona S. Szer, MD
• Teaches a monthly elective course in rheumatology for UCSD and Balboa pediatric residents
• Participates in several annual AAP CME meetings
• Conducts a weekly subspecialty clinic for senior pediatric residents
• Provides twelve-month training for second-year fellows completing adult rheumatology programs at Scripps Clinic and UCSD
• Attends monthly SRS adult rheumatology departmental meetings
• Mentor to Johanna Chang, who will be starting her UCSD faculty position in the Division in September 2011

• Teaches UCSD allergy fellows, UCSD medicine and pediatric residents in allergy, EGID clinics three half-days per week
• Mentors UCSD undergraduate, medical students, and residents in laboratory studies on eosinophilic esophagitis

Anthony A. Horner, MD
• Provides clinical training at RCHSD and its affiliated clinics for medical students, pediatric residents, and allergy/immunology fellows
Major Goals and Plans

Seema S. Aceves, MD, PhD
• Understand the mechanisms of TGFβ1 effects on smooth muscle contraction in EoE
• Conduct studies to elucidate a gene-environment interaction between food and TGFβ1
• Find new biomarkers in EoE
• Understand the effects of mepolizumab on esophageal remodeling in EoE
• Continue to expand the EGID clinic
• Oversee the patient education and research meeting for the 2012 American Partnership for Eosinophilic Disorders meeting
• Help to develop and design multi-center, NIH funded clinical trials in collaboration with The International Gastrointestinal Researchers and the Registry for Eosinophilic Gastrointestinal Disorders
• Participate in trials that validate pediatric quality of life and symptom activity indexes in EoE

John F. Bastian, MD
• Establish a food allergy clinic
• Conduct eosinophilic esophagitis trials with anti-IL5 and topical budesonide
• Obtain exhaled NO device for allergy clinic

Jane C. Burns, MD, and Chisato Shimizu, MD
• Define panel of protein biomarkers as a diagnostic test for KD
• Complete family-based linkage analysis
• Define role of microRNAs in KD pathogenesis
• Devise new therapies to prevent progression of coronary artery damage
• Understand mechanisms of action of IVIG

Alessandra I. Franco, MD, PhD
• Better characterize the events involved in the cross-talk between B cells and dendritic cells, aiming at the optimization of cytotoxic T cell priming in vivo
• Define a panel of carbohydrate-peptide conjugate that binds with high affinity to MHC class I molecules and has an appropriate structure to induce a T cell response skewed toward the recognition of the sugar moiety
• Explore (and compare) TACA conjugation natural viral sequences, sequences derived from environmental pathogens as the flu viruses and known cancer epitopes (i.e., MUC1 peptides, etc.) in preparation for pre-clinical trials.
• Complete studies on T-cell activation in Kawasaki disease

Hal M. Hoffman, MD
• Continue focus on cryopyrin function using a number of novel mouse models designed to reproduce human disease in mice
• Continue to study the mechanism of cold-induced inflammation using cell lines, human monocytes and mice
• Study the role of cryopyrin in more common diseases such as gout, rheumatoid arthritis, infection, otitis, and asthma by collaborating with other UCSD investigators
• Continue to identify families with rare inherited human diseases and search for the genetic basis of these disorders.
• Continue to evaluate pediatric patients with allergic and immunologic disease (approximately 400 patients a year)
• Pursue clinical interest in autoinflammatory diseases, including the periodic fever disorders, and expand clinic to meet the needs of these patients
Anthony A. Horner, MD
• Continue clinical and teaching responsibilities
• Continue research focusing on characterizing the cellular and molecular basis for the Th2 adjuvant and tolerogenic activities of house dust extracts (HDEs)
• Continue translational research studies to determine if HDE bioactivity measures predict allergic and respiratory status in clinical practice HDEs
• Continue collaborative studies to better understand the molecular basis for the immunostimulatory activities of HDEs
• Seek new sources of funding for our research

Robert M. Sheets, MD
• Consolidate practice in San Diego
• Continue involvement in the local Arthritis Foundation branch and its activities for children.

Ilona S. Szer, MD
• Cutting back to half time, mostly in Encinitas – patient care to be assumed by Dr. Johanna Chang who starts in September, 2011
• To accomplish the Second Edition of Arthritis in Children and Adolescents
• Continue to deliver the highest quality of care to children with RD in SD and surrounding catchment area
• Continue to work with the Search Committee for a Chief of AIR and Sr. Scientist

AWARDS, HONORS AND MAJOR PRESENTATIONS

Seema S. Aceves MD, PhD
NIH/NIAMS R01
American Academy of Allergy, Asthma, Immunology, Junior Women in Allergy Faculty Research Grant
Invited speaker, American Academy of Allergy and Immunology, 2009-2011
Invited speaker, International Eosinophil Society 2011
Invited speaker, American Gastroenterology Association Digestive Diseases Week, 2011
Invited speaker, World Allergy Organization, 2011
Invited speaker, Massachusetts General Hospital, Harvard Medical School, Medical Grand Rounds, 2011

Jane C. Burns, MD
Member, AHA Committee on Rheumatic Fever, Endocarditis and Kawasaki Disease, 2006-present
Speaker, Asian Pacific Cardiology Society Meeting, Chiba, Japan, July 2010
Speaker, International Kawasaki Disease Genetics Consortium, Amsterdam, Holland, September 2010
Speaker, Dept. of Pediatrics, Sant Joan de Deu, Barcelona, Spain, September 2010
Speaker, iC3 Institute for Climate Studies, Barcelona, Spain, September 2010
Speaker, Maui Cardiovascular Symposium, Maui, Hawaii, November 2010
Speaker, National Cardiovascular Physician Assistants Meeting, San Diego, CA, January 2011
Speaker, Dept. of Dermatology Grand Rounds, Univ. of Dijon, Dijon, France, January 2011
Speaker, National Academy of Dermatology, Paris, France, January 2011
Visiting Professor, Depts. of Medicine and Pediatrics, Emory University, Atlanta, GA, March 2011
Speaker, Illumina, San Diego, CA, April 2011
Speaker, Society for Pediatric Research, Denver, CO, April 2011
Speaker, Dermatology Grand Rounds, UCSD, San Diego, CA, June 2011
Speaker, Siberian Pediatric Congress, Irkutsk, Siberia, June 2011
Hal M. Hoffman, MD
Speaker, University of Toronto Symposium, Toronto, Canada, July 2010
Speaker, McMaster University Research Conference, Hamilton, Canada, July 2010
Speaker, International Autoinflammatory Diseases Meeting, Amsterdam, September 2010
Speaker, Symposium on CAPS, Tubingen, Germany, October 2010
Speaker, Japanese Society of Investigative Dermatology, Wakayama, Japan, December 2010
Speaker, McGill University Immunity and Genetics Seminar, Montreal, Canada, April 2011
Editorial Board, *The Journal of Clinical Immunology*, 2010-present

Anthony A. Horner, MD
Member, Editorial Board, *ISRN Allergy*, 2010-present
Speaker, UCSD Rheumatology Grand Rounds, San Diego, CA, July 2010
Invited Speaker, American Academy of Asthma, Allergy, and Immunology International Meeting, San Francisco, CA, March 2011

Ilona S. Szer, MD
Lunch with the Professor Series, ACR National Meetings, October 2010
Earl Brewer Leadership in Pediatric Rheumatology Award, AJAO, July 2010
Juvenile Arthritis Regional Leadership Award, AF, July 2010
Member, Childhood Arthritis and Rheumatology and Research Alliance, Finance and Pain Committees
Senior Editor, Arthritis in Children and Adolescents; in discussions with OUP regarding Second Edition; last edition March, 2006
Chair, DSMB, Teens Taking Charge – multicenter observational study using the latest hand held technology

PUBLICATIONS


## Research Support

<table>
<thead>
<tr>
<th>Grant/Contract #</th>
<th>Annual Budget</th>
<th>Total Direct Dollars/Duration of Grant</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Seema S. Aceves MD, PhD</strong> Registry of Eosinophilic Gastrointestinal Diseases (REGID)</td>
<td>$21,825</td>
<td>$27,500 July 2010 - July 2011</td>
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<tr>
<td><strong>Mechanisms of Chronic Tissue Damage in Allergic Eosinophilic Esophagitis</strong> 1 R01 AI092135-01/NIH (NIAID) Natl Inst Of Allergy &amp; 20110124/Children's Hospital Medical Center</td>
<td>$250,000</td>
<td>$1,798,750 July 2011-June 2016</td>
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<tr>
<td><strong>The Effects of Anti-IL-5 on Esophageal Remodeling in Pediatric Eosinophilic Esophagitis</strong> Glaxosmithkline (Merge:Glaxo Wellco)</td>
<td>$40,000</td>
<td>2011-2014</td>
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<tr>
<td><strong>The Role of miRNAs in Pediatric Eosinophilic Esophagitis</strong> University of California, Department of Pediatrics</td>
<td>$50,000</td>
<td>2011-current</td>
</tr>
<tr>
<td><strong>A Novel Molecular Diagnostic Platform for Eosinophilic Esophagitis</strong> Tigers</td>
<td>$70,000</td>
<td>2010-current</td>
</tr>
<tr>
<td><strong>Jane C. Burns, MD</strong> idASH: Integrating Data for Analysis, Anonymization, and Sharing</td>
<td>$2,314,179</td>
<td>$20,104,600 Sept. 2010-June 2015</td>
</tr>
<tr>
<td><strong>Impact of TNFa Blockade on Immune Function in Acute Kawasaki Disease</strong> 1 R01 HL103536-01/NIH (NHLBI) Natl Heart, Lung &amp; Blood</td>
<td>$250,000</td>
<td>$1,531,375 April 2010-Feb. 2014</td>
</tr>
<tr>
<td><strong>Phase III Infliximab for Primary Therapy of Kawasaki Disease</strong> 1 R01 FD003514-01/PHS (FDA) Food And Drug Administrat</td>
<td>$260,849</td>
<td>$1,440,944 Sept. 2008-July 2013</td>
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<td><strong>The Role of Matrix Metalloproteinases in Kawasaki Disease</strong></td>
<td>$93,119</td>
<td>$525,586 July 2004-May 2010</td>
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## Research Support (continued)

<table>
<thead>
<tr>
<th>Grant/Contract #</th>
<th>Annual Budget</th>
<th>Total Direct Dollars/Duration of Grant</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Patient-Specific Simulations for Quantitative Risk Assessment in Kawasaki Disease</strong>&lt;br&gt;1 R21 HL102596-01/NIH (NHLBI) Nati Heart, Lung &amp; Blood</td>
<td>$150,000</td>
<td>Apr. 2010-Mar. 2012</td>
</tr>
<tr>
<td><strong>Biomarker Panel Development to Aid in the Early Detection of Kawasaki Disease</strong>&lt;br&gt;20093187/The David Gordon Louis Foundation</td>
<td>$22,724</td>
<td>Apr. 2009-Dec. 2010</td>
</tr>
<tr>
<td><strong>Kawasaki Disease: Disentangling the Role of Climate in the Outbreaks</strong>&lt;br&gt;20105253/Institut Catala De Ciencies Del CLI</td>
<td>$14,007.93</td>
<td>June 2010-Mar. 2012</td>
</tr>
<tr>
<td><strong>Hal M. Hoffman, MD</strong>&lt;br&gt;The Role of Cryopyrin in Autoinflammatory Diseases</td>
<td>$200,000</td>
<td>Aug. 2001-July 2012</td>
</tr>
<tr>
<td><strong>Mechanisms Involved in Cold Activation of the Mutant Cryopyrin Inflammasome</strong>&lt;br&gt;20093127/Glaxosmithkline (Merge:Glaxo Wellco)</td>
<td>$97,088</td>
<td>Oct. 2009-Sept. 2011</td>
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<td><strong>Targeting Inflammasome Mediated Disorders with Green Tea</strong>&lt;br&gt;1 R21 AI090487-01/NIH (NIAID) Natl Inst Of Allergy &amp;</td>
<td>$150,000</td>
<td>June 2010-May 2012</td>
</tr>
<tr>
<td><strong>Genetic and Molecular Basis of Familial Atypical Cold Urticaria</strong>&lt;br&gt;UCSD CTRI Pilot Project</td>
<td>$25,000</td>
<td>Jan. 2011-Dec. 2011</td>
</tr>
<tr>
<td><strong>Anthony Horner, MD</strong>&lt;br&gt;Analysis of the Role of Airway Epithelial Cells in Mediating the Adjuvant and Tolerogenic Activities of LPS</td>
<td>$25,000</td>
<td>Jan. 2010-Jan. 2011</td>
</tr>
<tr>
<td><strong>Ambient TLR Ligand Exposures and the Genesis of Asthma</strong>&lt;br&gt;R01 AI61772/NIH (NIAID) Natl Inst Of Allergy</td>
<td>$1,500,000</td>
<td>Feb. 2004-Feb. 2010</td>
</tr>
</tbody>
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The Child and Adolescent Services Research Center (CASRC) at Rady Children’s Hospital-San Diego (RCHSD) is a consortium of over 100 investigators and staff from multiple research organizations in San Diego County, including RCHSD, UC San Diego (UCSD), San Diego State University (SDSU), University of San Diego (USD), University of Southern California (USC) and California State University San Marcos (CSUSM).

CASRC has a strategic focus on improving public pediatric mental health care through a program of mental health services research that includes clinical epidemiology studies linked to evidence-based practice, effectiveness and quality of care studies, and implementation studies that include organizational, financing, policy, and practice factors. CASRC research is conducted within a cultural exchange model that emphasizes the value of partnership between researchers, policy makers, providers, and consumers in youth mental health care across the public sectors of mental health, child welfare, juvenile justice, substance abuse services, and education. The CASRC mission is to improve mental health care for children in the public mental health and child welfare service sectors. CASRC works to achieve this mission by conducting research, training researchers, advancing research methods, and promoting research-community collaborations.
FACULTY

John Landsverk, PhD, *CASRC Director*, Senior Scholar at George Warren Brown School of Social Work, Washington University in St. Louis; Research Professor at the School of Social Work, USC; Professor Emeritus, SDSU’s School of Social Work

Gregory A. Aarons, PhD, Associate Professor of Psychiatry, UCSD

Natacha Akshoomoff, PhD, Associate Professor of Psychiatry, UCSD

Mary J. Baker-Ericzen, PhD, Research Scientist, Rady Children’s Hospital

Concepcion Barrio, PhD, Associate Professor, School of Social Work, USC

Lauren Brookman-Frazee, PhD, Assistant Professor of Psychiatry, UCSD

Denise Chavira, PhD, Assistant Professor of Psychiatry, UCSD

Natacha Akshoomoff, Sawssan Ahmed, Katina Lambros, John Landsverk, Kristen McCabe, May Yeh, Ann Garland, Larry Palinkas, Al Litrownik, Cynthia Connelly

Cynthia D. Connelly, PhD, RN, FAAN, Professor and Director of Research, USD, Hahn School of Nursing and Health Science

Inger Davis, PhD, Professor Emeritus, School of Social Work, SDSU

Ann F. Garland, PhD, CASRC Deputy Director; Professor of Psychiatry, UCSD

Rachel Haine-Schlagel, PhD, Research Scientist; Adjunct Assistant Professor, Department of Psychology, SDSU

Helen Hayden-Wade, PhD, Research Scientist, RCHSD
POSTDOCTORAL FELLOWS

Sawssan Ahmed, PhD
Rachel Askew, PhD
Guy Cafri, PhD
Amy Drahota, PhD
Cecilia Dueñas, PsyD
Kya Fawley-King, PhD
Danielle Fettes, PhD
Anthony Garcia, PhD
Amy Green, PhD
Ember Lee, PhD
David Sommerfeld, PhD
Jessica Suhrheinrich, PhD
Emily Trask, PhD
Katherine Nguyen Williams, PhD

RESEARCH ACTIVITIES

CASRC researchers have made important discoveries in multiple areas affecting children’s behavior and mental health, with research findings published in many internationally renowned journals and presented at numerous conferences around the world. For the fiscal year period, 2009-2010, $8.5 million in research grants and contracts were awarded to CASRC investigators, with 17 research proposals totaling $20.5 million submitted. Highlights of CASRC research accomplishments in the past year include:

- Developing and testing a successful parent-training program that reduces child behavior problems and placement failures for children in foster care
- Identifying reasons for unmet need for treatment, and developing and testing more culturally appropriate mental health treatments for children and families
- Identifying critical challenges in the detection and effective treatment of autism in community settings
- Establishing the linkage between leadership and organizational culture and climate of mental health clinics and staff turnover rates, as well as openness to the use of best practices and quality improvement
Major Goals and Plans

CASRC’s principle research focus is directed toward improvement of public pediatric mental health care, primarily in the mental health and child welfare service sectors, through improved integration of evidence-based practice and usual care. CASRC is committed to improving knowledge about effective strategies to implement evidence-based practices in community-based settings, thus bridging the science to practice gap.

- Examining how evidence-based practice implementation influences organizational culture and climate, working alliance between provider and client, and client outcomes
- Developing a leadership training program to improve the ability of mental health agencies to effectively implement and sustain evidence-based practices in real-world community settings, ultimately improving service effectiveness
- Facilitating implementation of an evidence-based practice to prevent child maltreatment in the child welfare systems of San Diego and several other California counties, as well as statewide in Oklahoma
- Developing and testing efficient and effective methods for identifying emotional and behavioral problems such as ADHD and anxiety disorders in primary care offices
- Developing a model to screen for and assist mothers with maternal depression in obstetric settings during the perinatal period
- Identifying various parent and family contextual factors associated with child well-being
- Identifying the significant impact of exposure to domestic and community violence on children’s emotional and behavioral well-being
- Examining the social consequences of and treatment ideas for childhood obesity within ethnically diverse families
- Identifying student preferences for prevention and treatment of substance abuse and other mental health services in high schools
- Demonstrating the effectiveness of voluntary intervention for alcohol reduction among high school students
- Identifying common elements of evidence-based practice for common disorders such as autism and conduct problems
- Translating empirically-supported interventions into community settings for childhood disorders such as autism
- Identifying discrepancies between evidence-based treatment and community-based usual care for children with behavior problems
- Developing and testing improved methods of tracking mental health practice and outcomes in community-based clinics and child welfare agencies
- Developing strategies to support parent active participation in public sector child outpatient mental health treatment

Studies by individual CASRC researchers are highlighted below.

**Gregory Aarons, PhD** has NIMH and CDC-funded research that focuses on organizational and provider factors that impact uptake of evidence-based practices in community and hospital settings. His research program examines the impact of organizational culture, climate and leadership on quality and outcomes of services, the workforce, service delivery, and evidence-based practice. He is nationally and internationally known for his studies of provider attitudes towards adopting evidence-based practice and the effect of provider attitudes on adoption and use of evidence-based practices. His recent publications document system and organizational benefits of evidence-based practice implementation. Dr. Aarons is developing organizational interventions to improve evidence-based practice implementation and organizational change.

**Natacha Akshoomoff, PhD** focuses her studies on services for children with autism spectrum disorders. She is specifically interested in diagnostic and assessment practices used by community service agencies, community clinicians, and school providers. She also studies neuropsychological development of attention and visuospatial
processes in normal and atypical development and the impact of deficits in these areas on academic achievement.

Mary J. Baker-Ericzen, PhD conducts research in the areas of children/adolescent mental health services, parent and family issues including parent stress and maternal depression, clinician decision-making and cognitive decision-making models, and developmental disabilities as autism spectrum disorders.

Concepcion Barrio, PhD studies ethnocultural factors in serious mental illness and the cultural relevance of psychosocial rehabilitative services. She is also developing culturally-based interventions for individuals and families dealing with severe mental illness.

Lauren Brookman-Frazee, PhD researches mental health services for children with autism spectrum disorders, community-based psychotherapy process and outcomes, research-practice partnerships and collaboration, parent training, early intervention and clinician training/supervision.

Denise Chavira, PhD conducts research in collaborative care studies for treating children with anxiety disorders in pediatric primary care settings, genetic and family history studies to understand the etiology of anxiety disorders, specifically in OCD, ADHD, and selective mutism, studies examining cross-cultural variations in the expression of anxiety disorders and studies examining patterns of mental health service utilization and barriers to care among children with anxiety disorders and ethnic minority populations.

Cynthia D. Connelly, PhD, RN, FAAN studies the co-occurrence of substance abuse, domestic violence, and mental health issues for women of childbearing age, and is working to improve the identification of and intervention for these co-occurring problems in community maternal-child health settings using culturally appropriate early identification and intervention strategies.

Inger Davis, PhD focuses on foster care and reunification of children from out-of-home placement, and the delivery of social and clinical services and case management of children with mental disorders.

Ann Garland, PhD studies treatment processes and outcomes in community-based psychotherapy services for youth, identifying gaps between evidence-based care and usual care; and psychiatric epidemiology of youth in public systems of care. Dr. Garland is collaborating with other investigators to develop improved models for training mental health care providers and tracking their practices to improve the effectiveness of mental health care.

Rachel Haine-Schlagel, PhD studies the role of family in child mental health service utilization and effectiveness, interventions to enhance parent and family involvement in treatment, and community-based psychotherapy process and outcomes.

Helen Hayden-Wade, PhD examines early interventions for mild- to moderate-developmental delays in children, as well as early prevention and intervention regarding pediatric/early childhood obesity and its psychosocial ramifications.

Andrea Hazen, PhD conducts research on domestic violence, child maltreatment and trauma, and studies the use of mental health services by adults and children who are impacted by these problems. She oversees the Chadwick Center for Children and Families Treatment Outcome office.

Richard Hough, PhD looks at how behavioral health care organizational systems affect the delivery of services to children and adolescents, and studies behavioral health care interventions for minority children and adolescents.

Michael S. Hurlburt, PhD studies policies that affect access to mental health services among youth with emotional and behavioral disorders, and factors that affect the translation of tested mental health interventions for children and adolescents to community treatment settings.

Sigrid James, PhD conducts research in the areas of residential and inpatient psychiatric care youth with emotional and behavioral disorders, mental health needs and outcomes of children in child welfare, mental health service utilization of children in child welfare, placement stability in out-of-home care, and risk factors and behaviors of adolescents in out-of-home care.

Katina M. Lambros, PhD focuses her research on best practices in the assessment and intervention for high incidence disabilities including Learning Disabilities (LD), Attention Deficit Hyperactivity Disorder (ADHD), and Emotional and Behavioral Disorders (EBD), general and special education teacher training in evidence-based academic and behavioral interventions, and the interface between treatment efforts for disabilities across service sectors (i.e., school-based, mental health, child welfare, primary care).

John Landsverk, PhD studies child maltreatment, children's mental health and mental health services, research
on implementing and maintaining evidence-based, parent mediated interventions in child welfare settings for treating disruptive behavior disorders, and externalizing behavior problems in children and adolescents.

Laurel K. Leslie, MD looks at the interface between primary care and subspecialty care, effective methods of identifying and treating developmental and behavioral problems of children in community settings, children in foster care, and the impact of Medicaid managed care on access to care.

Alan Litrownik, PhD examines risk and protective factors as they relate to both adaptive and maladaptive development, with specific focus on the longitudinal effects of child maltreatment. He also evaluates community preventive interventions (e.g., substance use), especially in adolescent Latino populations.

Kristen M. McCabe, PhD studies cultural factors that affect treatment access and outcomes for children, culturally responsive treatments for children and psychosocial risk and protective factors for child psychopathology.

Rae Newton, PhD conducts statistical analysis, particularly structural equation modeling and qualitative data analysis, and studies health services delivery and family violence.

Lawrence A. Palinkas, PhD conducts research in psychiatric epidemiology and psychoneuroendocrinology, cross-cultural medicine with a focus on cultural epidemiology, ethnopsychiatry, and health services. His current research is focused on studies of implementation of evidence-based practices in child welfare and child mental health.

Joseph Price, PhD studies the emotional and social development of maltreated children, and the behavioral and social problems of children within the child welfare system.

Laura J. Proctor, PhD conducts longitudinal research on pathways from multiple forms of early maltreatment and co-occurring childhood adversity to subsequent onset and trajectories of substance use, delinquency, and sexual risk behavior in adolescence.

Scott C. Roesch, PhD conducts latent variable and structural equation modeling and mental health services research.

Donald J. Slymen, PhD analyzes cluster randomization trials, clinical and community intervention trials and longitudinal data and survival.

Fernando Soriano, PhD studies community intervention programs to deal with the effects of violence, and the effects of acculturation status on behavioral health problems.


V. Robin Weersing, PhD focuses on the development, implementation, and evaluation of effective and efficient interventions for anxiety and depression in children and adolescents in both specialty mental health and primary care service settings.

May Yeh, PhD focuses her research on cultural issues and cultural competence in mental health services for youth, multiple party involvement in care and school-based mental health services.

TEACHING ACTIVITIES

Many of the CASRC investigators teach courses at all the affiliated academic institutions: UC San Diego, SDSU, USD, and USC. Over the past 17 years, CASRC investigators provided training to approximately 170 individuals, with detailed data available on 89% of the trainees. Key successes include:

(a) The following are NIH grants obtained by trainees:
• Two dissertation awards
• Ten predoctoral training awards
• Two postdoctoral NRSAs
• 16 K01 Mentored Career Awards
• Six R01 type awards for K-award graduates (Garland, Yeh, Stahmer, Aarons, Hurlburt, and Connelly)
(b) Minority trainees and research on cultural issues.
35% of CASRC trainees self-identify as members of an ethnic minority group. Grants specifically focused on cultural issues include:
• Four NIMH postdoctoral training awards
• Five K01 awards
• Two R34s and an R01

CASRC has also had five NIMH ethnic minority predoctoral fellowships, one minority supplement award and one disability supplement award.
(c) Trainees at multiple levels across multiple disciplines:
- Trainees have included undergraduates/post baccalaureates (36%), master's students (17%), doctoral students (22%), postdoctoral fellows/junior faculty (24%), and medical students (1%) from the disciplines of psychology, sociology, social work, public health, medicine, and anthropology. At any given time, CASRC accommodates approximately 30 volunteer interns seeking research experience. CASRC has a reputation in local academic departments for providing rich research training.

(d) Advancement to higher levels of training:
- Many undergraduates have successfully entered graduate programs in medicine, public health, clinical and developmental psychology, sociology, counseling, social work, and education. At least 20 doctoral students have gone on to postdoctoral fellowships or junior faculty positions, and 30 post-doctoral trainees have become independently-funded researchers.

AWARDS, HONORS AND MAJOR PRESENTATIONS

Natacha Akshoomoff, PhD
Editorial Board, Developmental Neuropsychology and Child Neuropsychology
Special Panel NIMH Grant Reviewer, 2010, 2011

Mary J. Baker-Dericzen, PhD
Health Services Research, Child and Youth Care Forum, Journal of Behavioral Health Services and Research
Invited Grant Reviewer for National Foundation for Autism Research (NFAR), Invited Grant Reviewer for Alberta Centre for Child, Family and Community Research

Lauren Brookman-Frazee, PhD
UC San Diego National Center for Leadership in Academic Medicine (NCLAM) Fellowship, 2008
Ad Hoc Member, NIMH Mental Health Services in Non-Specialty Settings committee, 2008, 2009
Ad Hoc Grant Reviewer, U.S. Department of Education, National Institute on Disability and Rehabilitation Research, Field Initiated Projects, 2009

Denise Chavira, PhD
Editorial Board, Depression and Anxiety

Cynthia D. Connelly, PhD
USD-University Professorship (one of five awarded) 2009
The Association of Women’s Health, Obstetrics and Neonatal Nurses Outstanding Research Paper Award 2009
Merit Scholar Research Mentor USD Hahn School of Nursing and Health Science, 2009-present
Presidential Scholars and Deans Scholars Professor, USD Hahn School of Nursing and Health Sciences
Reviewer, Pediatrics, Journal of Family Nursing, Western Journal of Nursing Research, Research in Clinical Nursing Practice, Women and Health, Prevention Science
Grant Reviewer, National Institute of Mental Health, 2009

Ann Garland, PhD
2010 Excellence in Teaching Award from the Department of Psychiatry, UCSD (voted on by trainees)
Associate Editor, Administration and Policy in Mental Health and Mental Health Services Research
Member of Ad Hoc NIH Review Committees
Member, Research Network on Youth Mental Health, John D. and Catherine T. Macarthur Foundation

Rachel Haine-Schlagel, PhD
National Institutes of Health (NIH) Loan Repayment Renewal Award, 2009-2010
Ad Hoc Reviewer, Child Abuse and Neglect, Community Mental Health Journal, IRB: Ethics & Human Research, Association for Behavioral and Cognitive Therapies Annual Conference

Helen Hayden-Wade, PhD
Elected Member of National Children’s Study, San Diego, Advisory Board, 2008-present
Elected Member of First 5 Commission, San Diego Evaluation Leadership Team, 2002-2009
Reviewer, Obesity Research, Cognitive Therapy and Research, Comprehensive Research
Center in Health Disparities (CRCHD) UCSD

Andrea Hazen, PhD
Ad Hoc Reviewer, Pediatrics, Violence Against Women, Journal of Interpersonal Violence, Child Abuse and Neglect, Trauma, Violence, and Abuse

John Landsverk, PhD
Member, NIMH National Advisory Mental Health Council Workgroup on Services and Clinical Epidemiology
Chair, member of several NIH IRG Research Committees
Editorial Board, Child Maltreatment, Journal of Mental Health Services Research

Ad Hoc Reviewer, Child Abuse and Neglect, Child Maltreatment, Children and Youth Services Review, Psychiatric Services, Medical Care, Journal of Community Psychology, American Journal of Psychiatry, Pediatrics, Mental Health Services Research, Journal of Behavioral Health Services and Research

Chair, Braam Oversight Panel, State of Washington Department of Health and Social Services

Alan J. Litrownik, PhD
Senior Associate Editor, Child Abuse and Neglect

Lawrence A. Palinkas, PhD
Sterling C. Franklin Award for Distinguished USC School of Social Work Faculty Member, National Institute of Mental Health Services Research Non-Specialty Services Panel 2006-2010
Member, National Institute of Health Fogarty International Center Special Emphasis Panel, Frameworks in Global Health, June 2010
Member, National Institute of Mental Health NRSA Institutional Research Training (T32) Special Emphasis Panel, November, 2010
Chair, National Institute of Mental Health Global Mental Health Collaborative Hubs, April 2011
Chair, Scientific Review Panel, Millennium Cohort Family Study
Member, Committee to Review the Federal Response to the Health Effects Associated with the Gulf of Mexico Oil Spill, Institute of Medicine
Consultant, Committee on Psychiatric Dimensions of Disasters, American Psychiatric Association
Member, Human Behavior and Mental Health Panel of the Decadal Survey on Physical and Biological Sciences in Space, Space Studies Board, National Research Council/National Academy of Sciences
Member, Research Network on Youth Mental Health, John D. and Catherine T. Macarthur Foundation
Member, Scientific Steering and Advisory Committee, Millennium Cohort Study, Department of Defense Center for Deployment Health Research

Laura Proctor, PhD
Reviewer, Child Abuse and Neglect, Journal of Research on Adolescence

Aubyn C. Stahmer, PhD
Member, California Autism Spectrum Disorders Advisory Committee Department of Developmental Services, 2005-2009
Associate Editor, Journal of Positive Behavior Interventions
Member, South Counties Autism Regional Taskforce (SCART) of the Senate Select Committee on Autism and Related Disorders

V. Robin Weersing, PhD
Editorial Board, Journal of Consulting and Clinical Psychology, Behavior Research and Therapy

May Yeh, PhD
SDSU/UCSD Joint Doctoral Program in Clinical Psychology Experimental Psychopathology Co-Track Leader
SDSU/UCSD Joint Doctoral Program in Clinical Psychology Curriculum Committee Member

PUBLICATIONS

## Research Support

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<th>Grant/Contract #</th>
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<tr>
<td><strong>Gregory A. Aarons, PhD</strong></td>
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<td>Cascading Diffusion of an Evidence-Based Child Maltreatment Intervention</td>
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<td>R01-CE001556/CDC</td>
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<td>Evaluation of Pregnant and Parenting Women Program</td>
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<td>T1018361/SAMHSA</td>
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<td>Leadership Development for Evidence Based Practice Implementation</td>
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<td>Mixed Methods Study of a Statewide EBP Implementation</td>
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<td>Substance Abuse Recovery Management System (SARMS)/NIH</td>
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<td><strong>Natacha Akshoomoff, PhD</strong></td>
<td>$784,143</td>
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<td>July 2004-June 2010</td>
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<td>Evaluation of Diagnostic and Services Practice in Autism</td>
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<td>K23-MH71796/NIH</td>
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<td><strong>Mary J. Baker-Ericzen, PhD</strong></td>
<td>$747,983</td>
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<td>Examining Parent and Family Factors in Child Mental Health</td>
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<td>Evidence Based Practice Training on Clinician Decision Making (Pilot Study)</td>
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<tr>
<td>California Department of Education SDSU/SDSU Contract</td>
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<td>Evaluation of Resolution for Student Success</td>
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<td>SDSU/SDSU Contract</td>
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## Research Support (continued)

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<th>Grant/Contract #</th>
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<td>Family Guidance Program</td>
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<td>California Endowment Foundation COMPASS contract</td>
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<td><strong>Lauren Brookman-Frazee, PhD</strong></td>
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<td>K23-MH077584/NIH</td>
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<td><strong>Denise Chavira, PhD</strong></td>
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<tr>
<td>Improving Care for Anxiety in Pediatric Settings</td>
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<td>$740,000 June 2006-June 2011</td>
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<td>Academic Senate Research Grant/UCSD</td>
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<td>Feasible Delivery of CBT for Rural Latino Youth with Anxiety</td>
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<td>$650,000 July 2010-Mar. 2013</td>
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<td>National Institute of Mental Health/NIH</td>
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<tr>
<td>National Institute of Neurological Disorders and Stroke</td>
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<td>$40,000 Feb. 2005-Jan. 2010</td>
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<tr>
<td>An affected sib pair study of ADHD in Costa Rica</td>
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<td>1 R01-NS048376-01A1 (Chavira, sub, Mathews, PI)/UCSD subcontract</td>
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<tr>
<td>Developing clinical subtypes for genetic studies of Tourette Syndrome</td>
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<td>Tourette Syndrome Association (Chavira, sub, Mathews, PI)/UCSD subcontract</td>
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<tr>
<td><strong>Cynthia D. Connelly, PhD</strong></td>
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<td>Collaborative Model Addressing Mental Health in the Perinatal Period</td>
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<td>$3,100,000 Sept. 2008-Aug. 2013</td>
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<td>R01-MH075788/NIH</td>
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<td><strong>Ann Garland, PhD</strong></td>
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<tr>
<td>Research Services for Children’s Mental Health Care in San Diego/System of Care Evaluation (SOCE)</td>
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<td>$800,000 Sept. 2010-Aug. 2011</td>
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<td>County of San Diego, Department of Health Services</td>
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<td>Building Collaborations to Address Disparities in Psychoactive Medication Use</td>
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<td>$10,000 Jan. 2011-Dec. 2011</td>
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<td>UCSD Division of Child Development and Community Health Planning Grant/UCSD</td>
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<td><strong>Rachel Haine-Schlagel, PhD</strong></td>
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<td>Promoting Parent Participatory Engagement in Youth Mental Health Services</td>
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<td>$724,969 Apr. 2010-Mar. 2015</td>
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<td>K23-MH80149/NIH/NIMH</td>
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### Research Support (continued)

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<td><strong>Helen Hayden-Wade, PhD</strong></td>
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<td>C3 Evaluation Contract</td>
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<td>C3 Evaluation Contract</td>
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<tr>
<td><strong>Andrea Hazen, PhD</strong></td>
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<tr>
<td>Engaging Victims of Partner Violence in Services</td>
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<td><strong>Richard Hough, PhD</strong></td>
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<td>Multi-Method Ethnographic Assessment of Behavioral Health Reform in New Mexico</td>
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<td>The Natural History of ADHD in a Population-Based Sample</td>
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<td>R01-MH071563/NIMH</td>
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<td><strong>Michael S. Hurlburt, PhD</strong></td>
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<tr>
<td>Improving Therapist Fidelity During EBP Implementation (Subcontract)</td>
<td>$1,285,742</td>
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<td>R01-MH074497/NIH</td>
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<tr>
<td><strong>Sigrid James, PhD</strong></td>
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<tr>
<td>Treating EBD Children in Foster Care-The Role of Residential Group Care Mentored Research</td>
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<td>Scientist Development Award</td>
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<td>K01-MH077732-01A1/NIMH</td>
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<td><strong>John Landsverk, PhD</strong></td>
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<td>Advanced Center to Improve Pediatric Mental Health Care (ACIPMHC)</td>
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<td>1 P30-MH074678-01/NIH/NIMH</td>
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<td>Annie E Casey Technical Report</td>
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<td>Annie E Casey Foundation</td>
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<tr>
<td>Child Trauma Stress Initiative Evaluation</td>
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<td>Clearinghouse for Evidence Based Treatment Evaluation</td>
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<td>Chadwick Center</td>
<td>July 2008-June 2009</td>
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<th>Grant/Contract #</th>
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<td>Dimensions of Early Stress and Child Welfare Involvement (Subcontract)</td>
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<td>Alan Litrownik, PhD</td>
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<tr>
<td>Longitudinal Studies of Child Abuse and Neglect-San Diego Site</td>
<td>$1,250,000</td>
<td>Oct. 2005-Sept. 2010</td>
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<td>Lawrence A. Palinkas, PhD</td>
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<tr>
<td>Innovation and the Use of Research Evidence in Public Youth-Serving Systems</td>
<td>$434,381</td>
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<td>Joseph Price, PhD</td>
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<td>Laura J. Proctor, PhD</td>
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<td>Aubyn C. Stahmer, PhD</td>
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<td>Research on Infant/Toddler Mental Health: Building a Community Partnership</td>
<td>$480,342</td>
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<td>Translating Pivotal Response Training into Classroom Environments</td>
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<td>Randomized Clinical Trial of the STAR program</td>
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<td>U.S. Department of Education Grant Efficacy and Sustainability of the STAR Programs</td>
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<td>Interstate Variation In Healthcare Utilization Among Children With ASD</td>
<td>$110,755</td>
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<td>Discovering Biological and Behavioral Indicators of Autism, Developmental Delay, and Typical Development:</td>
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<td>Core C: Clinical Phenotype: Treatment Response Core</td>
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<td>Robin Weersing, PhD</td>
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<td>Developing and Disseminating Effective Interventions for Depression and Anxiety in Youth</td>
<td>$320,000</td>
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<td>William T. Grant Foundation Scholars Program</td>
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<td>Brief CBT for Pediatric Abdominal Pain and Anxiety</td>
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<td>Cross-Cultural Comparison of Youth Outcome in Families with Anxious Mothers</td>
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<td>R24-MH065515-06/NIH (Subproject)</td>
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<td>May Yeh, PhD</td>
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<td>R01-MH071483/NIH</td>
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Gonzalez A, Weersing VR. Childhood depression: Treatment, In: Child and Adolescent Psychopathology and


Hurlburt MS, Hazen AL, Hough RL. Accuracy of caregivers’ reports of children’s mental health and substance use treatment episodes over one year. Journal of Emotional and Behavioral Disorders (in press).


Leslie LK, Raghavan R, Hurley M, Zhang J, Landsverk J, Aarons GA. Investigating geographic variation in use...


Stein MB, Yang BA, Chavira DA, Hitchcock C, Sung SC, Shipon-Blum, E, Gelernter J. A common genetic variant in the neurexin superfamily member CNTNAP2 is associated with increased risk for selective mutism and social anxiety-related traits. *Biological Psychiatry* (in press).


Trask E, Garland A. Are children improving? Results from outcome measurement in a large mental health system. *Administration and Policy in Mental Health and Mental Health Services Research* (in press).


The Chadwick Center for Children and Families is Rady Children’s Hospital-San Diego (RCHSD)’s response to child abuse and neglect, domestic violence, and post-traumatic stress in children. The staff is composed of a variety of professionals in disciplines ranging from medicine and nursing to child development, social work, and psychology. In addition to the main hospital campus, the Chadwick Center has satellite offices throughout San Diego County from Oceanside to Chula Vista, including the San Diego Family Justice Center downtown, and a wide variety of community agencies.

Left to right: Leilani Stuck, Robyn Igelman, Cindy Huddock, Tom Jung, Lisa Quinn, Cambria Rose, Chris Perkins, Marisol Olguin, Katherine Wilder, Jennifer Daemarii, Charles Wilson, Dr. Marilyn Kaufhold
Lisa Conradi, Alexia Hobson, Rica Law, Laurie Fortin, Cat Celis, Nicole Taus, Linda Wong Kerberg

Alison Hendricks, LCSW
Jesus Herrera, PsyD
Robyn Igelman, PhD
Thomas Jung, BS, Administrative Director
Iby Kantor, PhD
Marisa Kaprow, LCSW
Marilyn Kaufhold, MD, Clinical Instructor
of Pediatrics
Carol Kesten-Selahy, LCSW
Daniel Keyser, ASW
Heather Kiffe, ASW
Al Killen-Harvey, LCSW
Cynthia Kuelbs, MD, Clinical Professor
of Pediatrics
Blanca Lugo, MFT
Lisa McCulloch, LCSW
Megan McKellogg, PsyD
Clorinda Merino, MEd
Azita Mirin, PsyD
Marisol Olguin, MS
Janay Osantowski, PhD
Clarence Perry, MD
Leslie Peterson, MSW
Lisa Quinn, RN
Ashley Rambeau, ASW
Dana Roloff, LCSW
Cambria Rose, LCSW
Sheri Rouse, MFT
Heidi Stern-Ellis, LCSW
Leilani Stuck, MA
Louie Subido, MFT
Nicole Taylor, PhD
Armida Valencia, MFT
Robin Vanderlaan, LCSW
Elias Villafana, LCSW
Katherine Wilder, RN
Miranda Williams, PhD
Linda Wong Kerberg, MFT, Clinical Director
Blake Zimmet, ASW

PEDIATRIC FELLOWS

Premi Suresh, MD
Sarah Villarroel, MD

Judi Cox, LCSW
Mauricio CruzyCelis, MFT
Joan Diccianni, MHA
Jackie Dietz, LCSW
Roquette Dungan, LCSW
Fabiola Figueroa, MFT
Laurie Fortin, LCSW
Noelia Galvez-Nelson, ASW, MSW
Alicia Gilbert, PhD
Guillermo Gonzalez, MFT
Margaret Gonzalez, LCSW
Susan Gordon, LCSW
Tanya Grame, PhD
Lynne Guzman, ASW
Rebecca Harvey, Psy.D.
CHADWICK RESEARCH

John Landsverk, PhD, Scientific Director
Andrea Hazen, PhD, Outcomes Office

CLINICAL ACTIVITIES
INPATIENT/OUTPATIENT

The Chadwick Center serves over 8,336 children and families per year through two clinical programs: Forensic and Medical Services and Trauma Counseling. The following sections describe the activities of each program.

Forensic and Medical Services

• 2,589 children received expert medical assessment and/or a forensic interview for abuse. This does not include the children assessed at the US Navy, Riverside County or Polinsky Center for Children, which RCHSD’s Chadwick Center continues to support. The program also expanded its services to include Extended Forensic Examinations for children and families that may need more than a single interview and facilitate the trauma/healing process.

• The Center conducts a bimonthly multidisciplinary Failure to Thrive Clinic for young children who are not gaining weight due to parental behavior. Most referrals for this clinic come from community physicians.

• The Chadwick Center facilitates the weekly San Diego County Child Protection Team meeting to discuss complex child abuse cases. 2011 marked the Team’s 35th anniversary, making it one of the longest running multidisciplinary child abuse team meetings in the world. Attendees include hospital professionals, law enforcement, child protection professionals, and district attorneys.

Trauma Counseling

• As the Center’s largest component, the Trauma Counseling Program provides services on the hospital campus, as well as in satellites throughout the county. Working in five teams, 39 therapists specialize in treating acute traumatic stress and related disorders, using up to 26 clinical outcome measures to assess clients’ clinical needs and to track their progress in therapy.

• The Trauma Counseling Program reached almost 4,915 children and parents through individual, group and family sessions resulting in nearly 52,686 units of service with 93.7% of the clients reporting being “very satisfied” with the therapy services they received. Most of these children were victims of child abuse or witnesses to extreme domestic violence. The program also served children with post-traumatic responses to other events such as shootings and wild fires, and helped pain patients served by Children’s Pain Clinic.

• The Center is leading the community in the use of structured research-based trauma treatment protocols such as Parent Child Interaction Therapy (PCIT) and Trauma Focused Cognitive Behavioral Therapy (TF-CBT) and Child Parent Psychotherapy. The use of evidence-based protocols in the treatment of childhood trauma is still relatively rare across the nation. With organized training and consultative support, the Chadwick Center has emerged as the largest specialized evidence-based trauma treatment program in California, and perhaps the world.

• Chadwick Center connected its extensive use of clinical assessment measures and its repertoire of evidence-based practices with RCHSD’s experience in developing clinical pathways to create the “Trauma Assessment Pathway” (TAP). The TAP model has now emerged as a nation-wide model for linking assessment to clinical practice. Chadwick trained professionals in TAP in various locations in the United States and Canada.

• The Kids in Court Program works with the District Attorney’s office and Juvenile Court to prepare children and their families for the emotional stress of facing their abuser in court. There were 832 children prepared to testify in court.

• The Psychology teams at all Chadwick Centers are members of the California Psychology Internship Council (CAPIC). Membership is necessary in order for the Center to continue to accept doctoral students in its Trauma Counseling Program. Having CAPIC membership ensures that a program has met a level of quality that is annually reviewed and updated. CAPIC member internships adhere to a standardized timeline for receiving students’ applications, a uniform notification day and a clearinghouse process.
Major Goals and Plans

The Chadwick Center began developing a Business Plan in 2007-08 to guide its work for the next five years. Among the key recommendations for future action were:

- The Chadwick Center should build upon its experience and reputation for quality and continue to expand the quality of service delivery, add new evidence-based practices, empirically test those practices, and then teach others locally, nationally, and internationally to deliver similar level quality services.
- The Chadwick Center should expand its leadership role locally and nationally in advocating for the best evidence-based or supported practice, teaching others to build their capacity, and assisting them to actually implement the practices in real-world settings.
- The Chadwick Center should further build the engagement of its staff and focus on equipping its workforce with the knowledge, skills, tools, and resources they need to do extraordinary work.
- The Chadwick Center should work closely with CASRC to develop a strong world-class research program testing clinical relevant to those suffering from serious childhood traumatic stress.
- While RCHSD’s Chadwick Center will never be able to serve all the children in need in San Diego, it should remain the safety net provider that brings the highest level of expertise to the most severely affected children and their families, while training others to deliver high quality services to less severely affected children.
- Chadwick and CASRC should research the impact of professional education and advocacy on service delivery systems and learn and disseminate the best ways to teach and implement evidence-based practices.
- The Chadwick Center should expand the evidence-based SafeCare® model of home visitation/family support in California.
- The Chadwick Center should develop or learn the best practices, deliver the best practice, and teach others the best practice.

RESEARCH ACTIVITIES

Greg Aarons, PhD and Cambria Rose Walsh, LCSW—Dynamic Adaptation to Implement an Evidence-Based Child Maltreatment Intervention (ADAPTS) is a three year program funded by the CDC. ADAPTS tests the Evidence-Based SafeCare home visitation model to modify SafeCare training and ongoing consultation to support adaptation of SafeCare in practice. It also uses qualitative methods to examine the process, feasibility acceptability and utility of ADAPTS.

Lisa Conradi, PsyD continued working with the National Child Traumatic Stress Network on the Cross-Site Evaluation of child trauma treatment programs across the country and involving over 40 sites. Provided information on Chadwick Center programs as part of the national evaluation efforts of the National Child Traumatic Stress Initiative. This includes entering data into the Transformation Accountability (TRAC) system and completing the required quarterly and annual reports.

Lisa Conradi, PsyD worked with CTISP staff member Alison Hendricks to create the Trauma Systems Readiness Tool. This tool is designed to assess the trauma-informed nature of various child welfare systems. The tool was finalized and administered via the online system to individuals at our Oklahoma laboratory site. Based on information gathered in this initial pilot and future administrations of the tool to the other laboratory sites (San Diego and New Hampshire), we will conduct statistical analyses on the tool’s validity and delete/modify questions as needed.

Lisa Conradi, PsyD worked with the assessment subcommittee of the NCTSN’s Child Welfare Committee and other Child Welfare communities to refine the existing Child Welfare Trauma Referral Tool. She has conducted a
preliminary review of existing tools and had preliminary conversations with researchers from the Child and Adolescent Services Research Center to discuss the possibility of “mapping” various questions posed on the CWT with the National Survey of Child and Adolescent Well-Being data to determine if some questions are more heavily weighted to outcomes than others.

**Cynthia L. Kuelbs, MD** is studying the prevalence of strangulation in teen sexual assault victims, whether activation of the emergency response system differentiates between serious non-accidental trauma and accidental trauma and what predicts follow up after adolescent sexual assault.

**Jennifer Rolls Reutz, MPH** in cooperation with **Cambria Rose Walsh, LCSW**, is conducting an evaluation of the California Evidence-Based Clearinghouse for Child Welfare.

**Jennifer Rolls Reutz, MPH** in cooperation with **Blake Zimmett, LCSW** and **Charles Wilson, MSSW**, is conducting an assessment of the service systems in Brevard County, Florida to improve evidence-based practice utilization in the county.

**Sarah Villarroel, MD** is studying the frequency of medical follow-up of adolescent victims after an acute sexual assault and if certain characteristics of the patient, exam, and/or assault were related with better follow-up rates.

**Charles Wilson, MSSW** is the Director of the California Evidence-Based Clearinghouse for Child Welfare (CEBC), from the State of California. The Center is working with CASRC and a national scientific panel on the project. CASRC’s John Landsverk, PhD is the Scientific Director, and the Chadwick Center’s **Cambria Rose Walsh, LCSW** serves as the Project Manager. The project receives day-to-day support from CASRC’s **Jennifer Rolls-Reutz**. The CEBC brings up-to-date research reviews and careful analysis and ratings of common practices related to abused and neglected children and their families. There are currently 32 Topic Areas with over 205 programs and 14 Screening and Assessment Tools reviewed, rated and posted. The CEBC has been visited by over 150,000 individuals from over 180 nations. The website is www.cebc4cw.org.

TEACHING ACTIVITIES

The Chadwick Center has a long tradition of sponsoring nationally and internationally-recognized professional education opportunities. In 2011, the 25th Annual San Diego International Child and Family Maltreatment Conference featured Cordelia Anderson, Consultant, Trainer, Sensibilities, Inc. and James Beasley, Supervisory Special Agent, Critical Incident Response Group, Behavioral Analysis Unit, FBI Academy and over 250 faculty members. The event attracted over 2,000 professionals from 50 states and 30 countries. The Chadwick Center also provided preceptorships to professionals from Colombia, Australia, Norway, Denmark, Iceland and Belgium and sent faculty to speak in conferences around the world.

**Virginia Agcayab, MFT**
- Presented Child Sexual Abuse at the Womens Resource Center and Center for Community Solutions

**Julie Alley, PhD**
- Provided week-long PCIT trainings for Chadwick staff

**David Bond, LCSW**
- Presented Integrating Play Therapy Techniques and Trauma Focused CBT
- Presented Advanced Topics in Childhood Trauma: Effects Upon Psychological Functioning Across Development and Culture
- Presented Effectively Using Play Therapy with LGBTQ Youth

**Lisa Conradi, PsyD**
- Invited to speak on creating trauma-informed child welfare systems at several conferences and events across the country. These include the Child Welfare League of America conference, Casey Family Programs in Austin, TX, NCTSN All-Network Conference in Baltimore, MD, Field Center conference in Philadelphia, PA and across San Diego County
- Presented Assessment-based treatment for traumatized children: Using the trauma assessment pathway model (TAP) in Miami, FL

**Laurie Fortin, LCSW**
- Coordinated Investigative Response to Child Abuse (CIRCA) – Forensic Interviewing module
- Extended Forensic Evaluation training
- Beyond the Bench (Judges/Lawyers training)
• POST Training (Advanced Child Molest Investigations)
• Offender Training in New Hampshire
• Public Child Welfare Training Academy training (various topics)
• Forensic Interviewing Overview for visiting physicians

Alison Hendricks, LCSW
• Presented numerous times on TF-CBT
• Presented and trained on CTISP

Marilyn Kaufhold, MD
• Advanced 1 day Training in Physical Abuse Injuries for CWS, twice/year
• CIRCA Training for Child Abuse First Responders in San Diego County, quarterly
• California Clinical Forensic Medical Training Center (CCFMTC) Course Director for Pediatric Sexual Assault Forensic Examiner Training, twice/year
• California Clinical Forensic Medical Training Center (CCFMTC) lecturer in Adult Sexual Assault Forensic Examiner Training, twice/year
• POST training for Child Abuse detectives in child sexual abuse (Bridging the Communication Gap between the Medical Provider and law enforcement), twice/year
• Child Protection Team Presentation on Abusive Head Trauma to San Diego child abuse investigators with Premi Suresh, MD
• Child Abuse for First Responders (Paramedics) –San Diego

Al Killen-Harvey, LCSW
• Presented two day training on Assessment-based treatment for traumatized children: A trauma assessment pathway model-Part I in Miami, FL
• Presented a half day training on the trauma assessment pathway model in Salt Lake City, UT, Dallas, TX and San Francisco, CA
• Presented a one day training on treatment issues for child abuse victims to the Judicial Council of California in Long Beach, CA
• Presented a half day training on child abuse risk factors for lesbian, gay, bisexual and transgender youth in Salt Lake City, UT, Dallas, TX and Charleston, SC

Cynthia L. Kuelbs, MD
• Supervises child abuse fellows (two of only 21 child abuse pediatric fellowships in the nation) and the family violence rotation for pediatric residents at UCSD and Naval Medical Center, San Diego
• Lectures at UCSD Medical School on recognition of abusive head trauma and family violence prevention
• Lectures on issues associated with proper assessment and diagnosis of child physical and sexual abuse and the role of the pediatricians in family violence to local and national audiences

Clorinda Merino, MEd
• Provided trainings on SafeCare in Central Valley and Northern California

Cambria Rose Walsh, LCSW
• Provided trainings throughout the United States. The trainings focused on the importance of Evidence-Based Practice and TF-CBT

Heidi Stern-Ellis, LCSW
• Presented on Risk for LGBT youth

Charles Wilson, MSSW
• Invited to speak at over 20 national and international gatherings. Speaking engagements included the National Child Traumatic Stress Network, national conference on child and family maltreatment in Ede and Haarlem, Netherlands, state conferences in Minnesota, Florida, Oklahoma and New Hampshire, along with Child Welfare League of America and Evidence Based Practice Seminar in San Francisco

Blake Zimmet, ASW
• Provided trainings throughout the United States. The trainings focused on the importance of Evidence-Based Practice and TF-CBT
## Research Support

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<td>Substance Abuse and Mental Health Administration Treatment and Services Adaptation Center</td>
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AWARDS, HONORS AND MAJOR PRESENTATIONS

NCA Recertification
The Board of the National Children's Alliance, the national accrediting body for multi-disciplinary child abuse centers awarded the Chadwick Center full accreditation status for the next five years after thorough review and site visit

David Chadwick, MD, Director Emeritus
AMA's 2010 Scientific Achievement Award

Marilyn Kaufhold, MD
Presentations on Team work in Child Abuse Evaluation and Investigation, Bogota, Cali and Medellin, Colombia, November 2010

Cynthia L. Kuelbs, MD
San Diego Magazine's Best Doctors Award, October 2009
San Diego Magazine's Best Doctors Award, October 2010
Consultant, Developing a hospital based child protection team. Karolinska Institute, Stockholm Sweden, 2009
Abuse and medical care of teen delinquencies. 23rd Annual Conference on Child and Family Maltreatment, San Diego, CA, January 2009
Sorting through the allegations and evidence of sexual and physical abuse. Juvenile Law Institute, Oakland, CA, February 2009
San Diego Magazine’s Best Doctors award, October 2010

Charles Wilson, MSSW
2011 Annual Stars Award, San Diego Commission on Children, Youth and Families
Invited by the National Center for Child Traumatic Stress and SAMHSA to serve as Co-Chair for the National Breakthrough Collaborative on Development of Trauma- Informed Child Welfare
Appointed as expert faculty for the International Society for Prevention of Child Abuse and Neglect
United Way of San Diego Impact Council on Child Abuse and Neglect

Appointed member of San Diego County Commission on Children and Youth by the Board of Supervisors

Sarah Villarroel, MD
• Presented on the frequency of medical follow-up of adolescent victims after an acute sexual assault and if certain characteristics of the patient, exam, and/or assault were related with better follow-up rates at the annual Helfer Society Meeting, Amelia Island, FL, April 3-6, 2011

PUBLICATIONS
Child Development and Community Health

The Division of Child Development and Community Health has two sections, Developmental-Behavioral Pediatrics and The Pediatric Center for Community Health. Dr. Sheila Gahagan, a developmental-behavioral pediatrician and epidemiologist who holds the Martin T. Stein Endowed Chair in Developmental-Behavioral Pediatrics, leads the division. The division is made up of 11 full-time faculty, nine adjunct faculty, and 52 research and health promotion staff including 25 with master’s degrees or higher. The division’s clinical mission is to provide evidence-based developmental-behavioral pediatric evaluation and treatment to children from birth to 21-years old. The research focus is to understand and test interventions for a range of common health problems related to community conditions and health disparities. Educating undergraduate students, medical students, pediatric residents, fellows in developmental-behavioral pediatrics, child psychiatry, and post-doctoral research fellows is an important mission of the division.

Developmental-Behavioral Pediatrics (DBP) has expanded its consultation services with a move to the Fresh Start Clinic space at 7920 Frost Street. The consultation clinic now has the capacity to assess and treat many more patients and we expect to double the number of children with developmental and behavioral concerns and disorders cared for in our clinic within the first six months. In addition to the developmental-behavioral pediatric consultation clinic, from 2009 –
2011, we have provided care for children at the Rady Children’s Hospital-San Diego (RCHSD) Autism Discovery Institute, San Diego Regional Center, and the First Five Project in South Bay San Diego. From 2010 – 2011, we have also participated in multidisciplinary care for vulnerable children in the foster care system who have complex social and medical problems through the KidSTART program (directed by RCHSD Developmental Evaluation Services). Developmental-Behavioral Pediatrics provides education for pediatric and internal medicine/pediatric residents through the RRC-required DBP one-month block rotation. In addition, medical students rotate through DBP during their core clerkship and may take a clinical elective in DBP. We also provide didactic teaching during the core curriculums for medical students and residents. Since 2009, two pediatricians have completed a clinical DBP fellowship. The DBP three-year ACGME approved fellowship begins July 1, 2011, with two first year fellows. The fellowship will include an intensive clinical year and two years focusing primarily on research and scholarly preparation for an academic career.

The focus of The Pediatric Center for Community Health is on prevalent health disparities in children and youth in the United States. Our work includes clinical, epidemiological and community-based research and local health promotion projects. We have been successful in funding our work through grants from the National Institutes of Health, Centers for Disease Control and Prevention, the California Foundation and other foundations, totaling $15,157,004 over the last two years. Currently, our areas of focus include childhood obesity, HIV/AIDS, adolescent pregnancy, oral health, access to care, and increasing underrepresented groups in the health professions. We work collaboratively across five research themes: Parenting and Family Processes; Determinants and Consequences of Childhood Obesity; Understanding and Reducing Health Disparities in Youth; Educating the Next Generation in Child Development and Community Health; and Working with Community Partners to Improve Child Development and Health. Because of our location on the U.S./Mexico border, our group has considerable expertise in issues relating the Latino context to children’s health outcomes. Through our Child Development and Community Health Pilot grants we have developed new research collaborations with faculty in Pediatric Gastroenterology, The Child and Adolescent Services Research Center (CASRC) at RCHSD, and the Department of Health Behavior at the School of Public Health at San Diego State University. While most of our research is local, we are leading funded research in Mexico and in Chile, related to HIV/AIDS and childhood obesity. Our international work broadens our focus but improves our ability to understand health disparities at home.

**FACULTY**

Sheila Gahagan, MD, MPH, Chief, Professor of Clinical Pediatrics
Sheila Broyles, PhD, MPH, Project Scientist, Senior Lecturer
Sandra Daley, MD, Clinical Professor of Pediatrics and Associate Chancellor, UC San Diego (UCSD)
Patricia East, PhD, Research Scientist
Nancy Graff, MD, Clinical Professor of Pediatrics (Joint appointment - General Pediatrics)
Yi Hui Liu, MD, MPH, Assistant Clinical Professor of Pediatrics
Kyung (Kay) Rhee, MD, MA, MSc, Assistant Adjunct Professor of Pediatrics
Martin T. Stein, MD, Professor Emeritus
Howard Taras, MD, Clinical Professor of Pediatrics
Michelle Zive, MS, RD, Academic Coordinator
Maria Luisa Zúñiga, PhD, Associate Adjunct Professor of Pediatrics (Joint appointment-Medicine)

**ADJUNCT FACULTY**

Cecilia Algarín, MD, Neurophysiology, University of Chile
Bronwen Anders, MD, Professor Emeritus
Adam Braddock, MD, Medical Staff Physician - Developmental-Behavioral Pediatrics
Raquel Burrows, MD, Endocrinology, University of Chile
Marcela Castillo, PhD, Psychology, University of Chile
Fátima Muñoz, MD, MPH, Medicine
Philip Nader, MD, Professor Emeritus
Patricio Peirano MD, PhD, Neurophysiology, University of Chile
Marcela Reyes MD, PhD, Preventive Medicine, University of Chile
POSTDOCTORAL FELLOWS

Tasha Taylor, MD, July 2008–July 2010
Nina Chien, PhD, Sept. 2009–June 2010
Anna Anderson-Lazo, PhD, Sept. 2010–April 2012

CLINICAL ACTIVITIES

Sheila Gahagan, MD, MPH
• Provides developmental-behavioral pediatric services in Developmental and Behavioral pediatric consultation clinic and in clinics that serve underserved communities (South Bay, KIDSTART clinics)
• Consults nationally and internationally on Developmental-Behavioral Pediatrics

Yi Hui Liu, MD, MPH
• Administers Developmental-Behavioral clinic, provides clinical care and oversees education for medical students, residents and Developmental-Behavioral Pediatric and Child Psychiatry fellows
• Provides clinical care clinics that serve underserved communities (South Bay, KIDSTART clinics)
• Provides care and consultation for children with developmental disabilities through San Diego Regional Center

Kyung (Kay) Rhee, MD, MA, MSc
• Provides care as a hospitalist in the Division of Pediatrics and Hospital Medicine at RCHSD and provides clinical care at Grossmont Hospital and Palomar Hospital

Martin T. Stein, MD
• Provides developmental-behavioral pediatric services in Developmental and Behavioral pediatric consultation clinic
• Provides clinical care in General Pediatrics clinic, including consultation to General Pediatricians related to Developmental and Behavioral problems
• Consults nationally and internationally on Developmental-Behavioral Pediatrics

Howard Taras, MD
• Prominent national leader and teacher in Developmental-Behavioral Pediatrics

HEALTH PROMOTION ACTIVITIES

Sheelia Broyles, PhD, MPH
• Educate caregivers on the importance of proper nutrition and physical activity for children and provide skills they can use to promote optimal physical health for their children and families

Nancy Graff, MD
• Advocacy for children served by foster care and child protection services
• Pediatric oral health policy development and training

Howard Taras, MD
• Outreach to parents, through community partner agencies, to provide access to low cost/no cost health care for families with uninsured children throughout the county
• Access to emergency dental care for children who qualify for the program, and to offer information and education to professionals, parents, and children to foster ongoing preventive dental care

Michelle Zive, MS, RD
• Dissemination of research-based social marketing programs for low-income communities, related to fruit and vegetable consumption and daily physical activity
• Obesity prevention addressing community environments, including schools, recreational facilities and parks in Latino neighborhoods

María Luisa Zúñiga, PhD
• Behavioral health and health promotion among persons of Mexican origin
Major Goals and Plans

1. To increase breadth and depth of research related to child health disparities. We expect that this will be accomplished in three ways:
   - Continuation of excellent work related to childhood obesity, adolescent pregnancy, HIV/AIDS, and addressing health services work force disparities
   - New research initiatives through new collaborations with other divisions, departments and schools (facilitated by CDCH pilot funding grants)
   - Build research on current innovative health promotion programs
   - Participating in faculty recruitments with other divisions in order to expand our focus to other health disparity conditions including asthma, injuries and mental health conditions

2. To increase the reach of Developmental-Behavioral Pediatrics through:
   - Increasing clinical volume
   - Addition of three-year ACGME approved fellows
   - Partnering with local programs providing developmental and behavioral assessment and intervention

3. To provide outstanding educational opportunities for trainees for:
   - Developmental-Behavioral Pediatrics fellows in clinical care, research and education
   - Post-doctoral fellows in public health, nursing, social sciences in child health disparities
   - Pediatric residents in Developmental-Behavioral Pediatrics and Community Pediatrics.
   - Medical students and undergraduate students in clinical care and research related to Developmental-Behavioral Pediatrics and Community Pediatrics.

4. Work to improve the health of our local community, through:
   - Health promotion projects funded by the Centers for Disease Control and Prevention and foundations. Our focus will continue to be on conditions in which disadvantaged children have higher risk compared to other children in the United States.

5. Increase the innovation and impact of our work through:
   - Interdisciplinary collaboration within and outside of our division
   - New projects with our strong community partnerships
   - Strategic thinking about current funding priorities

RESEARCH ACTIVITIES
Shelia Broyles, PhD, MPH
- Recruitment, development, enrichment, and retention program for Hispanic students and faculty
- Disparities in health
- Social and environmental determinants of health
- Disparities related to training health professionals
- University-Community Liaison, Clinical and Translational Research Institute-Community Engagement and Outreach Unit (CTRI-CE): Development of agency-based outreach strategies designed to improve recruitment of understudied, hard to reach participants; and consultation to UCSD researchers on the benefits of community-based participatory research, and methods for applying effective community engagement strategies into their research design
- National Children’s Study, Field Data Co-Team Leader, and Community Engagement team member: assistance with data collection personnel, field data metrics, and community outreach and engagement activities and related metrics
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<td>UCSD CDCH 2011 1952 02/UCSD CDCH Pilot Study</td>
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<tr>
<td><strong>Howard Taras, MD</strong></td>
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<tr>
<td>San Diego Clinical and Translational Research Institute</td>
<td>$3,033,699</td>
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<td>1UL1 RR031980-01/NIH Natl Ctr Research Resources</td>
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<td>Collaboration to Establish the Prevalence of FASD in San Diego, CA</td>
<td>$919,052</td>
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<td>San Diego Dental Health Initiative</td>
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<td>National Children’s Study (Swanson, PI)</td>
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Research Support (continued)

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<th>Grant/Contract #</th>
<th>Annual Budget</th>
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<td>Michelle Zive, MS, RD</td>
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<td>Behavior and Clinical Trials Participation in HIV+ Latinos</td>
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<td>Maria Luisa Zúñiga, PhD</td>
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<tr>
<td>HIV Care Among Recently Released HIV+ Jail Inmates (Pollini, PI)</td>
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<td>ID09-SD-016/CA HIV/AIDS Research Program (CHRP)</td>
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<td>Complementary &amp; Alternative Care Behavior in HIV+ Latinos in the US-Mexico Border Region</td>
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<td>AIDS International Training Program in the US-Mexico Border Region (Strathdee, PI)</td>
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<td>Mobile Phone-Based Video Directly Observed Therapy for Tuberculosis (Garfein, PI)</td>
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Sandra Daley, MD
- PI-NIH-funded Program Project focused on health disparities
- Recruitment, development, enrichment, and retention program for Hispanic students and faculty
- Factors that increase the number of qualified disadvantaged students entering the local healthcare workforce
- Disparities related to training health professionals

Patricia East, PhD
- Family- and individual-level factors that contribute to how younger siblings of pregnant teens can avoid teenage parenting (this is the only study in the country to focus on siblings’ risk of adolescent pregnancy and to examine family adaptation to adolescent transition to parenting)
Sheila Gahagan, MD, MPH
• Research is aimed at understanding health disparities in child growth and development
• PI on NIH-funded project on biological and psychosocial determinants of adolescent obesity and cardiovascular risk in Chilean adolescents
• PI on NIH-funded pilot grant studying an intervention to increase walking and decrease high-calorie beverage consumption in mothers and their pre-school-age children
• PI on Child Development/Community Health-funded pilot to test feasibility of promotora-led intervention to promote optimal weight in first-time pregnant mothers and their babies in collaboration with San Ysidro Health Center

Kyung (Kay) Rhee, MD, MA, MSc
• PI on NIH-funded pediatric weight control intervention that examines the role of parent behaviors and parenting style in the success of treatment in overweight/obese 8-12 year old children. The study is also examining baseline underlying difference in parent feeding behaviors and parenting style among parents of overweight and normal weight children
• Co-PI on a Child Development/Community Health-funded project that is developing and piloting a culturally tailored behavioral weight control intervention for Latino children and their families. This project involves focus groups with Latino parents and subsequent modification of the current behavioral intervention that will be used in a pilot intervention.

Martin T. Stein, MD
• Research focuses on bringing multidisciplinary experts together to think about challenging pediatric cases. This work is published as a regular article in the Journal of Developmental & Behavioral Pediatrics.

Howard Taras, MD
• Co-Investigator and director of the Community Engagement Unit, of the Clinical & Translational Research Institute, funded by the NIH-NCRR
• Co-Investigator, directing community engagement for the National Children’s Study
• Research methods of cross-professional teaching at California Western School of Law
• Research in practical applications of school health

María Luisa Zúñiga, PhD
• Research focus is on health care access and utilization in the US-Mexico border region with particular emphasis on Latinos living with HIV and Community-Based Participatory Research
• Primary and secondary HIV-prevention, including HIV/STI prevention among youth, barriers to health care utilization, complementary and alternative medicine use, and stigma and HIV-transmitting risk behaviors among Latinos living with HIV in the border region
• Zuniga has considerable expertise in Community-Based Participatory Research

TEACHING ACTIVITIES

Shelia Broyles, PhD, MPH
• Taught Quantitative and Qualitative Research Methodologies, with emphasis on health and health disparities impacting underserved and at-risk populations
• Supervises medical students’ Independent Study Projects
• Supervises undergraduate and graduate students’ special projects and internships
• Mentors students in SDSU-UCSD joint doctoral program in health behavior
• Lecturer, Special Topics in Health Disparities, SDSU graduate public health class
• CTRI-CE: Development of education modules to train staff, students, residents, and researchers covering community outreach topics such as the benefits of community-based participatory research, and methods for applying effective community engagement strategies into clinical and behavioral research design
• National Children’s Study - mentor student interns in community engagement methods and supervise activities

Sandra Daley, MD
• Principal Investigator of the Health Career Opportunities Program, Hispanic center of Excellence, and San Diego Comprehensive NIMHD Research Center in Health Disparities (CRCHD)
• Chair, The Preuss School Board of Directors
• Co-Chair, UCSD School of Medicine Diversity Task Force
• Board member, The San Diego Foundation, San Diego, CA
• Educational activities include: recruitment and retention of students and faculty from disadvantaged groups;
establishing partnerships with community groups and schools of higher education; teaching and mentoring students, fellows and junior faculty; and designing and implementing academic enrichment and research training programs for post-baccalaureate, community college, middle and high school academic enrichment and research methodology training programs

- Supervises medical students’ Independent Study Projects (ISP)
- Program advisor for the Healthcare Opportunities Preparation Empowerment Program (HOPE), UCSD Diversity Coalition, and the School of Public Health course, Special Topics in Health Disparities

**Patricia East, PhD**

- Mentor for post-doctoral fellow, Nina Chien PhD (Education) September 1, 2009 – June 30, 2010
- Directs monthly Post-doctoral fellows Faculty Development Seminar attended by six post-doctoral fellows in psychology, health behavior, anthropology, developmental-behavioral pediatrics
- Master’s Thesis Committee Member for Humberto Parada - SDSU Master’s of Public Health Candidate. Thesis: Adolescent Mothers’ Relationships with Their Baby’s Father: Relations to Parenting and Child Acceptance at One year Postpartum, 2009-ongoing

**Sheila Gahagan, MD, MPH**

- Precepts residents and medical students on Developmental-Behavioral Pediatric rotation
- Core faculty for the Community Pediatric rotation (attends two months/yr)
- Mentor and thesis committee member for Master’s level students in Public Health (Christine Williams, MPH, Health Promotion and Behavioral Sciences, 2011) and Clinical Research (Olga Dolgonos, MD, MAS, 2011)
- Mentor and thesis committee member for Doctoral level students in Nursing (Melinda Bender, PhD, 2009-2011) and Public Health—Health Behavior (Kim Tran Carpuic, PhD candidate, 2010-2011; Kristi Robusto, PhD candidate, 2010-2011)
- Mentor for post-doctoral fellow Suzanna Martinez, PhD, MS (Health Behavior) September 1, 2009 – September 1, 2012
- Mentors Dept. of Pediatric junior faculty (Kimberly Newton, MD-Pediatric GI), Lillian Choi, MD (Pediatric GI), Adrianna Tremoulet, MD (Pediatric Pharmacology), Yvette Lacoursiere, MD (Obstetrics)
- Co-directs post-doctoral fellows Faculty Development Seminar
- Consults nationally and internationally in Developmental-Behavioral Pediatrics and children’s growth

**Nancy Graff, MD**

- Rotation director for Community Pediatrics Rotation-Resident training in community pediatrics, advocacy, and child protection; Attending physician three-four blocks per year plus maintains curriculum; Develop and implement four Cultural Immersion Days per year, three film nights per year and one theater night per year; Leads two noon conferences in Community Pediatrics
- MS-4 course Principles to Practice: small group facilitator for general pediatrics cases; Directed the adolescent medicine case session and was small group facilitator
- Teaches continuity clinic residents in General Pediatrics

**Yi Hui Liu, MD, MPH**

- Developmental-Behavioral Pediatrics RRC-required block rotation director
- Precepts medical students, residents, and fellows in Developmental-Behavioral clinics

**Kyung (Kay) Rhee, MD, MA, MSc**

- Teaches topics in core hospitalist medicine curriculum to pediatric hospitalist fellows
- Developed and leads monthly research working group meetings in the Division of Child Development and Community Health
- Leads monthly research meetings in the Division of Pediatrics and Hospitalist Medicine
- Teaches UCSD undergraduates in Special Studies Course (BISP199)
- Supervises graduate students and post-doc students in delivering behavioral weight control intervention

**Martin T. Stein, MD**

- Precepts residents and medical students on Developmental and Behavioral rotation
- Consults nationally and internationally on Developmental-Behavioral Pediatrics
- Pediatrics 401: Core Pediatric Clerkship
• Lectures in Child Development (medical students)
• Conducts seminars in Child Development: Child and Adolescent Psychiatry Fellows
• Monthly Joint Conference with Developmental-Behavioral Pediatrics and Child Psychiatry
• Monthly Joint Conference with Developmental Services at RCHSD
• Pediatric Professor’s Rounds

Howard Taras, MD
• Core faculty for the Community Pediatric rotation (11 months per year of teaching; one month of precepting)
• Oral health training session, monthly for 10 months per year to medical students
• Supervises medical students’ Independent Study Projects
• Co-directs pediatric residents’ continuity clinic program
• Course co-director, Introduction to Clinical Medicine

María Luisa Zúñiga, PhD
• Course Instructor, UCSD clinical research enhancement through supplemental training (CREST)
• Co-director and Instructor, Joint Doctoral Program Public Health UCSD Series FPM 258A, B, C
• Co-Instructor, Culture and Ethics, UCSD Biomedical Ethics Series (Winter 2011)
• Lecturer, Post-Doctoral Cancer Disparities Seminar (Fall 2010)
• Invited Course Instructor, Epidemiology in the Mexico-U.S. Border Region, Masters in International Health, Universidad Xochicalco, Tijuana, B.C., Mexico (Winter 2011)

RCHSD DEVELOPMENTAL EVALUATION SERVICES

The Division of Child Development and Community Health works closely with RCHSD Program of Developmental Evaluation Services for education of pediatric residents and Developmental-Behavioral Pediatric Fellows.

Kristin Gist, MS, Senior Director
Audiology, Speech-Language Pathology, Occupational Therapy, Developmental Evaluation Clinic and the Autism Discovery Institute provide outstanding training opportunities for pediatric residents and Developmental-Behavioral Pediatric Fellows. Developmental-Behavioral Pediatric faculty collaborate with Developmental Evaluation Services to provide care for children with complex developmental needs.

Alyssa Needleman, PhD, CCC-A, FAAA, Manager, Audiology
Audiology Department offers a full range of diagnostic and rehabilitative audiologic services, serving San Diego, Riverside, Imperial, San Bernardino and Orange counties, and families from Mexico. Services include diagnostic hearing tests, dispensing hearing aids and counseling, auditory evoked response testing, and cochlear implant services. Over the past two years (2009–2011) inpatient and outpatient visits for 25,000 patients included over 13,500 audiological evaluations, 2,000 brainstem evoked response tests (BERs), and 1,700 hearing aid fittings. In fiscal year 2011, audiologists saw more than 14,000 patients, including more than 350 patients with cochlear implants. Residents rotate through the Audiology Department under the supervision of Dr. Catherine Moyer and Dr. Shani Goldgrub and have the opportunity to observe diagnostic audiological evaluations and hearing aid fittings, and receive education on degrees and types of hearing loss, types of hearing aids, cochlear implants and other amplification devices, and the basics of how to read an audiogram, audiological tests and how to order them.

Shari Garrett, MS, CCC-SLP, Manager, Speech-Language Pathology
Speech-Language Pathology Department provides comprehensive individualized inpatient and outpatient evaluation and treatment in speech production, language comprehension, expressive language, voice, fluency, auditory processing, and pragmatics. Speech-language pathologists also provide multi-disciplinary evaluation, consultation, and enrichment classes for children birth to five years of age through the First 5 Commission of San Diego’s HDS initiative and KidSTART, a new multidisciplinary program for children ages 0-5 presenting with complex developmental and/or behavioral needs. The Speech-Language Pathology Department conducted more than 20,000 evaluation and treatment sessions in both fiscal years 2010 and 2011. Residents observe diagnostic and treatment sessions under the supervision of Valerie Dorfman, MS, CCC-SLP.
They also receive education about speech and language developmental expectations, milestones, and delays. Education is provided on frequently asked questions regarding typical and atypical fluency, voice and resonance, social pragmatics, and apraxia associated with autism spectrum disorders.

**Eileen Porter, OTR/L, HTC, PAM, Manager, Occupational Therapy**

Occupational Therapy Department provides a wide range of diagnostic and rehabilitation inpatient and outpatient services for children with developmental delays and disabilities including a focus on self-care skills, hand rehabilitation, splint fabrication, sensory processing, feeding and swallowing, fine motor coordination, and developmental activities. Occupational therapists also provide multidisciplinary evaluation, consultation, and enrichment classes for children ages 0-5 through the First 5 Commission of San Diego’s HDS initiative and KidSTART, a new multidisciplinary program for children, ages 0–5. The results of these comprehensive diagnostic evaluations are used to create a profile of developmental strengths and delays and identify early intervention programs and therapies. Outpatient services are also provided at Solana Beach, Oceanside, and Temecula. Over the past two years, the Developmental Evaluation Clinic (DEC) conducted more than 1,600 developmental evaluations for children from San Diego, neighboring, and Baja California, Mexico. Residents spend a day with a clinical psychologist in DEC observing a developmental evaluation during Developmental-Behavioral Pediatrics. Our Clinical Improvement Coordinator serves as the mentor for this program and reviews diagnostic tools with the residents.

**Jeffery Olson, Supervisor, Developmental Services Operations**

Developmental Evaluation Clinic (DEC) offers inpatient and outpatient developmental and psychoeducational evaluation services for children birth-18 years, with a focus on children, ages 0–5. The results of these comprehensive diagnostic evaluations are used to create a profile of developmental strengths and delays and identify early intervention programs and therapies. Outpatient services are also provided at Solana Beach, Oceanside, and Temecula. Over the past two years, the Developmental Evaluation Clinic provided 73,000 patient visits. Physical therapists also provide consultation and enrichment classes for children, ages 0–5, in the community through First 5 Commission funding. Other programs include a multidisciplinary program for children presenting with complex developmental and/or behavioral needs and a program to assist drug using mothers to bond with their infants by teaching them infant massage. Residents observe evaluation and treatment sessions for young patients with developmental delay and adolescent patients with orthopedic and sports injuries. In addition, residents learn about who to refer and how.

**Nan Haney, PT, MS, PCS, Manager, Physical Therapy**

Physical Therapy Department offers inpatient and outpatient rehabilitation services for children with a goal that each child achieve optimal developmental and functional outcomes focusing on continuity of care in the treatment of neurological, congenital, orthopedic, and developmental problems from infancy through adolescence. Over the past two years (2009–2011), the Physical Therapy Department provided 73,000 patient visits. Physical therapists also provide consultation and enrichment classes for children, ages 0–5, in the community through First 5 Commission funding. Other programs include a multidisciplinary program for children presenting with complex developmental and/or behavioral needs and a program to assist drug using mothers to bond with their infants by teaching them infant massage. Residents observe evaluation and treatment sessions for younger patients with developmental delay and adolescent patients with orthopedic and sports injuries. In addition, residents learn about who to refer and how.

**Christina Corsello, Ph.D., Clinical Director and Aubyn Stahmer, Ph.D., Research Director, Autism Discovery Institute**

Autism Discovery Institute (ADI) provides comprehensive diagnostic and treatment services for children with autism spectrum disorders. Services include diagnostic assessments, parent-child developmental behavior therapy (PC-DBT), parent education and training, social skills groups, behavior modification, cognitive behavior therapy, service coordination and professional training. Specialized inclusion toddler and preschool programming is provided at Alexa’s Playful Learning Academy for Young Children (PLAYC), which includes educational and therapeutic programming designed to integrate early education for typically developing children and children with autism or related disorders. In addition, the ADI is involved in research in diagnostic practices, individualized intervention, service systems, and genetics. Child psychiatry and Developmental-Behavioral Pediatric appoint-
ments are also offered within the ADI. Residents and fel-
lows observe diagnostic evaluations and children in class-
rooms, under the direction of Drs. Christina Corsello,
Natacha Akshoomoff, and Jennifer Reinehr. Residents
learn about diagnostic assessments, intervention programs,
community resources, and early screening and how to refer
for an evaluation or intervention.

AWARDS, HONORS AND
MAJOR PRESENTATIONS

Sheila Gahagan, MD, MPH
UCSD National Center of Leadership in Academic Medicine Mentor Award, 2009
Academic Senate Research & Travel Award, UCSD 2010
Biopsychosocial risk for adolescent obesity in a Chilean cohort. UCSD Department of Pediatrics Faculty Research Seminar, San Diego, CA, April 28, 2009
Biopsychosocial risk for adolescent obesity in a cohort from Santiago. Institute of Nutrition and Food Technology, University of Chile, Santiago, Chile, July 6, 2009
Infant and toddler sleep. UCSD Department of Pediatrics, San Diego, CA, July 28, 2009
The development of eating behavior. UCSD Department of Pediatrics Grand Rounds, San Diego, CA, September 25, 2009
Risk for adolescent obesity – Early growth, eating behavior, sleep and activity. Keynote Speaker – Pediatric Research Day, Michigan State University and Wayne State University, March 12, 2010
Sleep in typically developing and impaired children. Visiting Professor, University of Brescia, Brescia, Italy, October 27, 2010
The development of eating behavior. Visiting Professor, University of Brescia, Brescia, Italy, October 28, 2010
Strategies for early identification of neurologically impaired infants. Visiting Professor, University of Brescia, Brescia, Italy, October 29, 2010
Developmental outcomes in adolescent and adults who were former premature infants. 11th Annual APECADE Conference (The Association for Early Intervention for Development in At Risk Infants), Paris, France (presented in French), March 25, 2011
Behavioral and psychiatric outcomes in adolescent and adults who were former premature infants. 11th Annual APECADE Conference (The Association for Early Intervention for Development in At Risk Infants), Paris, France (presented in French), March 25, 2011

Sandra Daley, MD
Salvation Army Women of Distinction Award, 2010
The California Wellness Foundation Champion’s of Health Professions Award, 2010
POWER presentation at the Upward Bound Awards Banquet, San Diego, CA, July 23, 2009
Why medicine, why you. Presentation at the Student National Medical Association Region I Annual Conference, San Diego, CA, October 17, 2009
Is inequality making us sick? Presentation at the UCSD Medical Center Diversity Association Lecture Series, San Diego, CA, October 27, 2009
Developing pipeline programs for diversity in health careers. Presentation at the American Association of Medical Colleges Annual Meeting, GSA/GEA Breakout Session, Boston MA, November 9-11, 2009
Twelfth Annual/NMA Lenoir Pediatric Allergy, Asthma and Immunology Lecture, January 15, 2010
The challenges of diversity in academia: Walking the walk. Association for Library and Information Science Annual Conference, San Diego, CA, January 5, 2011
UCSD Health Sciences Institute Student Tracking: Lessons learned. Presentation at the HRSA Health Professions Diversity HCOP/COE Conference, Bethesda MD, February 1-3, 2011
Albert Einstein College of Medicine 8th Annual Minority and Women Faculty Career Development Day, March 22-23, 2011

Patricia East, PhD
San Diego Business Journal Women Who Mean Business Award, 2009

Nancy Graff, MD
Indications of physical abuse. Training for the investigator: Burn evaluations, September 2010 and March 2011, San Diego, CA
Coordinator, California Collaborative Resident Legislative Advocacy Program, Sacramento, CA, 2009-2011

**Yi Hui Liu, MD, MPH**
Focus (I wish they would) on ADHD. Practical pointers for pediatric practice, San Diego, CA, October 24, 2009
Pharmacological pitfalls in managing developmental-behavioral disorders: ADHD and autism drugs. Advances in the practice of pediatrics, San Diego, CA, March 26, 2010
School readiness. Pediatric Grand Rounds at RCHSD, San Diego, CA, August 27, 2010
Medication and young children: A developmental-behavioral pediatrician’s perspective. We can’t wait! Recognition and treatment of mental health problems in children 0-5, San Diego, CA, September 25, 2010
Don’t be delayed! Developmental screening in primary care. Practical Pediatrics, San Diego, CA, October 30, 2010

**Kyung (Kay) Rhee, MD, MA, MSc**
Warren Alpert Medical School of Brown University Medical Student Teaching Award, 2009
Hasbro Children’s Hosp. Resident Teaching Award, 2009

**Martin T. Stein, MD**
C. Anderson Aldrich Award for Contributions in Child Development: American Academy of Pediatrics National Center for Child Health and Development. Tokyo, Japan 2009
Warren Weiswasser lecture in developmental and behavioral pediatrics, Yale School of Medicine, 2009
Rethinking well child care. Seminar at Pediatric Academic Society (PAS), San Francisco, CA, 2009
Scottish Rite Children’s Hospital, Dallas, TX, 2010
Pediatric psychopharmacology Presentations, 2009, 2010

**Maria Luisa Zúñiga, PhD**
Improving health outcomes for Latino patients. UCSD Nursing Grand Rounds, San Diego, CA, March 11, 2009
Understanding health care access and care utilization among HIV-positive Latinos in the US-Mexico border region. San Diego State University School of Social Work, April 7, 2009
UCSD School of Medicine University Link Medical Science Program Award in recognition of dedication and willingness to share time and resources with students of the program, 2009
Comisión de Salud Fronteriza México-Estados Unidos (US-Mexico Border Health Commission) Award for contributions to binational border health, 2010
San Ysidro Health Center CASA HIV/AIDS Services Program Community Award for commitment to serving persons living with HIV through research and improving health and quality of life, 2010
Universidad Xochicalco, Campus Tijuana Award in recognition for contributions as Honorary Faculty of the School of Medicine, 2010

**PUBLICATIONS**


Liu YH, Stein MT. Talking with Children. In: *The Zuckerman Parker Handbook of Developmental and


McCabe CT, Woodruff SI, Zúñiga ML. Sociodemographic and substance use correlates of tobacco use in a large, multi-ethnic sample of emergency department patients. *Addict Behav*, 2011 Apr 22. [Epub ahead of print].


The Critical Care Division is responsible for the Pediatric Intensive Care Unit (PICU) at Rady Children's Hospital-San Diego (RCHSD), a 30-bed unit that admits approximately 1,200 patients per year. The PICU multidisciplinary team is led by one of six attending pediatric critical care physicians. This team is responsible for the care of all patients in the intensive care unit, working closely with physicians from other specialty and subspecialty disciplines to assure excellent care. The PICU and its staff are an essential component of many programs at RCHSD, including the Regional Pediatric Trauma Center, the cardiovascular surgical program, and the pediatric transport program. In addition, the PICU plays an active part in both the educational and research missions of the hospital. Dr. Bradley Peterson is the Medical Director of the PICU and Dr. Susan Duthie is the Associate Medical Director.

The Anesthesia Division provides anesthesia services for 22,500 inpatient and outpatient procedures per year. The operating rooms consistently score in the top five percent of children's hospitals in operating room efficiency and utilization, as well as on-time starts. This has been achieved through the creative scheduling of Dr. Alvin Faierman, Director of Perioperative Scheduling, and through the cooperation of Dr. Scott Gillin, Chief of Anesthesia. The acute pain service is headed by Dr. George Ulma and provides services to approximately 2,500 patients annually.

Left to right: Eddie Canada, Alex Rodarte, Sandra Saw, Kathy Kaya, Andy Zimmerman, Robert Spear, Nate Brakke
FACULTY

Bradley Peterson, MD, FAAP, FCCM, Chief, Critical Care Section, Associate Clinical Professor of Pediatrics and Anesthesiology
Scott Gillin, MD, Chief, Anesthesia Division, Assistant Clinical Professor of Anesthesiology
Nathan Brakke, MD, Assistant Clinical Professor of Anesthesiology
Edgar Canada, MD, Clinical Instructor of Anesthesiology
Susan Duthie, MD, FAAP, Associate Medical Director, Critical Care Section
Alvin Faierman, MD, Clinical Instructor of Anesthesiology
Brock Fisher, MD, Assistant Clinical Professor of Anesthesiology
Michael Flynn, MD, Associate Clinical Professor of Anesthesiology
David Frankville, MD, Associate Clinical Professor of Anesthesiology

Josh Gordon, MD, Assistant Clinical Professor of Anesthesiology
Mark Greenberg, MD, Professor of Anesthesiology and Pediatrics
Gloria Hwang, MD, Clinical Instructor of Anesthesiology
Kathleen Kaya, MD, Assistant Clinical Professor of Anesthesiology
Sandeep Khanna, MD, FAAP
Daniel Lee, MD, Assistant Clinical Professor of Anesthesiology
Sidney Merritt, MD, Associate Professor of Anesthesiology
Daniel Ness, MD, Assistant Clinical Professor of Anesthesiology

Left to right: Anthony Stanzi, Scott Gillin, Vinit Wells, Gloria Hwang, Alvin Faierman, George Ulma
Christine Nieman, MD, Assistant Clinical Professor of Anesthesiology
Alex Rodarte, MD, Associate Clinical Professor of Anesthesiology
William Ronan, DO, Assistant Clinical Professor of Anesthesiology
Sandra Saw, MD, Assistant Clinical Professor of Anesthesiology
Robert Spear, MD, Assistant Clinical Professor of Anesthesiology
Clay Stanley, MD, Clinical Instructor of Anesthesiology
Jennifer Ting, MD, Assistant Clinical Professor of Anesthesiology
George Ulma, MD, Clinical Instructor of Anesthesiology
Karen Vanderwall, MD, Assistant Clinical Professor of Anesthesiology
Vinit Wellis, MD, Assistant Clinical Professor of Anesthesiology
Michael Worthen, MD, Assistant Clinical Professor of Anesthesiology
A. Andrew Zimmerman, MD, Clinical Instructor of Anesthesiology

DIVISION OF PEDIATRIC CRITICAL CARE POSTDOCTORAL FELLOWS

Milton “Bill” Meadows, MD
Anya Freedman, MD
Francisco Recalde, MD
Matthew Wilder, MD
Raveen Raviendran, MD
Jesse Gargas, MD
Helen Harvey, MD
Brian Frugoni, MD

CLINICAL ACTIVITIES
INPATIENT/OUTPATIENT

The Anesthesia Division provides anesthesia care to patients in the 16-room Acute Care Pavilion Operating Room Suites, the Sharp Memorial Hospital and Rady Children’s Hospital-San Diego MRI Center, the catheterization lab, the CT scanner, hematology-oncology procedure center, and to those receiving special procedures that must be performed at Sharp Memorial Hospital. The Division provides services for all major surgical procedures including congenital heart surgery, major orthopedic surgery, trauma, and organ transplants.

Dr. George Ulma is the Medical Director of the Acute Pain Service, which provides consultation for post-operative and oncology patients. The Division presents an annual pain conference at RCHSD, in addition to the ongoing pain resource nurse course.

A multidisciplinary team led by the attending critical care physician treats critical care patients in the PICU. This team includes nursing, respiratory therapy, pharmacy, social work, child life, the case manager and chaplaincy. Nutrition support, occupational therapy, physical therapy and speech therapy also join the multidisciplinary team when needed.

The medical team in the PICU includes the attending physicians, critical care fellows, and critical care nurse practitioners and resident physicians. The PICU is a closed unit, which means that the critical care medical team coordinates care given by all medical and surgical sub-specialists, and is ultimately responsible for the care each patient receives in the PICU. In addition, the medical team is responsible for the care of patients located outside of the PICU that are still on the PICU service. This may include trauma patients, as well as patients who have been transferred from the PICU to other areas of the hospital.

A critical care faculty member leads daily bedside patient care rounds. These rounds consist of an in-depth review of all pertinent radiological tests, laboratory data, and clinical data and all medical and surgical consulting opinions. A plan of care for the day is determined during rounds. In addition, the critical care faculty members provide consultations on patients in other care areas when requested, and attend all trauma activations as integral members of the trauma team.
Major Goals and Plans

Critical Care

To ensure continued excellent quality of care:
• Continue to collect and review PRISM data

To maintain excellence in the education and training of critical care fellows:
• Continue to provide educational programs for the fellows such as didactic conferences, journal club and research meetings
• Invite fellows to participate in the Multidisciplinary Critical Care Knowledge Assessment Program (MCCKAP) examination, a national test of core critical care knowledge

To support research by critical care attendings and fellows:
• Encourage all critical care fellows to identify and submit a research project to the IRB by the end of their first year of training
• Improve the number of fellow research projects submitted for presentation at a national meeting

To improve national recognition for the Critical Care Program at RCHSD:
• Increase the program’s presence at national meetings through committee involvement, speaking and participation

To strengthen education for critical care nursing and respiratory therapy:
• Oversee a bimonthly case conference for the critical care staff and be involved in planning and implementing Advanced Critical Care Topics

Division of Anesthesia

The Anesthesia Division’s future goals are to:
• Continue improving efficiency in the operating room
• Provide support for new programs such as cardiac transplant with minimal interruption in operating room efficiency and scheduling
• Improve on an acute pain database to allow more data analysis for quality improvement
• Provide guidance in providing acupuncture as a form of alternative medicine for oncology patients
• Encourage the use of regional anesthesia with the use of ultrasound location techniques

The PICU participates in a national program (PICUE) that reviews observed and predicted (based on severity of illness scores, PRISM) morbidity and mortality, as well as other care indicators in 34 major PICUs across the country. From December 2000 to December 2005, the PICU at RCHSD had the best outcomes of all PICUs combined. The observed mortality was 3.94%; based on PRISM scores, the predicted mortality was 5.33%. This yields a Z-score of (-) 6.03 (i.e., 6 standard elevations to the good side), the best in the country.
RESEARCH ACTIVITIES

Susan Duthie, MD, FAAP is currently researching a benefit analysis of routine follow-up computed tomographic (CT) scans in pediatric trauma patients with closed head injury. Dr. Duthie is also researching whether the use of antibiotics with open and/or deressed skull fractures reduces associated infectious complications.

Brock Fisher, MD is the Fellowship Research Director. His responsibilities include assisting the Critical Care Fellows in the creation, design, implementation and publication of their mandated research activities. Department research meetings are held monthly to discuss logistics and progress of research activities. Current research includes evaluation of external closed-chest compression in a tertiary pediatric setting. Dr. Fisher is also researching the use of D-Dimer after brain trauma.

Michael Flynn, MD, FAAP, FCCM has been a consultant for many medical devices including warming technology and devices used for maintaining the airway during surgery.

Sandeep Khanna, MD, FAAP has been a primary investigator evaluating the use of mannitol to decrease cerebral venous congestion and postoperative irritability in bi-directional cavopulmonary shunt patients. Dr. Khanna has also been studying vasospasm in pediatric traumatic brain injury and comparing pediatric intensivists’ and pediatric radiologists’ interpretations of post-traumatic head CT scans. Dr. Khanna has been actively evaluating whether a cervical spine computed tomography scan is sufficient to clear cervical spine precautions in pediatric trauma patients. Another area of research is whether children with minor closed head injury, GCS 15, and radiographic evidence of intracranial injury be discharged from the emergency room safely after a period of observation.

Bradley Peterson, MD, FAAP, FCCM has been researching 3% hypertonic saline as rescue therapy for elevated intracranial pressure. He has also been examining CT findings in near-drowning patients, helium-oxygen gas as an adjuvant therapy in pediatric patients with acute respiratory distress syndrome, and evaluating mannitol in postoperative bi-directional cavopulmonary shunt patients. He has been a primary investigator studying vasospasm in pediatric traumatic brain injury. Dr. Peterson has also been a lead investigator for a multi-arm study evaluating B-Type natriuretic peptide in pediatric patients with congenital heart disease. Additionally, he has been a lead investigator and mentor for a prospective dual-phase project evaluating the use of a serum biomarker panel to diagnose and manage pediatric brain injury. This project has led to the identification of a low plasma d-dimer as a predictor of the absence of brain injury in children.

Alexander Rodarte, MD has been interested in the pharmacokinetics of drugs used in the perioperative setting, as well as the Pediatric Intensive Care Unit. He has performed research in antiemetics, as well as medications for the relief of postoperative pain and the use of topical anesthetics for the prevention of pain in minor procedures in children.

Michael Worthen, MD research interests include near-infrared spectroscopy (NIRS) monitoring following repair of congenital heart disease, and evaluating an age based formula and bedside clinical exam findings for endotracheal tube placement in children. He is also the Principal Investigator researching the incidence of cerebral micro emboli during pediatric cardiac catheterization. Dr. Worthen has also been researching repetition radiography, examining the rates, costs, and diagnostic issues associated with inter-facility transfer of pediatric patients.
TEACHING ACTIVITIES

Each anesthesia attending is responsible for teaching Anesthesia residents from UC San Diego (UCSD) and the Navy Medical Center in San Diego. In addition, the Division trains respiratory therapists, emergency medical technicians, medical students and emergency department and pediatric residents in airway management.

In the Critical Care Division, each faculty member is responsible for teaching the critical care fellows, nurse practitioners, residents and non-physician staff while on the clinical service in the PICU. Teaching may take place during patient care rounds or at the bedside with new admissions. In addition, each faculty member is responsible for presenting several didactic talks for the fellows throughout the year. The UCSD Pediatric Residents, and the RCHSD Pediatric Emergency Department fellows spend time in the PICU and the critical care attending physician is responsible for their training.

Susan Duthie, MD, FAAP
- Organizes and oversees the biweekly didactic lecture series for the subspecialty residents and attends the majority of these lectures
- Participates in the monthly Critical Care Morbidity and Mortality conference and Journal Club meetings
- Provides lectures for the pediatric residents on the PICU service, new nursing graduates, and cardiology fellows

Sandeep Khanna, MD, FAAP
- Participates in the monthly Critical Care Morbidity and Mortality conference and Journal Club meetings
- Provides lectures for the pediatric residents on the PICU service

Brock Fisher, MD
- Serves as Research Director for the Critical Care Department
- Responsible for organizing and running the monthly Journal Club
- Participates in the monthly Critical Care Morbidity and Mortality Conference
- Provides lectures for Pediatric Grand Rounds and the Advanced Trauma Symposium

Bradley Peterson, MD, FAAP, FCCM
- Chairs the monthly Critical Care Morbidity and Mortality Conference
- Conducts the bimonthly Transport Case Conference
- Supervises the subspecialty residents in all aspects of patient care
- Lectures at the bimonthly Nursing Care Conference

Robert Spear, MD
- Participates in the monthly Critical Care Morbidity and Mortality Conference and Journal Club meetings

Michael Worthen, MD
- Participates in the monthly Critical Care Morbidity and Mortality Conference and Journal Club meetings

POSTER PRESENTATIONS


Nathalang D, Khanna S, Harvey L. Comparison of pediatric intensivists’ and pediatric radiologists’ interpretations of post-traumatic head CT scans. Poster Presentation at the 10th Annual John M. Templeton Jr. Pediatric Trauma Symposium, Selected as 1st place, Poster Presentation Award. Philadelphia, PA, March 2010


Duthie S, Harvey H, Bush R, Levy M, Hilfiker M. Scheduled follow-up computed tomography (CT) scans in pediatric trauma patients with closed head injury. Poster presentation at the 6th World Congress on Pediatric Critical Care. Sydney, Australia, March 13-17, 2011

**ORAL PRESENTATIONS**

Wilder M. Grand Rounds Presentation, Myocardial and vascular sequelae of Kawasaki disease. UCSD/RCHSD, San Diego, CA, 2009

Khanna S. Invited Speaker, Oral presentation: Congenital heart disease-management. Paediatric Cardiac Surgery Programme, Heart and General Hospital, Jaipur, India, January 30-February 5, 2010
Worthen M. Invited Speaker, Oral presentation: Congenital heart disease program in RCHSD, Paediatric Cardiac Surgery Programme, Heart and General Hospital, Jaipur, India, January 30-February 5, 2010
Khanna S. Oral presentation: Bidirectional cavopulmonary anastomosis. Pediatric Critical Care Nursing National Conference, San Diego, CA, October 26, 2010
Brock F. Oral presentation: Diagnosis and management of abdominal trauma in children. Pediatric Critical Care Nursing National Conference, San Diego, CA, October 29, 2010
Brock F. Oral presentation: Diagnosis and management of head trauma in children. Pediatric Critical Care Nursing National Conference, San Diego, CA, October 29, 2010
Gargas J, Khanna S. Oral presentation: Cervical spine computed tomography scan, is this sufficient to clear cervical spine precautions in pediatric trauma patients? 6th World Congress on Pediatric Critical Care, Sydney, Australia, March 13-17, 2011

PUBLICATIONS

CHAPTERS

CHAPTERS IN PRESS
The Division of Pediatric and Adolescent Dermatology is one of the largest pediatric dermatology units in the United States, and is a highly respected center for training in pediatric dermatology, with rotating physicians and trainees from throughout the world. The 2009-2011 academic years were tremendously successful for the division, with expansion of clinical services, educational activities and the research program.

The Eczema and Inflammatory Skin Disease Center, the first program of its type in the nation, continues to evolve clinical care, education, and research in atopic dermatitis, psoriasis, acne and other inflammatory diseases of childhood and adolescence. The Vascular Lesion and Birthmark Center has developed as a regional and national resource for the evaluation, management and study of hemangiomas, vascular malformations, pigmented and other cutaneous birthmarks. The Center’s services include multidisciplinary clinics with experts in dermatology, laser and plastic surgery, diagnostic and interventional radiology, otorhinolaryngology, pathology, ophthalmology and orthopedics. The division’s diverse faculty members also specialize in procedural dermatology, cutaneous infections, genetic diseases, nevi (moles) and skin cancer, as well as initiatives for disease prevention and to improve skin health over a lifetime.
The division offers one of the most comprehensive dermatology programs for children in the world, and is the largest and one of the most sought-after fellowship training programs in the nation.

**FACULTY**

- **Lawrence F. Eichenfield, MD**, Director, Professor of Clinical Pediatrics and Medicine
- **Sheila Fallon Friedlander, MD**, Professor of Clinical Pediatrics and Medicine
- **Magdalene A. Dohil, MD**, Associate Professor of Clinical Pediatrics and Medicine
- **Victoria R. Barrio, MD**, Associate Clinical Professor of Pediatrics and Medicine
- **Wynnis L. Tom, MD**, Assistant Clinical Professor of Pediatrics and Medicine
- **Sharon E. Jacob, MD**, Associate Clinical Professor of Medicine and Pediatrics
- **Richard L. Gallo, MD, PhD**, Professor of Medicine and Pediatrics
- **Neil F. Gibbs, MD**, Associate Clinical Professor of Pediatrics without Salary
- **Susan Boiko, MD**, Assistant Clinical Professor of Pediatrics – Voluntary

**POSTDOCTORAL FELLOWS**

- **Michael Caglia, MD** (Research)
- **Tina Chen, MD** (Clinical)
- **Andrew Krakowski, MD** (Clinical)
- **Caroline Piggott, MD** (Clinical)
- **Michael Ososky, MD** (Clinical)
- **Catalina Matiz, MD** (Research)
- **Chika Ugorji, MD** (Research)
- **David Dasher, MD** (Clinical)
- **Melinda Jen, MD** (Clinical)
- **Melissa Reyes-Merin, MD** (Clinical)

**POSTDOCTORAL FELLOWS**

- **Michael Caglia, MD** (Research)
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- **Caroline Piggott, MD** (Clinical)
- **Michael Ososky, MD** (Clinical)
- **Catalina Matiz, MD** (Research)
- **Chika Ugorji, MD** (Research)
- **David Dasher, MD** (Clinical)
- **Melinda Jen, MD** (Clinical)
- **Melissa Reyes-Merin, MD** (Clinical)

**PRACTITIONERS**

- Yvonne Clark, PA
- Nasreen Abbas, NP
- Tiara Esani, PA

**CLINICAL ACTIVITIES INPATIENT/OUTPATIENT**

The Dermatology Clinical service continues to grow, with over 18,000 ambulatory visits a year at the Rady Campus office, as well as Encinitas, Escondido and Murrieta satellites, and more than 850 surgical and laser procedures. The Vascular Lesion and Birthmark Center, under the leadership of Sheila Fallon Friedlander, has extended its multidisciplinary services to include an expanded laser program for refractory vascular birthmarks and other congenital and acquired dermatologic conditions.

The Dermatology Division services inpatient consultations at RCHSD, UCSD Medical Center and Sharp Mary Birch Hospital for Women. The pediatric dermatology clinical service is amongst the largest in the country — in physician number, size of the fellowship training program, number of annual patient visits, dermatologic surgeries/procedures, and newborn consultations.

The physicians in the division have advanced training in the expert diagnosis and management of common and uncommon skin conditions, which include:

- eczema, psoriasis and other inflammatory skin disorders
- hemangiomas, vascular malformations, and other birthmarks
- acne
- warts and molluscum contagiosum
- bacterial, viral and fungal infections of the skin, hair, and nails
- genodermatoses
- moles (nevi), melanoma and other skin malignancies
- congenital and acquired tumors

The members of the division have internationally recognized expertise in laser and dermatologic surgery for children and adolescents. Therapies utilized include topical and systemic drugs, cryosurgery, laser therapy and dermatologic surgery. Surgical services are performed in-office.
Dr. Lawrence Eichenfield is Division Director and co-directs The Eczema and Inflammatory Skin Disease Center, along with Dr. Magdalene Dohil, and The Vascular Lesion and Birthmark Center, with Dr. Fallon Friedlander. Dr. Eichenfield has a long-standing interest in inflammatory skin disease, including atopic dermatitis, psoriasis and pediatric acne. Studies include assessment of allergic conditions in children at risk for, or with, atopic dermatitis, the influence of barrier dysfunction on the course of eczematous dermatitis, the evaluation of safety and efficacy of topical and systemic anti-inflammatory agents for dermatitis, psoriasis and acne vulgaris, and the utility of therapeutic interventions in inflammatory disease outcomes. Dr. Eichenfield delivered the keynote address at the International Atopic Dermatitis Therapeutic Education conference, held in Rome, Italy, and is one of the creators of a multicenter collaborative research program for pediatric dermatology, PEDRA (PEdiatric Dermatology Research Alliance). Dr. Eichenfield also served on the NIH/NIAID Food Allergy Guidelines Expert Panel and Oversight Committee; the guidelines were published over the last several months. He serves as co-Chair of the American Academy of Dermatology Atopic Dermatitis Guidelines Task Force. In addition, Dr. Eichenfield is co-chairing a National Guidelines for Pediatric Acne Initiative (of the American Acne and Rosacea Society and Acne Alliance of North America), in collaboration with the American Academy of Pediatrics. His research interests also include vascular lesions, hemangiomas, and pigmented and non-pigmented birthmarks and acquired lesions.

Magdalene A. Dohil, MD, co-directs the Eczema and Inflammatory Skin Disease Center, and is Physician Director of Clinical Services. Her research interests include therapeutic education and outcome measures in Atopic Dermatitis, molluscum contagiosum, and topical therapies for inflammatory skin disease. Dr. Dohil represented North American centers at the international “Harmonization of Outcomes Measures of Eczema” (HOME) meeting, and presented center data and experience at the International Society of Atopic Dermatitis meeting in Germany.

Dr. Sheila Fallon Friedlander continues her productive research on hemangioma pathogenesis and therapy.
Major Goals and Plans

Center Development
Eczema and Inflammatory Skin Disease Center

- The Center is continuing to innovate new methods for educating patients, families, physicians and other health care workers, including evolving web-based learning modules, videos, and “web 2.0 and 3.0.” The research program includes significant genomics initiatives such as the NIH-sponsored research on psoriasis of Dr. Wynnis Tom, as well as the study of disease impact and comorbidities in inflammatory skin diseases including atopic dermatitis and acne. The Center is also a leader in the development of a pediatric dermatology collaborative research group PEDRA (PEdiatric Dermatology Research Alliance) for the study of inflammatory skin disease and comparative effectiveness studies. Dr. Tom will be leading a multi-center study of systemic therapy for atopic dermatitis, utilizing web-based collaborative data entry as well as patient-oriented outcome measures.

- The Vascular Lesion and Birthmark Center is expanding its services, which includes the multi-disciplinary vascular lesion clinic and collaborative clinics with plastic surgery for the evaluation and management of congenital and acquired skin anomalies. The Center was recently named a Sturge-Weber Foundation Center of Excellence, reflecting the expertise in management of port-wine stains and associated syndromes, as well as complex vascular malformations. The laser program expansion continues, with the addition of new laser technology for refractory blood vessel birthmarks. The Center is a leader in utilizing new fractionated laser devices for the treatment of surgical and traumatic scars in children, in collaboration with Naval Medical Center dermatologist-laser surgeons. This new program has the potential to improve the lives of thousands of children, minimizing the physical and psychosocial impact and effects of trauma and disfigurement. The division is exploring the development of a Pediatric Photomedicine and Laser Center, dedicated to research and clinical care utilizing lasers and light-based therapies.

Faculty Development

- The recruitment of two to three faculty members is planned for the next four-year period. A national search is underway for pediatric dermatologists with interests and expertise in laser and procedural dermatology, as well as physician-scientists and clinical experts in pediatric dermatology.

including serving as principal investigator of a large study of the utility of beta-blocker therapy (propranolol). As co-Director of the Vascular Lesion and Birthmark Center, she has greatly expanded the specialty clinical services. Sheila is now President-elect of the Society for Pediatric Dermatology. She is Director of the Dermatology Fellowship Program, and is completing investigation of the basic biology and pathogenesis of infantile hemangiomas as well as other vascular lesions which she initiated as a Skaggs Clinical Research Scholar in association with The Scripps Research Institute. She is also a consultant in a CERM-funded study on the therapeutic utility of stem cells, as well as a participant in a study on the utility of topical beta-blockers in the treatment of hemangiomas of infancy. She is also a world-renowned expert in cutaneous infections, including those of fungal etiology, such as tinea capitis, onychomycosis, and candidal dermatitis. She is involved in multiple clinical studies on microbiologic effects of inflammatory skin disease.

Victoria Barrio, MD, participates in a broad set of clinical trials and activities. She has interests in neonatal dermatology and developmental dermatoses, as well as a strong interest in education.

Richard L. Gallo, MD, PhD, directs a basic science research program at UCSD that has NIH RO1 funding of approximately $1.5 million per year—the largest program
directed by a pediatric dermatologist in the United States. He is a leading investigator on the role of the innate immune system in skin health and disease, focusing on antimicrobial peptides and aspects of the interaction of the skin with the immune system, including the first description of an antimicrobial peptide in mammalian skin, the association of atopic eczema with a defect in antimicrobial peptide production, innate defense protein mediation of the pathogenesis of rosacea, and influence of vitamin D on cutaneous immunity.

TEACHING AND TRAINING ACTIVITIES

RCHSD and UCSD have perhaps the most extensive training program for pediatric dermatology in the nation. The Division of Pediatric Dermatology at RCHSD is affiliated with both the Department of Pediatrics and the Department of Medicine (Dermatology) at UCSD. The Pediatric Dermatology Fellowship Program was introduced in 1996. Based at RCHSD, fellows are involved in clinical activities and research involving pediatric dermatology. The clinical program involves ambulatory dermatology clinics and inpatient consultations at RCHSD, UCSD Hillcrest and Sharp Mary Birch Hospital. The programs have trained more than 280 dermatology residents and 38 fellows (in addition to hundreds of pediatric residents). Pediatric dermatology fellows are also actively involved in research during their fellowship years. These trainees enhance the program and contribute to the advancement of the field of pediatric dermatology through research and education.

The Division of Pediatric and Adolescent Dermatology offers specialized clinical training, clinical and basic research, teaching and other academic activities to develop individual expertise and allow trainees to contribute to the fields of dermatology and pediatrics. Elective rotations are available for medical students and resident trainees in dermatology, pediatrics and other specialties. Divisional education conferences are held weekly, which include case reviews and Journal Club. Dr. Victoria Barrio oversees medical student and resident educational activities for the division. An annual national continuing medical education course, “Pediatric Dermatology for the Practitioner,” is held in collaboration with Children’s Hospital of Philadelphia and the University of Pennsylvania. Both Drs. Wynnis Tom and Victoria Barrio have recently been awarded the prestigious Robert Goltz Teaching Prize of the UCSD Division of Dermatology.

AWARDS, HONORS AND MAJOR PRESENTATIONS

Victoria R. Barrio, MD
Best Doctors in America, 2009 - 2011
Co-Chair, Society for Pediatric Dermatology National Meeting, Spring 2012
Speaker, Things that go bump in the nursery. Pediatric Dermatology for the Practitioner. San Diego, CA, April 2009
Speaker (with Treat J, Yan A), Pediatric Dermatology Emergencies Workshop: Pediatric dermatology for the practitioner. San Diego, CA, April 2009
Speaker, Things that go bump at school. 12th Annual School Health Leadership Conference, San Diego, CA, October 2009
Speaker, Pediatric dermatology jeopardy. 34th Annual Hawaii Dermatology Seminar, Waikoloa, HI, February 2010
Speaker, Dermatoses in the first year of life. American Academy of Dermatology Annual Meeting, Miami, FL, March 2010
Speaker, Neonatal dermatology. Pediatric dermatology for the practitioner, San Diego, CA, April 2011
Speaker, ER or ignore? Pediatric dermatology for the practitioner, San Diego, CA, April 2011
Speaker, Barrio VR. Common Pediatric Skin Problems. Rady Children’s Continuing Medical Education. San Diego, CA, May, 2011
Speaker, Dermatoses in the first year of life. Alabama Dermatology Society, Destin, FL, June 2011
Speaker, Interesting cases from UCSD pediatric dermatology. Alabama Dermatology Society, Destin, FL, June 2011
Magdalene A. Dohil, MD
Co-Chair, Society for Pediatric Dermatology National Meeting, Spring 2012
Golden Triangle Award of the American Academy of Dermatology for the Eczema Center at RCHSD, 2010
Director, American Academy of Dermatology Annual Meeting, New Orleans, LA, February 4-8, 2011
Speaker, New approaches to old problems: Technology in pediatric endoscopy. International Endoscopy Day, RCHSD, San Diego, CA, October 2, 2009
Speaker, Atopic dermatitis: What’s new and what’s true; terrible to trivial: Pediatric version, advances in cosmetic medical dermatology. 6th Annual Meeting, Maui, HI, January 23-27, 2010
Speaker, Warts and molluscum: Pediatric issues; hair too much/hair too little. American Academy of Dermatology 68th Annual Meeting, Miami, FL, March 5-9, 2010
Speaker, AD in children and challenging cases in pediatric dermatology. American Academy of Pediatrics Quarterly Meeting, Central Florida Chapter, Orlando, FL, November 9, 2010
Speaker, American Academy of Dermatology Exam Prep Course, San Diego, CA, November 19-21, 2010
Invited Director, Pediatric dermatology. American Academy of Dermatology Annual Meeting, New Orleans, LA, February 4-8, 2011
Speaker, Lumps and bumps. 35th Annual Hawaii Dermatology Seminar, Maui, HI, March 13-18, 2011
Speaker, Lumps and bumps. Pediatric Dermatology for the Practitioner, San Diego, CA, April 8-9, 2011
Speaker, Warts and molluscum. Pediatric Dermatology for the Practitioner, San Diego, CA, April 8-9, 2011
Speaker, Naturals in dermatology. Pediatric Dermatology for the Practitioner, San Diego, CA, April 8-9, 2011
Director and Moderator, Pediatric Dermatology for the Practitioner, San Diego, CA, April 8-9, 2011
Speaker, Consensus criteria and outcome measures in atopic dermatitis. Harmonizing Outcome Measures in Eczema (HOME), Amsterdam, June 6-7, 2011

Lawrence F. Eichenfield, MD
Editor-in-Chief, Pediatric Dermatology
Best Doctors in America, Castle Connolly Medical Ltd., 2004-2011
San Diego Top Doctors of Excellence, Dermatology and Pediatric Specialists, 2004-2011
Chair, American Academy of Dermatology Atopic Dermatitis Guidelines Task Force, 2010-2012
Member, Board of Directors, American Academy of Dermatology, 2005-2009
Pasquariello Lectureship, Children’s Hospital of Philadelphia, 2010
Sidbury Lectureship, Duke University Department of Pediatrics, 2010
Co-Chair, Dermatology Section, Excellence in Paediatrics, London, 2010
Chair, World Congress of Pediatric Dermatology: Atopic Dermatitis Symposium, Bangkok, Thailand, November 17-18, 2009
## Research Support

<table>
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<tr>
<th>Grant/Contract #</th>
<th>Annual Budget</th>
<th>Total Direct Dollars/Duration of Grant</th>
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<tr>
<td><strong>Lawrence F. Eichenfield, MD</strong></td>
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<tr>
<td>An Open-Label Extension Study to Evaluate the Safety of Etanercept in Pediatric Subjects with Plaque Psoriasis</td>
<td>$106,793</td>
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<td>An Open-label Study to Assess Facial Acne Improvement and Tolerability with Use of RETIN-A MICRO(Tretinoin Gel) Microsphere, 0.04% in a Pump Dispenser</td>
<td>$131,800</td>
<td>$166,068 Apr. 2008-Apr. 2009</td>
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<td>A Phase Two Study Evaluating the Safety and Efficacy of Once Daily Use of the LEO 80185 Topical Suspension Containing Calcipotriol 50 mcg/g Plus Betamethasone Valerate</td>
<td>$70,279</td>
<td>$158,582 May 2010-Present</td>
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<td>Clinical Evaluation of T.R.U.E. Test Panel 1.1, 2.1, and 3.1 in Children and Adolescents</td>
<td>$155,925</td>
<td>$155,925 Sept. 2008-Present</td>
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<td>A Phase 2B Multi-Center, Double-Blind, Randomized, Dose-Ranging Clinical Trial to Evaluate IDP-107 in the Treatment of Moderate to Severe Acne Vulgaris with Nodular Involvement</td>
<td>$118,093</td>
<td>$148,797 Jan. 2008-Present</td>
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<td>A Phase 2, Single-Arm Study to Evaluate the Safety and Pharmacokinetics of Alefacept in Adolescent Subjects with Moderate to Severe Psoriasis</td>
<td>$77,278</td>
<td>$142,472 Feb. 2009-Present</td>
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<td>PD and PD of Calcitriol Following Twice Daily Application of Calcitriol 3mcg/g Ointment under Conditions of Maximal Use on Adolescents with Plaque Psoriasis</td>
<td>$44,487</td>
<td>$129,307 Oct. 2006-Present</td>
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## Research Support (continued)

<table>
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<th>Grant/Contract #</th>
<th>Annual Budget</th>
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<tr>
<td>An Investigator-Blinded, Randomized, Community, Based, Phase Four Study to</td>
<td>$90,242</td>
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<td>Assess Facial Acne Improvement and Tolerability with Use of RETIN-A-MICRO®</td>
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<td>(Tretinoin Gel) Microsphere, 0.04% in a Pump Dispenser in a Pediatric Population</td>
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<td>CA-P-6397-1/Johnson &amp; Johnson</td>
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<td>A Prospective Pediatric Longitudinal Eval. to Assess Long Term Safety of $</td>
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<td>APPLES/Astellas Pharma Inc.</td>
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<td>A Randomized, Double-Blind, Placebo-Controlled, Dose Response Study for the</td>
<td>$90,065</td>
<td>$103,680</td>
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<td>Safety and Efficacy of Thymosin Beta 4 in the Treatment of Patients</td>
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<td>with Epidermolysis Bullosa</td>
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<td>SSEB/Regenerx Biopharmaceuticals, Inc.</td>
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<td>Double-Blind, Prospective, Randomized, Vehicle Controlled Multi-Center Study</td>
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<td>of Photodynamic Therapy with Visionac Ccream in Patients with Acne Vulgaris</td>
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<td>PC TA 206/11/Potocure ASA (Norway)</td>
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<td>A Multi-Center Randomized Vehicle Controlled Double-Blind Study to Evaluate the</td>
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<td>Safety and Efficacy of Epiduo Gel 0.1%/2.5% Administered Once Daily</td>
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<td>18155/Galderma Laboratory, Inc.</td>
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<td>Safety and efficacy of TACLONEX ointment (&quot;Study Drug&quot;) in adolescent patients</td>
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<td>(aged 12 to 17 years) with psoriasis vulgaris</td>
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<td>MCB 0501 INT/Leo Pharmaceutical Products Ltd.</td>
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<td>Method Evaluation of Buccal Swab Collection</td>
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<td>A Sub-Study of CASM981C US09/Novartis Pharmaceutical</td>
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<tr>
<td>Evaluation of the Cutaneous Innate Immune and Clinical Response to Oral and</td>
<td>$50,000</td>
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<td>Topical Vitamin D</td>
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<td>UCSO/CSSD/RCHSD Intramural Grant</td>
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<td>An Investigation of the Safety and Efficacy of Elidel 1% Cream in Atopic Disease</td>
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<td>Modification Assessed in a 3-Year Randomized, Double-Blind, Vehicle Controlled</td>
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<td>Apr. 2002-June 2010</td>
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<td>Phase to Evaluate Effects on Atopic Dermatitis in Infants, and a 2-3 Year Open Label</td>
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<td>Phase to Evaluate the Effect of Early Intervention Versus Delayed Intervention with Elidel on teh Incidence of Asthma in Children</td>
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<td>CASM981C US09/Novartis Pharmaceutical</td>
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## Research Support (continued)

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<th>Grant/Contract #</th>
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<tr>
<td><strong>Sheila Fallon Friedlander, MD</strong></td>
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<tr>
<td>A Randomized, Controlled, Multi-Dose, Multi-Center, Adaptive Phase II/III Study in Infants with Proliferating Infantile Hemangiomas Requiring Systemic Therapy to Compare Four Regimens of Propranolol to Placebo</td>
<td>$194,795</td>
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<td>V0400 SB/Pierre Fabre Dermatologie</td>
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<td>A Real-Life In-Use Study to Evaluate the Tolerance and Safety of Aveeno Baby Sunscreen Lotion SPF 50, 1358-086 in Infants and Children with Atopic Derm</td>
<td>$56,150</td>
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<td>Autologous Retinal Pigmented Epithelial CellsDerived from Induced Pluripotent Stem Cells for the Treatment of Atrophic Age Related Macular Degeneration</td>
<td>$25,000</td>
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<td>SUB 5-22236/Scripps Research Institute</td>
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<td>A Prospective Study Comparing the Incidence of Infantile Hemangiomas Following Normal Pregnancies Versus Pregnancies Complicated by Placental Abnormalities Skaggs Scholar Grant</td>
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<td>Wynnis L Tom, MD</td>
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<td>20103845 INTERNATIONAL PSORIASIS COUNCIL</td>
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<td>Genetic Influence in Pediatric Psoriasis</td>
<td>$122,500</td>
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<td>1 K23 AR060274-01A1/NIAID (NIAMS)</td>
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<td>Oral Azathioprine and Pediatric Atopic Dermatitis: Evaluation of the Cutaneous Antimicrobial Barrier and Immune Response Pilot Project Award/Society for Pediatric Dermatology</td>
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<td>UCSD/Pediatrics</td>
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<tr>
<td>Genetic Variation in a T-Cell Signaling pathway and its Influence on Pediatric Psoriasis</td>
<td>$38,150</td>
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**Speaker, Seeing red: Hemangiomas and vascular malformations. Plastic Surgery Grand Rounds, UCSD, July 22, 2009**

**Speaker, Atopic dermatitis: What’s breaking out—challenging acne cases: Childhood and Adolescence; What’s hot in atopic dermatitis. Summer Academy Meeting of the American Academy of Dermatology, Boston, MA, July 30-August 2, 2009**

**Speaker, In the beginning...There was neonatology!; Dermatology jeopardy; Rheum with a view. Women’s & Pediatrics Dermatology, San Francisco, CA, September 10-13 2009**
Visiting Professor, Neonatal dermatology update; Procedural pediatric dermatology. Penn State College of Medicine, Hershey, PA, October 1, 2009
Speaker, Opportunistic infections in neonates. World Congress of Pediatric Dermatology, Bangkok, Thailand, November 17-18, 2009
Speaker, Eczema update; What’s new in pediatric dermatology. Mount Sinai Winter Dermatology Symposium, New York, NY, December 12, 2009
Speaker, Hot topic–Pigmented lesions in kids; Terrible to trivial: Pediatric version. Advances in Cosmetic and Medical Dermatology, Wailea, Maui, HI, January 25, 2010
Speaker, What's erupting: Acne update; Cases for the panel: What would you do? Skin Disease Education Foundation Hawaii Dermatology, Kona, HI, February 29, 2010

Speaker, Acne and Rosacea Update Forum; What's new in pediatric dermatology; Pediatric onychomycosis/nail disorders; Clinical trials in an academic setting and pediatric considerations. 68th Annual American Academy of Dermatology Meeting, Miami Beach, FL, March 2-9, 2010

Speaker, Neonatal dermatology (a case-based overview). Dermatology Resident Conference, University of Texas Southwestern Medical Center, Dallas, TX, March 31, 2010

Speaker, Pasquariello Lectureship, Neonatal dermatology. Dermatology Grand Rounds, Children’s Hospital of Philadelphia, Philadelphia, PA, April 14, 2010

Speaker, What’s new in eczema. Dermatology Grand Rounds, Mount Sinai School of Medicine, New York, NY, April 15, 2010

Speaker, Red, white, blue and new: What’s up with hemangiomas; Challenging cases for fun; Zit’s complicated: An update on acne. Pediatric Dermatology for the Practitioner, Philadelphia, PA, April 16, 2010

Speaker, Atopic dermatitis: Insights into pathogenesis and therapy. Pediatric Grand Rounds, Duke University Medical Center, Durham, NC, May 25, 2010

Speaker, Sidbury Lecturer, Atopic dermatitis: Insights; case presentations. Dermatology Grand Rounds, Duke University Medical Center, Durham, NC, May 26, 2010

Speaker, Advances in pediatric dermatology—you make the call; Skin signs—when to worry and not to worry. Case Studies in Pediatric Dermatology, 12th Annual Summer Conference on Pediatrics, Napa, CA, July 6-10, 2010

Speaker, How does the academic pediatric dermatologist partner w/industry? Society for Pediatric Dermatology Annual Meeting, Portland, OR, July 17, 2010

Speaker, Hemangiomas: What’s hot. Summer Academy Meeting of the American Academy of Dermatology, Chicago, IL, August 5-8, 2010

Plenary Session Speaker, Neonatal dermatology: Recent developments. Summer Academy Meeting of the American Academy of Dermatology, Chicago, IL, August 5-8, 2010

Speaker, Increasing patient compliance, update on eczema, asthma and atopic conditions. Chicago, IL, August 7, 2010

Speaker, Seeing red: Hemangiomas and vascular lesions. Pacific Dermatologic Association Annual Meeting, Pasadena, CA, August 12, 2010

Speaker, Acne. UCSD Department of Medicine (Dermatology) Didactics, San Diego, CA, August 25, 2010

Speaker, Back-to-school dermatology issues. Encinitas Community Healthcare Forum, Encinitas, CA, August 26, 2010

Speaker, In the beginning…neonatology; Atopic dermatitis: Meeting the clinical challenge. Women’s and Pediatric Dermatology Meeting, San Francisco, CA, September 25, 2010

Speaker, What’s the scoop on pediatric acne? PISD? Pediatric inflammatory skin disease. Coastal Derm Meeting, Rancho Bernardo, CA, October 1, 2010


Speaker, Neonatal dermatology. UCSD Department of Medicine (Dermatology) Didactics, San Diego, CA, October 6, 2010

Speaker, Controversies in dermatology; new developments in atopic dermatitis; therapeutic hotline. Fall Clinical Dermatology Conference, Las Vegas, NV, October 8, 2010

Speaker, In the beginning…neonatal dermatology; To worry or not to worry: Visual dermatologic diagnosis; Topical topics: What’s new in acne and eczema therapy; Scales & nails: Fungal infection. Update, American Academy of Pediatrics-CA CME Meeting, Las Vegas, NV, November 19-22, 2010


Speaker, Rheum with a view; food allergy and dermatology (testing); fungal infections. 69th Annual American Academy of Dermatology Meeting, New Orleans, LA, February 4-10, 2011

Speaker, Pediatric spots; atopic angst, advances in cosmetic and medical dermatology. Maui, HI, February 25, 2011

Speaker, MRSA and others: Skin and soft tissue infections; Case studies in derm: Cases that keep you up at night! 11th Annual Conference on Pediatric Emergencies, Breckenridge, CO, March 3-5, 2011

Session Chair, Clinical update on pediatric dermatology, hot stuff in inflammatory skin disease, and what would
Speaker, Challenging cases and acne—what’s erupting. Pediatric Dermatology for the Practitioner, San Diego, CA, April 8-9, 2011
Speaker, Skin Rashes: When do I need to worry? Advanced Pediatric Emergency Medicine Assembly Conference, San Diego, CA, April 13, 2011

Sheila Fallon Friedlander, MD
Best Doctors in America, Castle Connelly Medical Ltd, 2004-2011
San Diego Top Doctors of Excellence, 2004-2011
Who’s Who in America, 2008-2011
President Elect, Society for Pediatric Dermatology, 2011
Program Director, Advanced Pediatric Dermatology, American Academy of Dermatology Annual Meeting, 2011
Chair, Skin Disease and Education Foundation Women’s and Pediatric Dermatology Seminar, 2008-2011
UCSD Division of Dermatology; The Robert W. Goltz, MD Excellence in Teaching Award, 2010
UCSD Academy of Clinician Scholars, 2010-Present
Board of Directors, Children’s Specialists of San Diego Holdings, 2010
America’s Top Doctors/Best Doctors in America, Castle Connolly Medical Ltd, 2011
Medical Curriculum Committee, Dermatology Foundation, 2008–present
Speaker, Year in Review–Dermatology. Society for Pediatric Dermatology, Philadelphia, PA, July 9-12, 2009
Speaker, How to—the latest and greatest on pediatric eczema; Dermatology jeopardy; Diaper dermatitis—when it’s bad and what else could they have?; Name that lesion. Skin Disease Education Foundation, Women’s and Pediatric Dermatology Seminar, San Francisco, CA, September 11-13, 2009
Speaker, Childhood eczemas, pediatric acne. 5th Annual Coastal Dermatology Symposium, San Diego, CA, September 30-October 3, 2009
Speaker, Pediatric pearls re-polished; Terrible to trivial: Pediatric version. Advances in Cosmetic Medical Dermatology, Maui, HI, January 23-27, 2010
Speaker, Small fries? Pediatric sun protection update; Top five-minute downloads: What’s hot? Skin Disease Education Foundation Dermatology Seminar, Hawaii, February 14-19, 2010
Speaker, Tinea capitis: Management in children; Advanced pediatric dermatology; Vascular birthmarks-new approaches! American Academy of Dermatology 68th Annual Meeting, Miami, FL, March 5-9, 2010
Speaker, Acne through the ages; Dermatology jeopardy. Skin Disease Education Foundation, Women’s and Pediatric Dermatology Seminar, San Francisco, CA, September 24-26, 2010
Speaker, Vascular birthmarks: Management Pearls; Pediatric dermatology: The state of our specialty; Tinea Capitis. American Academy of Dermatology 69th Annual Meeting, New Orleans, LA, February 4-8, 2011
Speaker, Exanthems; Vascular lesions: When to watch, when to treat; Pediatric pearls restrung; Sun, skin, and sun protection in children. 7th Annual Maui Derm, Maui, HI, February 23-27, 2011
Speaker, Sun, skin, sun protection and children. 35th Hawaii Dermatology Seminar, Maui, HI, March 13-18, 2011
Speaker, Birthmarks and hemangioma management. 35th Hawaii Dermatology Seminar, Maui, HI, March 13-18, 2011
Speaker, Moles and melanoma in children. UC Davis Grand Rounds, April 6, 2011
Speaker, Hemangiomas and vascular lesions: A how-to approach. Pediatric Dermatology for the Practitioner, San Diego, CA, April 8-9, 2011
Speaker, Sun and moles. Pediatric Dermatology for the Practitioner, San Diego, CA, April 8-9, 2011

Wynnis L. Tom, MD
NIH Career Development K Award, 2011
UCSD Division of Dermatology; The Robert W. Goltz, MD Excellence in Teaching Award, 2011
Session Director, American Academy of Dermatology Annual Meeting, 2011
Atopic Dermatitis Delphi Consensus Conference 2010, Editorial Director
Appointed, American Academy of Dermatology, Atopic Dermatology Guidelines Task Force
Speaker, Approach to severe atopic dermatitis. 33rd Uniformed Services Dermatology Seminar, San Diego, CA, August 2009
Speaker, Atopic dermatitis…what should you do next? Advances in Cosmetic & Medical Dermatology Annual Meeting, Maui, HI, January 2010
Speaker, A case of Kasabach-Merritt Syndrome. Advances in Cosmetic & Medical Dermatology Annual Meeting, Maui, HI, January 2010

Sharon E. Jacob, MD
First prize—Society for Pediatric Dermatology Research Award (Matiz/Jacob) 2010
Session Director and Speaker (multiple lectures). American Academy of Dermatology Annual Meetings, 2010-11

PUBLICATIONS


Breithaupt A, Friedlander SF. A comparative trial evaluating the efficacy of tacrolimus 0.1% ointment versus...


Herro EM, Friedlander SF, Jacob SE. Bra associated allergic contact dermatitis: p-tert-butylphenol formaldehyde resin as the culprit. *Pediatric Dermatology* in press.


Matiz C, Jacob SE. Systemic contact dermatitis in children: How an avoidance diet can make a difference.


Dr. Jones and Dr. Chambers are involved in efforts to improve policies regarding drug safety during pregnancy, both in California and at the federal level. They are involved in active clinical and epidemiological research programs in California, and collaborate with scientists at Boston University as well as in Australia, South Africa, Ukraine, South Korea, Poland and Mexico. They also lead a new NIH initiative to develop for the first time a population prevalence estimate of Fetal Alcohol Spectrum Disorders in San Diego County. Dr. Chambers also leads the National Children’s Study for San Diego County, a 21-year 100,000 person cohort study of maternal and child health and development. They also maintain a strong commitment to teaching at the undergraduate, graduate and postdoctoral levels, and participate in many programs for trainees in the areas of pediatrics, epidemiology, and behavioral health as well as in the School of Pharmacy.

The division is involved in three major areas: (1) An active clinical service in San Diego County and the Tijuana region of Mexico; (2) A highly productive and well-funded research program focused on better understanding the etiology and developmental pathogenesis of birth defects and other child health issues; and (3) A teaching program that includes undergraduate students, graduate students in epidemiology, medical students, postdoctoral students, and associate faculty and fellows.
FACULTY

Kenneth Lyons Jones, MD, Chief, Division of Dysmorphology/Teratology, Professor of Pediatrics, Dysmorphologist/Clinical Teratologist
Christina D. Chambers, PhD, MPH, Program Director, Professor of Pediatrics, Perinatal Epidemiologist

CLINICAL ACTIVITIES INPATIENT/OUTPATIENT

The Division has a number of active clinical activities providing diagnostic services, genetic and Teratogen counseling, and long-term follow-up of children with birth defects throughout the region. Clinics are held in the city of San Diego, Tijuana, Mexico, and in newborn intensive care units throughout San Diego County. Inpatient consults are conducted at UC San Diego (UCSD) Medical Center (in the neonatal intensive care unit, newborn nursery and autopsy service), Scripps Mercy Hospital and Kaiser Permanente Hospital’s Zion facility. Outpatient consults and follow-up take place at Rady Children’s Hospital-San Diego (RCHSD), Kaiser Permanente Hospital’s Vandevere facility and at Hospital del Infantil de las Californias in Tijuana.

Another major clinical service is delivered through the California Teratogen Information Service and Clinical Research Program (CTIS Pregnancy Health Information Line). The program, which is directed by Dr. Chambers, provides counseling for pregnant women and physicians throughout California regarding the prenatal effects of drugs, chemicals, and environmental agents to which the pregnant woman may have been exposed. The program is located at UCSD, with satellite offices at Los Angeles Children’s Hospital.

RESEARCH ACTIVITIES

Our research group has been involved in a number of areas of investigation. The group’s primary focus is to better understand the etiology and developmental pathogenesis of birth defects. A major research theme is based on the premise that a substantial number of birth defects which presently have an unknown etiology are the result of drugs, chemicals and/or environmental agents to which the fetus is exposed. Follow-up through systematic post-marketing surveillance of prenatally exposed infants whose mothers were ascertained through the California Teratogen Information Service and Clinical Research Program provide a wealth of research material. In addition, our group is the coordinating center for research studies conducted through the Organization of Teratology Information Specialists (OTIS), a group of 12 services throughout North America. We provide the infrastructure that allows for proper study design, subject ascertainment, follow-up, collection of data, statistical analysis and interpretation of data for a number of large collaborative studies that are being performed by OTIS. In a major national initiative in collaboration with the American Academy of Allergy Asthma and Immunology and Boston University, in 2009, a national system for post-marketing surveillance for pregnancy safety of drugs and vaccines was launched – known as the Vaccines and Medications in Pregnancy Surveillance System (VAMPSS). This research effort provides an infrastructure and research pipeline for multiple national studies of drug and vaccine safety in pregnancy. In the inaugural year of VAMPSS the Division received funding from the U.S. Department of Health and Human Services/BARDA to study H1N1 vaccine in pregnancy, and federal funding from AHRQ to study asthma medications in pregnancy. Two additional VAMPSS projects funded by commercial pharma have recently been added to the system.

A second major research theme relates to the prenatal effects of alcohol. Four studies that are on-going at the present time are funded by the National Institute on Alcohol Abuse and Alcoholism (NIAAA). One study examines a variety of risk factors for fetal alcohol spectrum disorders in Ukraine. A second study compares the dysmorphologic features of children exposed to alcohol across cultures. A third study, funded by NIAAA through a NARCH Center is focused on testing a randomized intervention for risky alcohol consumption among Native American women of reproductive age. A fourth study represents a consortium of investigators who are establishing for the first time an accurate prevalence estimate of the full range of fetal alcohol spectrum disorders in four cities in the U.S.
A third research area is based on the multidisciplinary National Children’s Study which is a 21 year cohort study involving at least 100,000 pregnancies in the U.S. The San Diego County site for this study is led by our division along with an interdisciplinary team of investigators from Pediatrics, Reproductive Medicine, and Behavioral Health and in collaboration with San Diego State University’s Graduate School of Public Health.

A fourth research theme is based on the theory that intrauterine vascular accidents play a major role in the etiology of birth defects which previously have defied a rational embryologic explanation. We are particularly involved at the present time in attempting to better understand the etiology of gastroschisis, which we strongly believe has a vascular etiology. An additional theme that we have recently been pursuing is based on the premise that a certain portion of birth defects are the result of chronic or acute alterations in embryonic and/or fetal nutrition.

TEACHING ACTIVITIES

The division recently hosted a visiting scholar, Matteo Cassina, MD, from the Department of Pediatrics, University of Padova, Italy. Currently Warren Foster, PhD, from the Department of Obstetrics and Gynecology, McMaster University, Ontario, Canada, is here to observe programs.

Christina D. Chambers, PhD, MPH

Dr. Chambers mentors three post-doctoral fellows in Pediatrics and one post-doctoral fellow in Reproductive Medicine, mentors two pre-doctoral students in Public Health, a number of graduate students from the Skaggs School of Pharmacy and Pharmaceutical Sciences for six-week elective rotations, and mentors ISP student and CREST students from the UCSD School of Medicine. She teaches an elective course in the Skaggs School of Pharmacy and Pharmaceutical Sciences, and lectures in the various graduate courses in epidemiology.

Kenneth Lyons Jones, MD

Dr. Jones is the ISP liaison for the Department of Pediatrics. He conducts resident rounds for neonatal fellows, residents and medical students in the UCSD neonatal intensive care unit and newborn nursery. He gives didactic lectures at the UCSD School of Medicine. He has one full day outpatient clinic per week at Rady Children’s Hospital San Diego. On all occasions he has a pediatric resident from UCSD or Balboa Naval Hospital rotating on service as part of the Dysmorphology/Genetics elective. Fourth-year medical students may also rotate on this service on a case-by-case basis.

AWARDS, HONORS AND MAJOR PRESENTATIONS

Christina D. Chambers, PhD, MPH

Delegate to Representative Assembly UCSD Academic Senate for Department of Pediatrics, 2009-
Member, Executive Committee, Center for Human Development, UC San Diego, 2009-
UCSD National Center of Leadership in Academic Medicine Mentor Honor in the 2009 Junior Faculty Development Program, Health Sciences, UCSD, 2009
UCSD Community Pediatrics Seminar, December 2009
Feature Interview with David Garret, UCTV Health Matters, January 2010
PregTASTIC podcast, February 2010
Global Health Seminar Series, UCSD, April 2010
Expert Panel Member, Center for Evaluation of Hazards to Human Reproduction (CERHR), Meeting of Evaluation of Genistein and Infant Soy Formula, December 2009
Quarterly Columnist, OB Gym News, 2009-
Member, NIH-NIAAA International Team; establishing collaboration with Poland National Ministry of Health, 2009
Expert Member, International ‘PregForum’ Board of Specialists in Rheumatology, Internal Medicine, Obstetrics and Gynecology, and Pediatrics, 2010
Consultant to Naval Health Research Center H1N1 Vaccine Pregnancy Safety Study, 2009-2010
Expert Member, National Data Bank for Rheumatic Diseases (NDB), Wichita, KS, 2010
Major Goals and Plans

• Safety of maternal/infant exposure to medications and vaccines – expanding the national VAMPSS program and developing a national Center for maternal and fetal/infant health
• Launching the National Children’s Study and adjunct studies in San Diego and across multiple sites.
• Maternal/fetal genetic susceptibility to developmental toxins – pharmacogenetics and personalized medicine during pregnancy.
• Stem cells as a model system for study in developmental toxins.
• Maternal/fetal immune tolerance and pregnancy outcome.
• Abnormalities of maternal and/or fetal nutrition as an etiology of adverse pregnancy outcome.
• Launch the Co-FASP School Study with the San Diego Schools and Community Organizations.
• Development of a telecommunication system that will permit practitioners in one area of the world real time communication regarding Dysmorphology/Teratology with members of our division.
• Establish the Center for the Promotion of Maternal Health and Infant Development.

Kenneth Lyons Jones, MD
Chair, Search Committee, Director, Pediatric Diabetes Research Center, Department of Pediatrics, UCSD
Member, Association of American Physicians, Inducted May 2010
Dr. David W. Smith Teaching Award – Academy of Pediatrics; Section of Genetics and Birth Defects Vancouver, British Columbia, March 2011
Invited Speaker, Alcohol and pregnancy: What we have learned in 37 years; Organization of teratology information specialists studies; and Prenatal exposure to Retin-A for human teratogens: Environmental factors which cause birth defects. Harvard Medical School, Boston, MA, April 2010
Visiting Professor, Department of Pediatrics, The Meinhard Robinow Lecture: Fetal alcohol spectrum disorder: What we have learned in 37 years. House Officer Seminar: Minor malformations on the physical examination: A clue to more serious problems. University of Virginia School of Medicine, Charlottesville, VA, May 2010
Visiting Professor, Department of Pediatrics, Grand Rounds: Alcohol and pregnancy: What we have learned in 37 years. Neonatology Fellow Seminar: approach to the dysmorphic child. University of Pittsburgh Medical Center, Pittsburgh, PA, June 2010
Visiting Professor, Department of Pediatrics, A prospective approach to the identification of human teratogens. The OTIS Research Center at UCSD. University of California Los Angeles School of Medicine, October 2010
Member, Infectious Diseases, Reproductive Health, Asthma and Pulmonary Epidemiology (IRAP) NIH Study Section, 2009-
California Teratogen Information Service and Clinical Research Program: I and other members of the staff give talks to various community groups and organizations throughout the state of California
National Children’s Study: Promotion of study at neighborhood/community San Diego County Health Fairs
TERI, Inc. Oceanside, CA Research Advisory Council Training, Education @ Research Institute – Focus on autism and other developmental disabilities
Advanced federal funding for teratology information services throughout the United States for the last 10 years (Bill introduced into both the Senate and House of Representatives in 2010 are up for vote before Congress adjourns this fall)
## Research Support

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<th>Grant/Contract #</th>
<th>Annual Budget</th>
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<tr>
<td><strong>Christina D. Chambers, PhD, MPH</strong></td>
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<tr>
<td>National Childrens Study - San Diego County (Base Location)</td>
<td>$426,589</td>
<td>$18,203,872 Sept. 2007-Sept. 2012</td>
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<td>Sub UCI 20071925 (HHSN267200700021C)/(UCI) UC Irvine</td>
<td>$919,052</td>
<td>$10,545,402 Sept. 2010-Aug. 2015</td>
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<td>H1N1 and Influenza Vaccines and Antiviral Medications in Pregnancy (VAMPSS)</td>
<td>$2,712,672</td>
<td>$3,417,966 Nov. 2010-Oct. 2015</td>
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<td>Prospective Follow-up of Pregnancy Exposure to Leftunomide - OTIS Autoimmune Diseases in Pregnancy Project</td>
<td>$1,967,324</td>
<td>$2,343,016 Aug. 2010-Aug. 2015</td>
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</tbody>
</table>
Flight to the North Pole fantasy trip for handicapped children at the San Diego Coast Guard Station just prior to Christmas each year
Annual Kurt Benirschke Lecture at the UCSD School of Medicine

PUBLICATIONS


Chambers CD. What is the role of post-marketing surveillance studies in detecting teratogenic exposures? Teratology Primer, 2nd Ed. The Teratology Society, co-


Ding Ding M, Chambers CD, Kao K, Prewitt LM. Prospective birth outcomes in pregnant women using methamphetamine. Presented at the San Diego Epidemiology Research Exchange in La Jolla, California, May 2010.


Felix R, Chambers CD, Cobian V, Prince L, Kao K, Alvarado S, Jones KL. An electronic medical record (EMR) system-based referral facilitating access to ter-
## Research Support (continued)

<table>
<thead>
<tr>
<th>Grant/Contract #</th>
<th>Annual Budget</th>
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<tr>
<td>Asthma Control Test (ACT) Pregnancy Study - A VAMPSS Study</td>
<td>$121,644</td>
<td>$149,371</td>
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<td>NASBIRT - Native American Screening And Brief Intervention for Alcohol</td>
<td>$62,345</td>
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<td>Sub none (HS300292)/Indian Health Council, Inc.</td>
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<td>State of California Department of Education: California Teratogen Information Service &amp; Clinical Research Program (Jones, PI)</td>
<td>$308,000 annually</td>
<td>continuous</td>
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<td>State of California Community Service Project</td>
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<td>Dysmorphology Core (Jones, PI)</td>
<td>$795,000</td>
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<td>Prospective Follow-up of Pregnancy Exposure to Humira (Adalimumab) (Jones, PI)</td>
<td>$1,361,363</td>
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<tr>
<td>Kenneth Lyons Jones, MD</td>
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<tr>
<td>Prospective Follow-up of Pregnancy Exposure to Humira (Adalimumab)</td>
<td>$1,232,301</td>
<td>$3,630,319</td>
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<td>Maternal Dietary Fat Intake as a Potentially Preventable Cause of Gastroschisis</td>
<td>$100,000</td>
<td>$300,000</td>
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<td>Dysmorphology Core (U24 Core)</td>
<td>$240,255</td>
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<td>1 U24 AA014815-01/NIH (NIAAA)</td>
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<td>Maternal Nutritional Status as a Potentially Cause of Gastroschisis</td>
<td>$75,472</td>
<td>$80,000</td>
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<td>Sub CHNR08-803 (NO.06-000427)/(UCD) UC Davis</td>
<td></td>
<td>Jan. 2008-Mar. 2011</td>
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</tbody>
</table>

Green J, Lindsay SP, Chambers CD. The association between the fetal growth pattern and major congenital anomalies in infants of diabetic mothers. Presented at the San Diego Epidemiology Research Exchange in La Jolla, California, May 2010.


The Division of Pediatric Emergency Medicine provides medical care to sick and injured children at the Sam S. and Rose Stein Emergency Care Center (ECC) at Rady Children’s Hospital-San Diego (RCHSD) and four Urgent Care Centers (UCC). The ECC is the only emergency care center in the San Diego region solely dedicated to caring for children. It is also the only Level 1 pediatric trauma center in San Diego County. Our emergency department specializes in pediatric trauma care, laceration repair, pediatric sedation, orthopedic care, care of children with special needs, and stabilization and treatment of critically ill children. Our UCCs provide conveniently located after hours pediatric care at four different locations outside of our main campus.

**FACULTY**

Jim Harley, MD, MPH, *Interim Division Chief*, Clinical Professor of Pediatrics  
Marc Etkin, MD, *Interim Clinical Director*, Associate Clinical Professor of Pediatrics  
Joyce Arpilleda, MD, Associate Clinical Professor of Pediatrics

**Urgent Care Team:** Left to right: Tia Rajasingham, Jamil Madati, Arit Edwin-Enyenihi, Jamie Lien, Cynthia Hoecker, Janet Friday, Ghazala Sharieff, Marc Etkin, John Kanegaye, Stacey Ulrich, Krista Caldwell, Jim Harley, Heather Conrad, Paul Ishimine, Simon Lucio
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<td>P. Jamil Madati, MD</td>
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**INTERMEDIATE CARE PEDIATRICIANS**

- Janet Friday, MD, Clinical Professor of Pediatrics
- Elizabeth Hicks, MD, Assistant Clinical Professor of Pediatrics
- Wendy Hunter, MD, Assistant Clinical Professor of Pediatrics
- Jamie Lien, MD, Assistant Clinical Professor of Pediatrics
- Jennifer Weglowski, MD, Assistant Clinical Professor of Pediatrics

**URGENT CARE PEDIATRICIANS**

- Katherine Konzen, MD, MPH, Medical Director, Clinical Professor of Pediatrics

**PEDIATRIC EMERGENCY MEDICINE FELLOWS**

- Nisa Atigapramoj, MD
- Jessica Dayan, MD
- Angela Lumba, MD
- Julia Magaña, MD
- Matthew Murray, MD
- Sherri Rudinsky, MD
- Vanessa Tamas, MD

**NURSE PRACTITIONERS AND PHYSICIAN ASSISTANTS**

- Stacy Bright, NP
- Annie Gerhart, NP
- Jamie Gilley, NP
- Lindsay Grubensky, NP
- Tawnya Macchiarella, NP
- Kelly Pretorius, NP
- Stephanie Reittinger, NP
- Eva Schmitt, PA
- Marci Valenciano, NP
- Kristi Westphaln, NP
EMERGENCY CARE CENTER (ECC)

Jim Harley, MD, MPH and Marc Etkin, MD serve as the interim division and clinical directors of the Emergency Medicine Division. The nursing directors are Lesley Carlson, RN and Lisa McDonough, RN. The ECC is the busiest pediatric emergency department on the West Coast. Last year, we saw 71,000 patients in the ER (July 2010 to June 2011). We have made great strides in improving customer service by reducing the Left Without Being Seen (LWBS) rate and decreasing customer complaints. Our LWBS rate is now at 2.7% despite our overall volume continuing to increase. We achieved our 2010-11 goal of decreasing our patient throughput times by 5%. The number of compliments also has greatly increased.

The ECC is the most common entrance for admitted patients at RCHSD. 10% of the patients that are seen in the ECC are admitted. This accounts for over 50% of the total admissions to RCHSD. We are the receiving unit for emergency transports brought in by paramedics and Mercy Air. Our division provides continuous feedback and consultation regarding pediatric pre-hospital and disaster preparation and care in San Diego.

We were the first area of the hospital to begin on EPIC (an Electronic Medical Record). We have now finished our second year with this program and have seen many improvements in the quality of care we deliver. We now have ten different medical pathways we have developed and use to ensure that high quality care is always given.

Emergency Care Team: Left to right: Paul Ishimine, Janet Friday, Jennifer Weglowski, Linnday Grubensky, NP, Heather Conrad, Simon Lucio, Jason Lowe, Seema Shah, Jim Harley, John Kanegaye, Marc Etkin
QUALITY IMPROVEMENT INITIATIVE

We continue to strive to improve the quality of care we provide and our patient satisfaction. This year, the Emergency Improvement Committee headed by Paul Kurtin, MD and Abby Marquette and Rachel Weber along with Jim Harley, Marc Etkin, Lesley Carlson, and Lisa McDonough, was formed to improve our patient throughput. One of the most frequent complaints our patients have is of excessive waits. Our group met on a regular basis to examine why there were delays and what could be done to reduce them. A key finding was the number of patients in the ER for over 400 minutes was related to increased left without being seen rates. By reducing the number of these patients, our LWBS rates dropped and patient satisfaction improved. The findings of our group were recently published in the Society for Health Systems (SHS) monthly newsletter.

URGENT CARE CENTERS (UCC)

Under the leadership of Dr. Katherine Konzen, Urgent Care Medical Director, the UCCs saw 38,737 patients at our four off-site urgent care facilities last year. This was a 13.5% increase from the previous year. The Urgent Care Centers provide nearby access to local communities so that parents and patients do not need to travel to the RCHSD Emergency Department. The Urgent Care Centers provide quick access to a board certified pediatrician and pediatric trained nurses when the family’s doctor or pediatrician’s office is closed in the evenings and weekends. Our clinics provide after hours care 365 days a year. The sites are open 4pm - 10pm weekdays and 1pm - 10pm on weekends.

Emergency Care Team (cont'd): Left to right: Wendy Hunter, Nisa Atigapramoj, Matthew Murray, Julia Magana, Joyce Arpilleda, Vanessa Tamas, Jessica Dayan, Krista Caldwell, Elizabeth Hicks
Research Support

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North County
The North County Urgent Care is located at 625 W. Citracado Parkway, Suite 100, in the North County Medical Office Building. RCHSD leases space to run CCS specialty clinics during the day and the Urgent Care Center in the evenings and weekends. This site is located off Interstate 15 on the corner of Felicita and Citracado Parkway. Our team of providers saw 12,445 patients this past year.

East County
Our East County Urgent Care facility was re-opened in March 2008 on the Grossmont Medical Center Campus. This Urgent Care facility is conveniently located for people who live in East County communities such as La Mesa or El Cajon. This site has grown significantly since its re-opening, and saw 10,042 patients this year.

Mid City
The Mid-City Clinic was designed to provide comprehensive services for a largely underserved population in City Heights based on a creative model. The Mid-City Clinic sees primary care patients at the site during the day. The Urgent Care team sees patients in the evening, and provides unparalleled level of service to an area where most patients must use public transportation to go beyond their neighborhood. This combination provides services seven days a week and is open until 10pm. There were 15,626 patients seen at this site this year.

North Coastal
This site is located in Oceanside and is a collaborative effort between Sanford clinics, CPCMG, CSSD Specialty Clinics and RCHSD. The Urgent Care shares space with the Specialty clinics. This site opened April 4th and saw 624 patients through the end of the fiscal year.

EMERGENCY DEPARTMENT

MEDICAL STAFF

Our provider staff is comprised of 14 board certified pediatric emergency medicine specialists, 16 board certified or eligible pediatricians, nine nurse practitioners and one physician assistant. Two additional board-certified pediatric emergency medicine specialists will join our staff in fall of 2011. We have the largest group of pediatric emergency medicine physicians on the west coast. All of the pediatric emergency medicine specialists in the Division have completed a residency in Pediatrics or Emergency Medicine and an additional two- to three-year fellowship in Pediatric Emergency Medicine for a total of 5-6 years of postgraduate training. Our pediatricians, nurse practitioners and physician assistant staff our Intermediate Care area, rapid medical assessment area and less acute side of our emergency department.

The Emergency Division at RCHSD is the only ER in San Diego County that provides 24-hour coverage with pediatric emergency medicine physicians. We are also part of the trauma team. This year we saw 1091 children that were referred to our center after being involved in serious accidents such as motor vehicle collisions, pedestrians struck by automobiles, bicycle and skateboard accidents, and falls.

CLINICAL ACTIVITIES

Midlevel provider program
One of our most successful programs has been the development of specialized nurse practitioners and physician assistants that provide medical care for less acutely ill
and injured children who present to the ECC. We have ten pediatric nurse practitioners/physician assistants that run this program under the direction of Jim Harley, Marc Erkin and Tawnya Macchiarella. Currently, about 25% of our patients are seen by a mid-level provider.

Intermediate Care
We have five pediatricians to augment our medical provider staff to see patients with less acute problems. All our pediatricians have received additional training in suturing to improve care in our ER.

Sedation
This year we added a new nitrous oxide machine to use in procedural sedation. It can be used without need of a painful IV. Nitrous oxide is an excellent medication to calm excessive anxiety in children undergoing procedures in the ER. We have found this has been well received by both patients and staff.

Disaster Preparedness
Our division appointed Heather Conrad, MD as disaster director for our division. She has attended training and has worked this year to help make our ED ready to be the first line-receiving unit for pediatric disaster victims. We recently participated in a recent hospital wide table top disaster drill to see how we would respond to an influenza epidemic.

Emergency Medical Services
Our Division provides advice and direction to the County and City of San Diego in pre-hospital care. We strive to ensure that paramedics are properly supplied with the necessary equipment, education, and protocols to assess and stabilize sick and injured children before they are brought to the hospital. Jamil Madati, MD is the RCHSD pre-hospital care liaison. Jim Harley, MD is on the California State Technical Advisory Committee for EMS-C (Emergency Medical Services for Children).

TEACHING ACTIVITIES
Education is one of our core missions. We train Pediatric, Emergency Medicine, and Family Medicine residents from San Diego and from all over the country in the recognition and stabilization of sick and injured children. Medical students from the University of California, San Diego (UCSD) rotate with us. In the 2010-11 year, we trained 170 residents and 20 medical students. Seema Shah, MD is our division education coordinator. We provide bedside teaching and instruction in basic procedures such as suturing or lumbar punctures with 40 hours of direct attending coverage a day. We offer a fourth-year UCSD medical student rotation that is one of the most popular selections among students interested in pediatrics or emergency medicine.

We currently participate with UCSD in using a state of the art, computer programmed resuscitation model for teaching residents and medical students.

FELLOWSHIP
The Division of Emergency Medicine runs an ACGME-accredited two- to three-year fellowship program in pediatric emergency medicine. Currently, there are six fellows in training. Paul Ishimine, MD is the Fellowship Director. We have four attendings on staff that completed their pediatric emergency medicine training in our program. Currently in the United States, there are not enough pediatric emergency medicine physicians to meet today’s demands. Training future pediatric emergency medicine physicians is a key priority of our department to help meet this need. There are only four other similar training programs in California.

RESEARCH ACTIVITIES
The Division of Emergency Medicine is committed to excellence in improving our knowledge of emergency care for sick and injured children. Current research in our emergency department falls into three categories: NIH-funded research on Kawasaki disease (an inflammatory disease unique to children that can cause heart disease); multicenter collaborative studies with other pediatric centers; and clinical research studies. Kawasaki disease research is a unique and highly successful collaboration among clin-
tactical researchers in the division, basic science researchers, and Dr. Jane Burns, an internationally recognized expert in Kawasaki disease. Our collaborative research is performed through the American Academy of Pediatrics’ Section on Emergency Medicine. We have two ongoing clinical studies on the treatment of minor head injuries. One is with the use of intravenous hypertonic saline and the other is with ondansetron. A recent study was published on the use of a rapid service area in improving patient flow. Other studies in progress include the effect of a croup pathway on patient throughput, the use of serum lactate levels in intussusception and the evaluation of syncope in the emergency department.

SCIENTIFIC PRESENTATIONS AND ABSTRACTS


PUBLICATIONS


Major Goals and Plans

The Mission of the Division of Emergency Medicine is to be a center of excellence for providing acute care to ill and injured children in San Diego. We are continuing to improve our care by developing and implementing clinical pathways, where assessment and treatment can be standardized and periodically assessed to ensure we are delivering high quality care.

We will continue to expand our urgent care services. Our goal is to provide parents a nearby alternative to the Rady Children’s Hospital Main Campus that allows their children to be evaluated for minor illnesses and injuries when their primary care physician’s office is closed. We hope to open one more Urgent Care Center in the South Bay area some time in the future.

We continue to recruit more pediatric emergency physicians to join our group. Two new PEM faculty will start this fall.

Our goal for our fellowship program is to make it one of the premier training centers for pediatric emergency medicine in the U.S.

We continue to make clinical research a priority.

We will continue participating in an NIH-funded grant on Kawasaki’s disease. All our fellows have clinical research projects in progress. We are looking to add a director of clinical research to our division and have begun recruitment for this position.


Lien J, Sharieff G. Trauma: Orthopedic injuries. In: *Neonatal and Infant Emergencies*, Sharieff G,


The Division of Pediatric Endocrinology is actively engaged in clinical care, research, teaching and community service in the areas of endocrinology, diabetes, lipid disorders and obesity. The division has continued to expand its clinical and research activities to meet the ongoing health needs of the San Diego pediatric community.

FACULTY

Michael Gottschalk, MD, PhD, Chief, Clinical Professor of Pediatrics
Ivka Afrikanova, PhD, Assistant Project Scientist
Ergeng Hao, MD, Associate Project Scientist
Alberto Hayek, MD, Professor Emeritus
Andrew Hinton, PhD, Assistant Project Scientist
Rohan K. Humphrey, PhD, Assistant Project Scientist
Ulupi Jhala, PhD, Associate Research Scientist
Kenneth Lee Jones, MD, Professor Emeritus
Ayse Kayali, PhD, Assistant Project Scientist
Thomas Kelly, MD, Assistant Clinical Professor of Pediatrics
CLINICAL ACTIVITIES
INPATIENT/OUTPATIENT

The Division of Pediatric Endocrinology cares for children with endocrine disorders, lipid disorders and diabetes mellitus. The division is a participant in the multidisciplinary Prader-Willi clinic. Outpatient endocrinology clinics are located at Rady Children’s Hospital San Diego (RCHSD) and in satellite offices in San Diego, Imperial and Riverside Counties. Over the past year, there were more than 8,000 endocrine/diabetes outpatient visits, and over 1,000 children with either type 1 or type 2 diabetes mellitus were routinely seen by the diabetes service. The Diabetes Center at RCHSD received the American Diabetes Association Recognition Award for meeting the standards of education in diabetes self-management.
RESEARCH ACTIVITIES

Carla Demeterco, MD, PhD is involved in developmental therapeutics for diabetes mellitus. She has worked extensively in the area of pancreatic beta cell biology with emphasis on inducing beta cell regeneration in the adult human pancreas. She previously reported a connection between cell-cell contact and hormone expression. She also showed abnormal signaling patterns in the beta-cells of patients with type 2 diabetes. More recently she has become interested in studying children with diabetes mellitus and obesity. She collaborated on a recent study of misdiagnosed monogenic diabetes in children. She is the local principal investigator investigating the effects of the bile acid sequestrant, Colesevelam, in children with type 2 diabetes.

Michael Gottschalk, MD, PhD is involved in clinical trials related to diabetes mellitus in children, including studies on the immunomodulation of type 1 diabetes, pharmacokinetic/pharmocodynamic studies of exenatide in type 2 diabetes mellitus and behavioral modification of obese adolescents at risk for type 2 diabetes mellitus. He is also the local principal investigator studying IGF-1 treatment and growth hormone treatment of children with IGF-1 deficiency.

Alberto Hayek, MD is the Co-Director of the UC San Diego Pediatric Diabetes Research Center and his lab is involved in studies related to basic research in diabetes, with a focus on insulin-producing pancreatic endocrine cells, contained in cell clusters called in the so-called islets. His laboratory was the first to show replication of human islets in vitro when exposed to specific growth factors. Dr. Hayek's laboratory was also one of the first to develop culture model-systems for human fetal and adult islets. This culture-system has provided a model for the identification of growth factors involved in islet cell differentiation and replication. At this time, Dr. Hayek's work centers on human embryonic stem cells and induced pluripotent stem cells derived from skin biopsies of patients with type 1 diabetes. The goal of this research is to contribute to the development of cell-based therapies for diabetes.

Ulupi Jhala, PhD research is focused on unraveling the mechanisms that initiate and sustain beta cell death to result in diabetes. Current projects are focused on the role of mixed lineage kinases in initiating apoptosis in response to cytokines and fatty acids. Specific emphasis areas include regulation of mitochondrial bioenergetic pathways and how they impinge on cell survival. A second interest of research is understanding the role that epigenetic events play in the binary cellular decision of differentiation versus growth of the beta cell.

Kenneth Lee Jones, MD continues his interest in diabetes and obesity in children. He is currently studying the effect of sulfonylurea therapy on glycemic control and neuromuscular function in a child with the DEND syndrome and neonatal diabetes. He is also studying the misdiagnosis of type 2 diabetes in children.

Jane Kim, MD investigates molecular mechanisms of insulin resistance and pancreatic beta cell failure in experimental models of type 2 diabetes. Current projects include studies defining the role of FoxO1 forkhead transcription factors in adipose and other insulin target tissues. This work is expected to identify novel mechanisms that regulate insulin signaling in the context of obesity.

Charles C. King, PhD is working to enhance the production of pancreatic progenitor cells from human embryonic stem cells (hESCs) through the manipulation of signal transduction pathways and microRNAs. Specifically, Dr. King is working to understand the biochemical signals that regulate the transition of hESC from pluripotent cells to definitive endoderm, a committed cell fate necessary for the generation of insulin-producing cells. His laboratory has identified a number of compounds that inhibit a previously unrecognized signaling pathway necessary to maintain pluripotency. Addition of these compounds enhances definitive endoderm formation and significantly decreases teratoma formation. A second focus of the laboratory is to better understand the role microRNAs play in insulin cell genesis. Next Generation Sequencing is being used to map changes in microRNA expression of cells at defined points in differentiation.

Karen Klein, MD is studying precocious puberty in girls with the goal of optimizing growth, exploring new treatment methods, and defining pubertal progression after treatment. Dr. Klein is also studying the effect of weight gain and racial diversity on pubertal onset. Her laboratory runs an ultrasensitive yeast bioassay for estradiol. This unique technique enables her to study estrogen's role in growth and pubertal development in the above settings. A third area of research is adolescent polycystic ovarian syndrome. Dr. Klein shares laboratory space with Dr. Jeffrey Chang in reproductive
Major Goals and Plans

The division’s major goal over the next five years is to build a pediatric diabetes center in San Diego. The aim is to bring clinicians and researchers together under one roof, creating an environment that allows novel interventions developed in the laboratory to be quickly translated into clinical practice.

Currently in San Diego, the clinical and research components of this initiative are geographically dispersed among multiple institutions, including UCSD, Rady Children’s Hospital San Diego, the Whittier Institute, the La Jolla Institute of Allergy and Immunology and the Sanford-Burnham Institute. Merging these independent programs into a single center would create a long-needed, comprehensive program on par with the leading pediatric diabetes centers in the country. Support for training will allow expansion to the UCSD Pediatric Endocrinology Fellowship program to be very competitive in recruiting talented individuals specifically focused on diabetes research.

The research focus will be on islet cell regeneration, including stem cell initiatives, immune-based interventions in recent onset of type 1 diabetes mellitus, and crucial collaborations that interface biological approaches to devise new avenues to treat and prevent type 1 diabetes mellitus. Clinically, the diabetes center would conceptually simulate a medical home for diabetes; physically, it would provide a home-like environment that would include a teaching kitchen, playroom, media room and library. Because an individual’s physical environment has an enormous impact on perceptions and overall feelings of well-being, creating a home environment provides a better interface with the child/adolescent, family, and diabetes healthcare team.

The Department of Pediatrics and RCHSD are currently planning for the construction of a clinical research center on the hospital campus, focusing on five areas of pediatric health, including obesity/diabetes. In collaboration with the Gastroenterology Division, the Endocrinology Division is creating a clinical research program for obesity and related consequences, directed toward prevention and treatment of obesity, insulin resistance, fatty liver disease, metabolic syndrome and dyslipidemia. The program will also include a multidisciplinary clinical program and, by working with the Center for Healthier Communities, provide comprehensive community education.

endocrinology, and hopes to increase collaboration using his expertise and her patient population.

Maja Marinkovic, MD maintains clinical database of patients with IGF-1 deficiency treated with Increlex.

Anthony Montgomery, PhD has focused on methods to improve the ex vivo expansion of insulin-producing beta cells for transplantation. Dr. Montgomery has shown that interactions between beta cells and their extracellular environment induces cultured beta cells to transition into a defunct mesenchymal phenotype. Importantly, Dr. Montgomery has identified small compound inhibitors that prevent this process and subsequently preserve the native phenotype and function of beta cells in culture. In collaboration with Dr. Alberto Hayek, Dr. Montgomery is also developing novel approaches to increase the yield and function of insulin producing beta cells from both human embryonic stem cells and pancreatic progenitor populations. This work is focused on the use of small compound inhibitors of select non-receptor tyrosine kinases and upon the manipulation of the extracellular matrix environment.

Ron Newfield, MD has developed and is maintaining a comprehensive database of endocrinology and diabetes patients seen at Rady Children’s Hospital-San Diego. The database has already enabled publication of manuscripts and abstracts, and will remain a valuable source for future research in pediatric diabetes and endocrinology. Dr. Newfield is involved in clinical trials of growth hormone
treatment in children with idiopathic short stature, testing of new injection devices for growth hormone, and pharmokinetic studies of lipid-lowering medications. Dr. Newfield is also involved in a clinical trial, related to the immunomodulation of type 1 diabetes mellitus in recently diagnosed children and adolescents, by way of a vaccination with an islet-cell antigen. He has launched a study to screen relatives of children with type 1 diabetes for their risk of developing the disease as well, as part of TrialNet, a multicenter network in the US and abroad. He has also initiated a few industry-based studies to study new therapies in children and adolescents with type 2 diabetes, to start enrolling in the fall of 2011.

Susan Phillips, MD is focused on understanding the hormonal function of adipose tissue in human obesity. Obesity increases the risk of developing type 2 diabetes, yet the nature of the link between obesity and diabetes remains poorly understood. To better understand the relationship between excess fat and diabetes, Dr Phillips has been studying human fat using a novel culture method that permits its study over a prolonged period of time. Using this method she has found that fat hormone secretion differs markedly in obese and lean subjects. She has specifically identified alterations in the secretion of the novel fat cell hormone adiponectin. Adiponectin is an insulin-sensitizing hormone whose low levels in obesity are predictive of diabetes disease occurrence. She has determined that adiponectin production is impaired in visceral fat and in large fat cells. Her current studies are focused on identifying the cellular mechanisms by which reductions in adiponectin occur in visceral fat and in large fat cells. The goal of her work is to identify key regulatory steps in adiponectin synthesis and secretion such that the excess adipose tissue of the obese can be leveraged to increase adiponectin production.

Maike Sander, MD conducts research into developing strategies for a cell-based therapy for diabetes mellitus. The successful production of insulin-producing beta-cells requires a thorough understanding of the molecular networks that direct the normal development of these cells, as well as the identification of an appropriate convertible cell type, such as embryonic stem cells or adult progenitor cells. One the major, still unanswered, questions in the field of pancreas organogenesis is whether a stem or progenitor cell population resides in the pancreas beyond the embryonic period. The objective of our research is to understand the molecular and cellular mechanisms that control stem/progenitor cell maintenance and differentiation in the embryonic and adult pancreas. Our research employs mouse molecular genetics, approaches in human embryonic stem cells as well as biochemical methods.

Jianhua Shao, MD, PhD is studying obesity and obesity-induced insulin resistance. His laboratory currently is working on three main projects: 1) Transcriptional regulation of adiponectin gene expression. The main goal of this study is to elucidate the underlying mechanisms that suppress adiponectin gene expression during the development of obesity 2) Adipocytokines and lipid metabolism. The objective of this study is to identify the regulatory effects of adiponectin on FFA and triglyceride metabolism in skeletal muscle and adipose tissue and 3) Macrophage infiltration and adipogenesis. Conditional gene knockout and macrophage-specific ablation approaches are employed to investigate the developmental role of macrophages in excessive energy intake-induced adipogenesis and angiogenesis. 4) Maternal obesity and offspring adiposity, which study how maternal overnutrition alters intrauterine metabolic environment and through which programs offspring adiposity. In addition, a series of preliminary studies are carrying out for a new project, which aims at brown adipocyte activation and obesity.

TEACHING ACTIVITIES

Carla Demeterco, MD, PhD
Dr. Demeterco supervises medical students, residents and fellows in the endocrine/diabetes clinic and lectures at resident and fellow conferences. She also serves as Skaggs School of Pharmacy & Pharmaceutical Sciences Preceptor.

Michael Gottschalk, MD, PhD
Dr. Gottschalk is the Pediatric Endocrinology Fellowship Program Director and Vice-Chair for Education in the Department of Pediatrics. As such, he is very involved in resident and fellow education. He teaches in the first-year medical student Endocrinology Reproductive Medicine and Metabolism course, precepts medical students in the endocrine/diabetes clinic and is chair for a medical student
# Research Support

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<td>Mixed Lineage Kinases as Drug Targets in Type 1 Diabetes</td>
<td>227,258</td>
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<td>Stress Kinase Regulated Beta Cell Apoptosis</td>
<td>151,571</td>
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<td>1-2006-303/JUVENILE DIABETES FOUNDATION</td>
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<td>Epigenetic Regulation of PDX1 Gene</td>
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<td>Modeling Pancreas from Human Embryonic Stem Cells (Hayek, PD)</td>
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<td>35-2008-622/JDRF</td>
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## Research Support (continued)

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<th>Grant/Contract #</th>
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<td><strong>Jane Kim, MD</strong></td>
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<td>1 K08 DK075479-01A1/NIH (NIDDK)</td>
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<td><strong>Karen Klein, MD</strong></td>
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<td>Growth and Menses in Girls with Precocious Puberty</td>
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<td>After Discontinuation of Treatment</td>
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<td>Racial Diversity and Obesity Impact on Pubertal Onset</td>
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<td>2005-0355/PFIZER</td>
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<td><strong>Anthony Montgomery, PhD</strong></td>
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<td>1-2006-138/JUVENILE DIABETES FOUNDATION</td>
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<td>Exploitation of Human ESC-Derived Sertoli Cells for Islet Transplantation</td>
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<td>5-2008-830/JUVENILE DIABETES FOUNDATION</td>
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<td>SRC Family Kinase Inhibitors and Generation of Functional Human Beta Cells</td>
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<td>110,000 Apr 2009 - Mar 2010</td>
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<td>Human Stem Cell-Derived Sertoli Cells for Islet Transplantation</td>
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<td>Kinase Inhibitors and the Endocrine Specification of hESC Derivatives</td>
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<td>1-11-10-19/AMERICAN DIABETES ASSN</td>
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<td><strong>Maike Sander, MD</strong></td>
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<tr>
<td>Epigenetic strategies for the in vitro generation of replacement beta cells</td>
<td>937,946</td>
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<td>Characterization of Pancreatic Progenitor Cells</td>
<td>313,030</td>
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<td>2008-D-014-NET/LARRY L. HILLBLOM FOUNDATION, THE</td>
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<th>Duration of Grant</th>
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<th>Annual Budget</th>
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<th>Quantitative Comparison of hESC and hiPSC Lines to Generate Pancreatic Endoderm and Endocrine Cells</th>
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<th>Grant/Contract #</th>
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<th>Total Direct Dollars</th>
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<th>Nkx6.1 - Induces Alpha-Cell Conversion and Enhanced Beta-Cell Regeneration</th>
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<th>Support for the NIH-NIDDK Beta Cell Biology Consortium Coordinating Center</th>
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**Jianhua Shao, MD, PhD**

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<tr>
<th>Grant/Contract #</th>
<th>Adiponectin and Regulation of Triglyceride Metabolism</th>
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<th>Grant/Contract #</th>
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<th>Total Direct Dollars</th>
<th>Duration of Grant</th>
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</table>
independent study project. In addition, he was invited to speak at meetings of the Endocrine Society and has been interviewed on local television.

Kenneth Lee Jones, MD
Dr. Jones continues to work with students, rotating residents and pediatric endocrinology fellows in the pediatric diabetes and endocrinology clinics. He also spends one week each month as the inpatient-attending physician on the pediatric endocrine/diabetes service. In this capacity, he rounds with the resident/student team for an hour each morning.

Tom Kelly, MD
Dr. Kelly provides lectures to residents and fellows, and teaches in the endocrine/diabetes clinic and inpatient service.

Jane Kim, MD
Dr. Kim provides lectures to residents and fellows, and teaches in the endocrine/diabetes clinic. She also serves on a fellowship scholarship oversight committee and is an instructor and mentor for undergraduate, graduate and medical students.

Karen Klein, MD
Dr. Klein teaches medical students, residents and fellows in the endocrinology clinic. She has served as a mentor for endocrine fellows and served on a fellowship scholarship oversight committee.

Maja Marinkovic, MD
Dr. Marinkovic teaches endocrine fellows, pediatric residents and medical students in inpatient and outpatient settings. She teaches in the first-year medical student Endocrinology Reproductive Medicine and Metabolism course. She serves on the ISP committee.

Ron Newfield, MD
Dr. Newfield is responsible for organizing the three-year endocrinology-diabetes fellowship lecture series. He is also in charge of Journal Club. He is involved in medical student, resident and fellowship education. He mentored a student on her ISP project, an abstract of which was published at the 2011 American Diabetes Association meeting. He has given several presentations to local health professionals and presented at endocrine grand rounds. In addition, he has been interviewed on local television to raise awareness for diabetes in children.

Susan Phillips, MD
Dr. Phillips teaches medical students, interns, residents and fellows in the outpatient pediatric diabetes and endocrinology clinics as well as in the UCSD/VA diabetes outpatient clinic. She serves as a facilitator to first year medical students and is a core-course lecturer for second year medical students. She provides noon lectures on a variety of pediatric diabetes and endocrinology topics to housestaff and provides two board review talks per year for endocrinology fellows. She serves as a mentor to a fourth year medical student and as an ISP chair. Dr. Phillips supervises postdoctoral fellows, medical students and undergraduate researchers in her laboratory.

Maike Sander, MD
Dr. Sander is co-lecturer of the Stem Cell Biology Course that is mandatory for graduate students, postgraduate researchers, and clinical fellows who receive support by the California Institute of Regenerative Medicine (CIRM). She also also teaches a core class for first year graduate students in the Biomedical Sciences Graduate Program and co-lectures a core class in the Integrated Bachelor’s/Master’s Degree Programs. Dr. Sander supervises postdoctoral fellows, graduate students, and undergraduate researchers in her laboratory.

AWARDS, HONORS AND MAJOR PRESENTATIONS

Michael Gottschalk, MD, PhD
• Lecture, Bone basics: When bones aren’t healthy. The 24th Annual San Diego International Conference on Child and Family Maltreatment, San Diego, CA January 26, 2010
• Lecture, Congenital adrenal hyperplasia: Transition from childhood to adulthood. UCSD Endocrine Grand Rounds, San Diego, CA June 16, 2010
• Invited Speaker, Meet the professor: Treatment of Diabetes in children and adolescents. The 92nd Annual Endocrine Society Meeting San Diego, CA June 24, 2010
Alberto Hayek, MD
• Speaker, Enhanced pancreatic endocrine differentiation of human pluripotent stem cells following pharmacological inhibition of select kinases. 13th World Congress of International Pancreas and Islet Transplant Association, Prague, Czech Republic, June 1-4, 2011
• Keynote Speaker, Islet stem cells in diabetes cell therapy. Cali, Colombia, May 26-29, 2011
• Speaker, In vitro conversion of stem cells to beta cells. 14th International Congress of Endocrinology, Kyoto, Japan, March 2010
• Speaker, Cell-based therapies for Type 1 Diabetes. Pancreas and Islet Transplant Society Meeting, Utsunomoya, Japan, March 2010
• Speaker, Cell based-therapies for T1D. Portland, OR, April 2010
• Speaker, Islet neogenesis from stem cells. Genoa, Italy, December 5, 2010

Ulupi Jhala, PhD
• Speaker, 1st annual Symposium. Pediatric Diabetes Research Center at UCSD, La Jolla, CA, February 2010
• JDRF workshop: Epigenetics and Beta cell reprogramming. Harvard University, Cambridge, MA, December 2009
• Invited Speaker, Obesity. Nutrition Research Center, Boston University School of Medicine, Boston, MA December 2009
• Speaker, Genomics Institute of Novartis Research Foundation, San Diego, CA, October 2010
• Invited Speaker, 2nd Annual GNF-JDRF Diabetes Research Symposium, San Diego, CA, April 2011
• Invited Speaker, Seminar series. Wells Center for Pediatric Research, Indianapolis, IN, May 2011

Jane Kim, MD
• Speaker, San Diego Beta Cell Society Meeting, November 2010

Maja Marinkovic, MD
• Lecturer, Growth patterns: Short, tall and in-between. Pediatric Grand Rounds Scripps Mercy Hospital, San Diego, CA, July 21, 2010

Anthony Montgomery, PhD
• Invited Speaker, Emerging role for the neural cell adhesion molecule L1 in promoting tumor growth and metastasis. Pfizer Global Research & Development, La Jolla, CA 2010
• Lecturer, Stem cell biology. Online course (BIOL-40186) UCSD Extension, 2009-present
• Impact of extracellular matrix on the mesenchymal transition of human β-cells. San Diego Beta Cell Society Meeting, 2010
• Enhanced pancreatic endocrine differentiation of human pluripotent stem cells following pharmacological inhibition of select kinases. Proceedings of the Western Region Islet Study Group, 2011

Ron Newfield, MD
• Lecture, Primary care and Diabetes management in the 21st century: New challenges. Regional CME event on Practical Pediatrics, at Scripps Memorial Hospital, La Jolla, CA, October 2010
• Lecture, an Update on hypopituitarism, diagnosis and management. CME lecture at Grossmont Hospital, San Diego, CA, April 2010

Susan Phillips, MD
• Invited Speaker, Are GLP-1R agonists appropriate for the obese child with T2DM? American Diabetes Association Meeting, New Orleans, LA, June 2010
• Invited Speaker, Regulation of adiponectin and anti-diabetic therapies in humans. Obesity Society Meeting, San Diego, CA, October 2010
• Oral presentation, Biology of the fat cell, Location?, Location?, Location? Pediatric Grand Rounds, San Diego, CA, October 2009

Maike Sander, MD
• Invited Speaker, Annual Meeting of the Society for Developmental Biology, Chicago, IL, July 2011
• Speaker, The Beta Cell Biology Consortium. Annual meeting, Washington, MD, May 2011
• Invited Speaker, Annual Meeting of the American Association of Anatomy, Washington, MD, April 2011
• Invited Speaker, EASD/JDRF Joint Strategic Meeting, Barcelona, Spain, November 2010
• Invited Speaker, University of California, Irvine, CA, November 2010
• Invited Speaker, 15th EASD/Hagedorn Oxford Workshop, Oxford, UK, August 2010
• Invited Speaker, session chair, 70th Meeting of the American Diabetes Association, Orlando, FL, June 2010
• Invited Speaker, session chair, Keystone Symposium on Islet Biology, Whistler, BC, Canada, April 2010
• Invited Speaker, City of Hope, Beckman Center, Duarte, CA, April 2010
• Invited Speaker, Understanding beta-cell functional maturation to generate alternative sources of human beta-cells. JDRF Workshop, New York City, NY, March 2010
• Speaker, The Beta Cell Biology Consortium, annual meeting, Washington, MD, March 2010
• Invited Speaker, Advances in Diabetes Biology, Immunology and Cell Therapy: 10th Annual Rachmiel Levine Diabetes and Obesity Symposium, Las Vegas, NV, February 2010
• Invited Speaker, University of Nebraska, Omaha, Medical School, NE, February 2010
• 1st annual Symposium, Pediatric Diabetes Research Center at UCSD (speaker), La Jolla, CA February 2010
• Invited Speaker, Harvard Medical School Joslin Diabetes Research Institute, Boston, MA, October 2009
• Invited Speaker, Kings College, London, UK, August 2009
• Invited Speaker, University of Manchester, Manchester, UK, August 2009
• Invited Speaker, Innovation and translational stem cell therapy for diabetes and neurological diseases. Los Angeles, CA, September 2009

Jinhua Shao, MD, PhD
• Lecturer, Adiponectin and lipid metabolism, The 2009 PDRC Symposium, February 2010
• Invited Speaker, Adiponectin and fetal fat deposition, Peking University, Beijing, China, June 2011
• Oral presentation, Adiponectin enhances skeletal muscle oxidative metabolism by suppressing MAPK phosphatase-1, ADA 71st Scientific secession, San Diego, CA, June 2011

PUBLICATIONS


Koppl JL, Dubois CL, Schaffer AE, Hao E, Shih HP, Seymour PA, Ma J, Sander M. Sox9+ ductal cells are multipotent progenitors throughout development but do not produce new endocrine cells in the normal or injured adult pancreas. *Development*, 138:653-65, 2011.


The Division of Gastroenterology, Hepatology and Nutrition is committed to the delivery of exemplary clinical care, to teaching trainees, and to perform basic and clinical research in digestive diseases in children. Faculty members engage in a wide variety of clinical and basic science research to further the understanding, treatment, and cure of many disorders. The division is part of many collaborative multi-center trials, and provides accredited training to pediatric and adult gastroenterology fellows, residents, and medical students from UC San Diego (UCSD) as well as other programs. The division provides comprehensive, interdisciplinary care for children and adolescents with general gastroenterology disorders, liver disorders including hepatitis, fatty liver, biliary atresia, inflammatory bowel disease, motility and functional disorders, obesity, peptic disorders, eosinophilic esophagitis, polyposis and colon polyps, feeding difficulties, and total parenteral nutrition.

Left to Right: Lars Bode, Kerri Boutelle, Jeannie Huang, Ranjan Dohil, Lillian Choi, Jae Kim, Paulina Ordonez, Jeffrey Schwimmer, Xenia Hom, Ariel Feldstein, Mamata Swagnanam, Warren Shapiro, Kimberly Newton
FACULTY

Ariel E. Feldstein, MD, Professor of Pediatrics and Division Chief
Lars Bode, PhD, Assistant Professor of Pediatrics in Residence
Kerri Boutelle, PhD, Associate Professor of Clinical Pediatrics and Psychiatry
Rebecca Cherry, MD, Assistant Clinical Professor of Pediatrics
Lillian Choi, MD, Assistant Clinical Professor of Pediatrics
Ranjan Dohil, MB, Bch, Professor of Clinical Pediatrics
M. Abigail Garcia, MD, Assistant Clinical Professor of Pediatrics
Xenia Hom, MD, Assistant Clinical Professor of Pediatrics
Jeannie Huang, MD, MPH, Associate Professor of Pediatrics in Residence
Sherry Huang, MD, Associate Clinical Professor of Pediatrics
Jae Kim, MD, PhD, Assistant Clinical Professor of Pediatrics
Martin Kagnoff, MD, Professor of Medicine and Pediatrics (Emeritus)
Kimberly Newton, MD, Assistant Adjunct Professor of Pediatrics
M. Paulina Ordonez, MD, Assistant Professor of Pediatrics
Jeffrey Schwimmer, MD, Associate Professor of Clinical Pediatrics
Warren Shapiro, MD, Assistant Clinical Professor of Pediatrics
Mamata Sivagnanam, MD, Assistant Professor of Pediatrics in Residence
Sharon Taylor, MD, Clinical Professor of Pediatrics

POSTDOCTORAL FELLOWS

Monica Zherebtsov, MD
Emily Contreras, MD
Elizabeth Yu, MD
Tamara Taketani, MD
Hannah Awai, MD

CLINICAL ACTIVITIES

INPATIENT/OUTPATIENT

The board-certified faculty members are the sole providers for pediatric digestive diseases in San Diego and Imperial Counties, providing consultations for patients and physicians on all aspects of gastrointestinal disease in the inpatient and outpatient settings, including diagnostic and therapeutic endoscopies, living-related and cadaveric liver transplantation, liver diseases, obesity, wellness and nutrition, eosinophilic esophagitis, motility disorders, parenteral and enteral nutritional supplementation, and disorders of the pancreas and gallbladder. The division has outpatient clinic centers at Rady Children’s Hospital-San Diego (RCHSD), Balboa Naval Medical Center, and Kaiser-Permanente. They also provide outpatient satellite care in Escondido, Murrieta, and Encinitas.

RESEARCH ACTIVITIES

Kerri Boutelle, PhD performs research focusing on the causes, characterization, prevention and treatment of childhood and adolescent obesity and eating disorders. Overarching research objectives include investigating the role of familial factors in the etiology, prevention, and treatment of obesity and eating disorders in youth, utilizing principles of basic behavioral science to inform and improve treatments for obesity and eating disorders; and determining intervention and prevention strategies aimed at changing the trajectory of weight and eating disorders in children and adolescents. In ongoing studies, Dr. Boutelle hopes to identify innovative and cost-effective treatment strategies for obese children (parent-only treatments), to develop new treatments based on basic behavioral research for children who binge eat (self-regulation treatments), and to disseminate current behavioral treatment through innovative methods (guided self-help, computer-based guidance for primary care physicians). Dr. Boutelle’s clinical interests lie in the treatment of childhood and adolescent obesity and eating disorders, and the concomitant depression, anxiety, oppositional, personality, behavioral and family changes that occur with eating-related difficulties. Her clinical work is
grounded in empirically based cognitive-behavioral, interpersonal and family-based treatments, and she provides and supervises individual, group and family therapy. She is also the Director of Behavioral Services, Weight and Wellness Clinic.

Lillian Choi, MD has special interests in pediatric gastroenterology that include irritable bowel syndrome. Dr. Choi is currently conducting a pilot trial assessing the effects of a non-tricyclic antidepressant on recurrent abdominal pain. The study is an open-labeled pilot trial evaluating S-adenosylmethionine as a treatment for recurrent abdominal pain (RAP) in 30 children. The specific aims are to determine whether SAM-e reduces pain intensity, non-pain symptoms, pain disability, and depressive symptoms in children with RAP.

Ranjan Dohil, MB, BCh is primarily interested in acid-peptic disease. He is interested in the acid-secretogogue, cysteamine, which is presently used as the only FDA-approved treatment for cystinosis. Studies to understand the pharmacokinetics of cysteamine have been performed and proven valuable. As part of his research, Dr. Dohil has recently developed a controlled-release preparation of cysteamine to reduce the frequency of drug administration and diminish associated gastrointestinal symptoms in cystinosis. Eosinophilic esophagitis (EE) is Dr. Dohil’s second interest. Having started an EE clinic for children, he created a database to improve our understanding of the epidemiology, diagnosis, treatment, and natural history of this condition. He has treated a number of children with a newly formulated viscous oral steroid formulation.

Ariel Feldstein, MD is Chief of the Division. He is regarded as a leading physician scientist in the field of Pediatric Hepatology. Dr. Feldstein’s research program is focused on dissecting the biochemical pathways of cell death trigger by over-accumulation of fatty acids and other lipids in the liver and other organs, which may play an important role in disease processes such as obesity-associated liver disease (non-alcoholic steatohepatitis or NASH), and type 2 diabetes. A second objective is to better understand the events that link excessive accumulation of lipids in the liver (steatosis) to liver injury, fibrosis and carcinogenesis. His research is currently supported by several grants from the National Institutes of Health (NIH) as well as foundation (American College of Gastroenterology) and industry (Nestle) grants. His laboratory has provided key evidence to support the currently most accepted theory of the role of hepatic lipid compartmentation and lipotoxicity in the pathogenesis of steatohepatitis development. Most recently, he provided key evidence for a novel pathogenic role for adipocyte cell death, and in particular the Fas extrinsic pathway of apoptosis in the recruitment of macrophages to adipose tissue, inflammation and subsequent metabolic disruption resulting in insulin resistance and hepatic lipid accumulation during weight gain. At the translational level, Dr. Feldstein has pioneered the role of examining cytokeratin-18 fragments as biomarkers for liver injury in NASH. This marker is currently considered the most promising non-invasive test for liver injury in patients with NASH. His laboratory routinely utilizes a variety of in vivo and in vitro experimental models in various projects on the basic mechanisms involved in steatosis and NASH development as well as an array of mass spectrometry based approaches (LC/ESI/MS/MS, proteomics) directed toward translational studies to identify mechanism-based disease biomarkers. Dr. Feldstein’s lab offers a unique environment for fellows in the gastroenterology training program combining significant clinical and translational endeavors with substantial basic research opportunities.

M. Abigail Garcia, MD receives funding from the Cystic Fibrosis Foundation to research gastrointestinal manifestations of cystic fibrosis. Dr. Garcia focuses on understanding the patho-physiological basis of cystic fibrosis (CF). Her research aims to understand the consequences of diminished bicarbonate transport in CF and how this affects development of mucoviscidosis. She has shown that bicarbonate is essential for optimal mucus secretion in mouse models, and that bicarbonate deficiency inhibits intestinal mucus release. She is further investigating the mechanisms behind this finding to provide an effective treatment option to CF patients who suffer from distal intestinal obstruction syndrome or chronic constipation.

Jeannie Huang, MD, MPH is a member of the Center for Wireless & Population Health Systems, which is a body of investigators whose work focuses on the creative use of networked technologies and ubiquitous computing to improve population health (cwphs.ucsd.edu). Dr. Huang currently leads and collaborates on several highly innovative health intervention projects addressing personal health behaviors and public health issues, including Texting to promote Adolescent Health Liaisons and Communication (TAHLHC), a technology (website + SMS)-based interven-
Major Goals and Plans

• Development of a Motility Center, one of the handful of pediatric motility programs in the country and the only one of its kind in the West Coast, will provide consultation and diagnostic services for children and adolescents with a wide variety of motility, and functional disorders.

• Development of an Inflammatory Bowel Disease Center, a multidisciplinary center that will provide comprehensive care for children with Crohn’s Disease and ulcerative colitis.

• The Division of Pediatric Gastroenterology and Nutrition at UCSD and RCHSD has undergone marked expansion in order to provide state-of-the-art care to children with GI illnesses. Last year we increased our clinical exposure county-wide with the implementation of satellite clinical services in Escondido. We have started clinics in Encinitas and Murrietta. Our goal is to continue to improve community access in GI services.

• Capsule endoscopy is now provided on-site.

• Recruitments are underway to increase research in developmental biology, stem cells, inflammatory bowel disease, and motility disorders.

• There is plan to enhance the fellowship program by maximizing the number of fellows and seeking more GI-dedicated training grant slots for fellows.

• The Division plans to further develop mentoring support for faculty members.

• The Celiac Disease Clinic combines the expertise of world-renowned leaders in celiac disease research with comprehensive care and management. Services are provided by pediatric gastroenterologists and nutritionists with specialized expertise.

• Dr. Ranjan Dohil plans to evaluate dyspepsia with the newly designed entero-naso tube in collaboration with other experts in the field of probiotics to determine colonization patterns of specific probiotic agent. Dr. Dohil plans to use the tube to study bacterial colonization patterns in varying diseases such as IBD, celiac disease, and eosinophilic disorders of the intestine.

• Dr. Sharon Taylor intends to increase nutritional awareness by providing formal educational opportunities to the house staff and students. A “Short Gut Pathway” is near completion and will improve outcomes in hospitalized patients with intestinal failure. She is also developing an inpatient Nutrition Support Team at RCHSD.

• With more than $8 million in external research funding relating to gastroenterology, hepatology, and nutrition, the division is a growing national leader in generation of new knowledge relating to the field as being at the forefront of scientific research in areas such as obesity and its metabolic complications, chronic liver diseases including steatohepatitis, as well as intestinal biology and immunology.
the oncogene PTEN plays in relation to DNA mismatch repair. She also has projects looking at activation of Wnt Signaling in hamartomatous polyposis. Dr. Huang also studies the AKT pathway in hamartomaotus polyps with special focus on mTOR signaling.

Dr. Huang's clinical focus is on the early detection of colon cancer and at-risk kindreds. Working with geneticists from UCSD Moores Cancer Center, Dr. Huang evaluates and counsels kindreds at risk for colon cancer. Dr. Huang recently became the Director for the UCSD Pediatrics Residency Program.

**Martin Kagnoff, MD (Emeritus)** is Director of the Warren Medical Research Center for Celiac Disease and the Laboratory of Mucosal Immunology at UCSD. He has served as Editor for two biomedical research journals and is currently the Chairman of the Immunology, Microbiology, and Inflammatory Bowel Disease section of the American Gastroenterological Association.

Dr. Kagnoff is an active physician scientist who works closely with the medical personnel who care for adults and children through the UCSD Celiac Disease Clinics. He led the current NIH consensus panel on the care of patients with celiac disease.

**Kimberly Newton, MD** is primarily interested in pediatric celiac disease. She directs the Pediatric Celiac Disease Center at RCHSD associated with the Warren Medical Research Center for Celiac Disease at UCSD. Dr. Newton is creating a comprehensive database for pediatric celiac disease patients that will serve as an important resource for the further understanding of genetic, environmental and immunologic factors that contribute to celiac disease development in childhood. Specific research endeavors will focus on the investigation of gut microflora and its relationship to celiac disease onset, in addition to the evaluation of potential biomarkers for monitoring celiac disease activity and dietary compliance.

Dr. Newton is participating in the formal evaluation of teaching and behavioral interventions that could aid in gluten-free dietary compliance in the adolescent population. Dr. Newton also completed an advanced fellowship in hepatology and transplantation.

**Jeffrey Schwimmer, MD** is Director of the Weight and Wellness Center, a multi-disciplinary program for the evaluation and treatment obesity at RCHSD. Dr. Schwimmer’s research emphasis is on the complications of obesity, both metabolic and behavioral. Current projects include the characterization of regional fat depots and their relationship to alterations in physiology and disease. Studies of quality-of-life in obese children are ongoing. Dr. Schwimmer also directs the Fatty Liver Clinic at RCHSD, the first clinic in the U.S. dedicated to the care of children with fatty liver disease. Dr. Schwimmer is working to identify genes and familial factors that determine susceptibility to fatty liver. Fatty liver is now the most common cause of chronic liver disease in children.

**Warren Shapiro, MD** continues to be interested in functional GI disorders. He implemented a GI Biofeedback Clinic at Kaiser, which has had significant success in helping the difficult cases. He inaugurated a similar clinic at RCHSD.

**Mamata Sivagnanam, MD** research focuses on congenital tufting enteropathy. This is a severe and life-threatening problem presenting with intractable diarrhea in infancy. Using modern genetic technology, Dr. Sivagnanam isolated epithelial cell adhesion molecule (EpCAM) as a gene associated responsible for this condition. She focuses on the effect it has on intestinal epithelial physiology. She hopes to gain a better understanding of the role of adhesion molecules in intestinal epithelial development in health and disease.

**Sharon Taylor, MD** is Director of Nutrition Support Services. She runs the Intestinal Rehabilitation clinic, managing most of the complex short bowel pediatric population in San Diego. She is responsible for RCHSD Nutrition Manual and Guidelines.

**TEACHING ACTIVITIES**

The Division’s ACGME accredited three-year fellowship program trains up to six fellows in clinical and basic science research. The program combines clinical and research training throughout the program, with the first year focused on an in-depth clinical experience in gastroenterology, hepatology, and nutrition. The second and third years provide time for focused development of research interests.
AWARDS, HONORS AND MAJOR PRESENTATIONS

Ranjan Dohil, MD
Invited Speaker, Clinical features of eosinophilic esophagitis. APFED meeting, San Diego, CA, July 2008
Invited Speaker, Eosinophilic esophagitis: Recounting the atopic triad. CME Eczema Conference, San Diego, CA, July 2008
Invited Speaker, Treatment of cystinosis with ECCysteamine. Workshop, CRN Meeting, Atlanta, GA, July 2009
Invited Speaker, Randomized, double-blind study of OVB for Eosinophilic esophagitis. Digestive Disease Week, Plenary session, New Orleans, LA, May 2010
Randomized, double-blind study of OVB for eosinophilic esophagitis. Digestive Disease Week, Plenary session, New Orleans, LA, May 2010
Invited Speaker, Developing new formulations for cysteamine. A Decade of Treatment studies in Cystinosis. CRF Scientific Meeting, Newport Beach, April 2010

Ariel Feldstein, MD
Organizer and Chair, Novel Diagnostics in Liver Disease Clinical Symposium. Digestive Disease Week 2009
Moderator, Mechanisms of cell death. AASLD Research Workshop
Moderator, Apoptosis and autophagy in the liver. AASLD Research Workshop
Faculty Member, Hepatic apoptosis and NASH Symposium. Canadian Digestive Disease Week 2011
Visiting Professor, Department of Pediatrics, Columbia University. August 6-7, 2009
Invited Faculty, AASLD Clinical Symposium NAFLD Update–Alternatives to liver biopsy. Digestive Disease Week, New Orleans, LA, May 14-18, 2010
Visiting Professor, Department of Pediatrics, University of Wisconsin, Madison, WI, September 12-13, 2009
Invited Speaker, Shanghai International Forum on Digestive Diseases, September 13-20, 2010

Invited Speaker, XXXVII Congress of the Chilean Gastroenterological Association, Puerto Varas, Chile, November 17-20, 2010

Jeannie Huang, MD, MPH
Invited Speaker, Childhood obesity: The role of the dentist. California Society Pediatric Dentistry Annual Meeting, San Francisco, CA, April, 2011
Invited Speaker, Maintenance of Certification Forum. NASPGHAN Annual Meeting, Orlando, FL, October, 2011
Invited KeyNote Speaker, Childhood obesity: The reason for H.O.P.E. 4th Annual Nutrition Symposium: Clinician’s guide to obesity management and treatment options. Seattle Children’s Hospital, October, 2011

Mamata Sivagnanam, MD
Invited speaker, 2nd International Symposium on Ep-CAM and Cancer Stem Cell Markers, Munich, Germany, October 2008

Jeffrey Schwimmer, MD
America’s Top Gastroenterologists, Consumer Research Council of America, 2008-2009
America’s Top Pediatricians, Consumer Research Council of America, 2009-2010
Young Investigator, Clinical Science Award Gastroenterology Research Group and American Gastroenterological Association, presented at Digestive Disease Week, New Orleans, LA, May 2, 2010
Walter B. Cannon Lecturer, The Society of Gastrointestinal Radiologists, 2011
The Benenson Distinguished Lectureship, San Diego Epidemiology Exchange, 2011

PUBLICATIONS
Abdelmalek MF, Suzuki A, Guy C, Unalp-Arida A, Colvin R, Johnson RJ, Diehl AM, and the Nonalcoholic Steatohepatitis Clinical Research Network. Increased fructose consumption is associated with fibrosis severity in patients with non-
Berman MI, Boutelle KN, Crow SJ. A case series investigating acceptance and commitment therapy as a treatment for previously treated, unremitted patients with anorexia nervosa. *European Eating Disorder Review*, 17(6), 426-34, 2009.
Boutelle KN, Eisenberg M, Becker M, Neumark-Sztainer D. The reciprocal relationship between connectedness...
## Research Support

<table>
<thead>
<tr>
<th>Grant/Contract #</th>
<th>Annual Budget</th>
<th>Total Direct Dollars/Duration of Grant</th>
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<td>Kerri Boutelle, PhD</td>
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<td>Parents as the Agent of Change for Childhood Obesity</td>
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<td>Rebecca Cherry, MD</td>
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<td>Pilot Study of Clinical Hypnosis for Treatment of Abdominal Pain in Children</td>
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<td>$17,500, UCSD Academy of Clinical Scholars/STRI Faculty Research Award, July 2011-July 2012</td>
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<td>Ranjan Dohil, MB, BCh</td>
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<td>Topical Budesonide in the Treatment of Eosinophilic Esophagitis</td>
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<td>Enteric Coated Cysteamine for NAFLD</td>
<td>Raptor Pharmaceutical Corp.</td>
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<td>Studies in Eosinophilic Esophagitis</td>
<td>Hearst Foundation</td>
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**Ariel Feldstein, MD**

| Caspase Dependent Cell death in Nonalcoholic Fatty Liver Disease (Feldstein, PI) | $1,492,128 | R01 DH082451/NIH/NIDDK |

**Alcoholic Liver Disease: Biochemical, Cellular and Systemic Responses to Ethanol, Project 2: Mitochondrial Phospholipid Oxidation in Alcoholic Liver Disease (Nagy, PI)**

| Systemic Oxidized Phospholipids in Mitochondrial Dysfunction of Alcoholic Injury (McIntyre, PI) | $250,934 | R01 AA017747/NIAAA | Oct. 2009-Sept. 2013 |
| Metabonomics for Discovery and Validation of Biomarkers in Nonalcoholic Fatty Liver Disease (NAFLD) and Nonalcoholic SteatoHepatitis (NASH) (Hazen, PI) | $498,000 | Nestle | Jan. 2010-Jan. 2012 |

**Pathways of Oxidative Stress in Chronic Pancreatitis (Stevens, PI)**

| ACG/Junior Faculty Development Award | $150,000 | Jan. 2011-Jan. 2013 |

**Jeannie Huang, MD**

| TAHLC: Texting to Promote Adolescent Health Liaisons and Chronic Disease Management | $323,625 | $999,891 | Sept. 2009-July 2012 |
| PACE-CALL: A Tailored Weight Management Program for Childhood ALL Survivors | $540,000 | $583,200 | July 2007-June 2012 |
## Research Support (continued)

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<td>Sub none (DK088831)/Medical College Of Wisconsin</td>
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<td><strong>Mamata Sivagnanam, MD</strong></td>
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<td>1 K08 DK078672-01A2/NIH (NIDDK)</td>
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<td>07-1646/Children’s Digestive Health</td>
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Dohil R, Schmelzer S, Cabrera B, Durelle J, Shragg P,


Feldstein AE, Bailey SM. Emerging role of redox dysregulation in alcoholic and nonalcoholic fatty liver disease. *Antioxid Redox Signal*, 2011 Jan 23 [Epub ahead of print].


Huang JS, Meixner L, Fernandez S, McCutchan JA. A double-blinded, randomized controlled trial of zoledronate...


Huang J, Pokala P, Hill L, Wood C, Boutelle K, Becerra


The Genetics Division is actively involved in clinical care, research, teaching and service. The division sees more than 4,000 patients per year in a variety of clinics, primarily as outpatients at Rady Children's Hospital San Diego (RCHSD), but also throughout Southern California, and in Mexico. The division has an active inpatient consult service, and also sees more than 500 inpatients per year. Faculty members in the division presently hold more than $6 million in grants and contracts, and have published over 50 original articles and chapters within the last two years.

Division faculty are actively engaged in teaching at all training levels, including graduate and medical students, residents and fellows, and community physicians. The division has several internationally recognized leaders in their respective fields. Many of the faculty have held leadership positions in national organizations, including most notably the Presidencies of the American College of Medical Genetics (Dr. Jones) and the American Society of Gene Therapy (Dr. Friedmann). A number of faculty members are on the editorial boards of leading Genetics journals.

Left to right: Albert LaSpada, William Nyhan, Mary Willis, Robert Naviaux, Lynne Bird, Jerry Schneider, Bruce Barshop, Ted Friedmann, Marilyn Jones, Craig Bennett, Alysson Muotri
A major development for the division was the appointment of Dr. Albert La Spada as the new Division Chief in 2009. Dr. La Spada's appointment concluded a national search, and places an internationally renowned physician-scientist with clinical training in Genetics at the helm of the division.

**FACULTY**

Albert R. La Spada, MD, PhD, Professor of Pediatrics and Cellular & Molecular Medicine; Division Chief of Genetics

Bruce A. Barshop, MD, PhD, Professor of Pediatrics; Director, Metabolic Disease Program

Lynne M. Bird, MD, Associate Professor of Pediatrics

Theodore Friedmann, MD, PhD, Professor of Pediatrics

Marilyn C. Jones, MD, Professor of Pediatrics; Director, Genetics and Dysmorphology

Fred Levine, MD, PhD, Emeritus Professor of Pediatrics; Professor and Director, Sanford Children's Health Research Center, Burnham Institute

Alysson Muotri, PhD, Assistant Professor of Pediatrics and Cellular & Molecular Medicine

Robert K. Naviaux, MD, PhD, Associate Professor of Medicine and Pediatrics In Residence

Mark E. Nunes, MD, Affiliate Faculty; Division Chief, Medical Genetics, Kaiser-Permanente

William L. Nyhan, MD, PhD, Research Professor of Pediatrics

Mary J. Willis, MD, PhD, Affiliate Faculty; Medical Officer, Pediatrics, Balboa Naval Hospital

**POSTDOCTORAL FELLOWS**

Constanza Cortes, PhD

Somashish Ghosh Dashdar, PhD

Audrey Dickey, PhD

Amy Dubinsky, PhD

Janel Kopp, PhD

Bradley Morrison, PhD

Hung-Ping Shih, PhD

**CLINICAL ACTIVITIES INPATIENT/OUTPATIENT**

The Division of Genetics provides a wide range of clinical genetics services to the greater San Diego community, including pediatric genetics, biochemical genetics, cancer genetics, and reproductive medicine.

RCHSD and the UC San Diego (UCSD) Medical Center have a long established tradition of excellence in biochemical genetics. Drs. Barshop, Levine, and Nyhan are the principal providers of biochemical genetics services in San Diego. At RCHSD, they admit patients, consult on inpatients, and participate in a weekly Metabolic Clinic, evaluating more than 700 patients annually. At the UCSD Medical Center, they serve in the Clinical Research Center, the Adult Neuro-Metabolic Clinic, and in the Infusion Center, where they treat adult patients with enzyme replacement therapies. Drs. Barshop, Levine, and Nyhan also provide consultation services for several other hospitals and pediatric practices throughout the region and abroad.

The Biochemical Genetics Laboratory serves as an important regional and international resource for several clinical and research tests. The laboratory is a licensed clinical laboratory and is certified by the College of American Pathologists. Drs. Barshop and Nyhan review and interpret results, and provide consultation services for referring physicians. Dr. Naviaux, who established the molecular diagnostic laboratory, provides the corresponding services for DNA tests performed by the Biochemical Genetics Laboratory.

**CLINICAL FELLOWS**

Jaime Barea, MD
The Cystine Determination Laboratory is a part of the Biochemical Genetics Laboratory, which is directed by Dr. Barshop. Intracellular cystine concentrations are analyzed by tandem mass spectrometry. The testing (about 500 leukocyte cystine assays per year) permits the diagnosis of 10 to 15 new cases of cystinosis each year, and the assays are used to direct therapy.

The division is also involved with the California Newborn Screening Program, which now includes an expanded number of conditions since the introduction of tandem mass spectrometry in August 2005. Dr. Barshop is Chief Medical Advisor of the Area Service Center, which coordinates all newborn screening for approximately 120,000 births each year in the four southernmost counties, including the Metabolic Center at RCHSD.

Drs. Lynne Bird and Marilyn Jones provide primary evaluation and follow up for children with birth defects, developmental disorders, and health-related conditions in which a genetic diagnosis is suspected. Dr. Jones is Acting Director of UCSD’s Prenatal Diagnosis Center and an active participant in the Fetal Diagnosis Center operated by the Department of Reproductive Medicine at UCSD. Both Drs. Bird and Jones provide consultations on the various inpatient services at RCHSD, Sharp Mary Birch Hospital for Women, the broader Sharp system, and Scripps system hospitals. They also counsel prenatal patients at the UCSD Fetal Diagnosis Center.

Dr. Bird evaluates roughly 800 new and follow-up patients annually. Dr. Bird sees patients in four half-day dysmorphology and genetics clinics, directs the monthly Prader-Willi syndrome clinic, and supervises two genetic counselors at RCHSD. Dr. Bird is Medical Director of the newly formed Down Syndrome Center, which offers multidisciplinary evaluation and management of children with Down syndrome.

Dr. Jones evaluates up to 1,200 new and follow-up patients annually. She sees patients at RCHSD in five half-day dysmorphology and genetics clinics, monthly craniofacial clinics, and monthly cleft palate clinics. In addition, Dr. Jones has a monthly half-day clinic at the San Diego Regional Center for the Developmentally Disabled, a monthly half-day clinic at the Hospital de las Californias in Tijuana, and an annual full-day clinic at the El Centro Regional Center for the Developmentally Disabled.

Dr. La Spada see patients in neurogenetics clinic and Huntington’s disease clinic at UCSD, and also evaluates patients with inherited neurological diseases at RCHSD.

Dr. Nunes directs the medical genetics service at Kaiser Permanente and runs a number of subspecialty clinics, including cancer genetics and cardiogenetics clinic. He participates in genetics teaching and training of medical students, residents, and fellows at UCSD – RCHSD.

Dr. Willis staffs the genetics Clinic at Balboa Naval Hospital and participates in their multi-specialty craniofacial clinic. In addition, she participates in the metabolic clinic at RCHSD twice monthly, and in resident and fellow training at RCHSD - UCSD.

RESEARCH ACTIVITIES

Dr. Bruce Barshop has conducted several clinical case studies and clinical trials, including: study of diagnostic approaches to Lesch-Nyhan disease and disorders of mitochondrial disorders, carbohydrate metabolism, and fatty acid oxidation. Therapeutic agents under trial include sapoporterin in phenylketonuria, dichloroacetate in congenital lactic acidemia, triacetyluridine in pyrimidine nucleotide depletion syndrome, and enzyme replacement in lysosomal storage disorders, including mucopolysaccharidosis type I. Dr. Barshop also collaborates with Dr. Ranjan Dohil on therapies for cystinosis. Work with Dr. Ajai Khanna of the Department of Surgery has centered on liver transplantation in metabolic diseases, including novel applications. Dr. Barshop has an interest in extensive analysis of metabolite patterns and is developing metabolomic studies, including a component of a recently funded project to investigate metabolic effects of infectious stress and vaccination in mitochondrial disease and autism.

Dr. Lynne Bird is the principal investigator on a large record review study through Sharp Memorial Hospital/ Mary Birch Hospital for Women, designed to explore the association between growth patterns and types of congenital abnormalities seen in infants of diabetic mothers, to be analyzed in conjunction with the Epidemiology Program at San Diego State University. Dr. Bird is also
Major Goals and Plans

The next five years will be crucial for the future of medical genetics clinical practice at RCHSD and UCSD, and will be pivotal in determining if the application of genetics and genomics advances to pediatrics clinical practice is to be achieved at RCHSD.

With the arrival of a new Division Chief, considerable effort will be directed to improving the academic orientation of genetics at RCHSD and UCSD. The plans for the Division of Genetics during the next 5-year period are thus as follows:

• We have reactivated our accredited clinical genetics residency and fellowship program, and we have accepted our first fellow, Dr. Jaime Barea, a trainee in the pediatrics residency at UCSD - RCHSD who will begin in 2011. Dr. Al La Spada became the Program Director of the genetics residency and fellowship in March of 2011.

• Our Clinical Genetics conference continues to be held at 7:30 AM the first Friday of each month just before Grand Rounds. Division faculty participation has been excellent, as this conference is directed at rotating medical students, residents, and fellows in genetics and other subspecialty areas. Our local Clinical Genetics physicians at Balboa Hospital and Kaiser-Permanente, as well as Genetics Counselors, all are regular attendees at the monthly meeting. This meeting continues to serve as a focal point for the creation of a vibrant academic Clinical Genetics community at RCHSD – UCSD.

• We will be recruiting a Clinician X faculty member to join our Division and participate in the Clinical activities of our unit. This individual will be primarily based at RCHSD and will be expected to assume leadership of the Genetics residency-fellowship program.

• We will begin a monthly Human Genetics research conference to be held one Thursday at 12:00 pm per month on the UCSD campus. The purpose of this conference will be to bring together clinical practitioners and basic researchers to facilitate interaction and collaboration, especially as advances in Genetics and Genomics open up new opportunities for the discovery of genes responsible for a wide range of inherited and complex diseases.

In addition to these division goals, individual faculty goals are as follows:

• Drs. Barshop and Dohil will begin a national study of a new formulation of cysteamine to improve treatment of cystinosis.

• Drs. Barshop and Naviaux will head two components of a project studying the stress response of patients with autism and mitochondrial disease, centering on metabolomics and molecular genetics, respectively.

• Dr. Bird will continue the study, "Congenital Anomalies in Infants of Diabetic Mothers," and recruit patients for the Rare Disease Clinical Research Network natural history study and treatment trial. She will participate in the development of an additional research protocol to evaluate the benefit of levodopa on motor problems in older children and adults with Angelman syndrome.

• Dr. Friedmann plans to test the effects of RNAi knockdown of the HPRT gene in embryonic stem cells. He will also attempt to identify small molecules able to cause dopaminergic (DA) differentiation of fluorescently-marked ES cells by exposure to small molecule libraries and high throughput detection of cells expressing the fluorescent marker from a DA-neuronal-specific promoter. Dr. Friedmann will begin to apply the resources of the recently established WADA world-wide bioinformatics facility at UCSD to coordinate the extensive WADA research program in growth factors.

• Dr. La Spada will be involved in the further development of the Institute for Genomic Medicine, and will work with Dr. Frazer and others to launch a new Genomics research program at Rady Children’s Hospital.

• Dr. Levine will continue to focus on cell therapy for diabetes, as well as high throughput screening to identify small molecules that affect various aspects of pancreatic beta-cell growth and differentiation.

• Dr. Muotri will be developing new methods of stem cell experimentation in the fields of autism and Rett syndrome.

• Dr. Nyhan is launching a clinical trial centering on dopaminergic therapy in Lesch-Nyhan disease.
the local site investigator in a collaborative endeavor to study Angelman syndrome (AS), as part of a large NIH-funded Rare Disease Clinical Research Network (RDCRN) to study AS, Rett syndrome and Prader-Willi syndrome (PWS). She supervises two studies as part of this project, a natural history study, and a clinical trial to treat young AS patients with vitamin supplements and was also awarded two grants by the Angelman Syndrome Foundation to conduct AS studies, including a Phase II trial of Levodopa. Dr. Bird also received funding from the Department of Pediatrics to establish a multidisciplinary clinic for the health supervision of children with PWS. The clinic has been operational for three years and is the only clinic in Southern California for the comprehensive evaluation and management of individuals with PWS; one goal of the clinic is to facilitate participation in clinical research on PWS, in collaboration with University of California Irvine where patients can be enrolled in the RDCRN natural history study.

Dr. Theodore Friedmann continues to study Lesch-Nyhan Disease (LND), a metabolic disease characterized by profound neurodevelopmental abnormalities. His lab is concentrating on microarray and proteomic characterizations of human fibroblasts derived from LND patients, and of affected brain regions of the HPRT gene knockout mouse model. Dr. Friedmann's lab has identified a number of genes and gene families that are aberrantly expressed in LND, and is presently examining their potential role in the development of the disorder’s neuropathology. Dr. Friedmann is continuing to study the assembly and gene transfer properties of synthetic virus-like nanoparticles (virosomes), and the molecular mechanisms of growth enhancement by the growth factor IGF-1 in cultured cells and in mice in vivo. He has also established a bioinformatic facility under the sponsorship of the World Anti-Doping Agency (WADA) that will coordinate the worldwide research program of growth factors and related functions under the auspices of WADA. The Friedmann laboratory recently reported that the HPRT deficiency of Lesch-Nyhan Disease is accompanied by severe disruption of normal cell signaling mechanisms in the Wnt and presenilin-1 pathways. They also reported that HPRT deficiency in iPS cells leads to major defects in purinergic signaling pathways that cause defects in ERK and CREB expression. They propose the surprising conclusion that the housekeeping HPRT gene plays a vital role in the development of the nervous system.

Dr. Marilyn Jones conducts research into the clinical delineation of birth defect patterns, the natural history of syndromes, genotype/phenotype correlations, the elucidation of normal and abnormal mechanisms of morphogenesis, and the impact of prenatal diagnosis on clinical management.

Dr. Albert La Spada applies the tools of molecular genetics, neuroscience, and functional genomics to understand mechanisms of neurological disease. His research program is focused upon human genetic diseases caused by expansions of trinucleotide repeats, including Huntington’s disease, spinobulbar muscular atrophy, and spinocerebellar ataxia type 7. He has found that transcription dysregulation and activation of apoptosis/autophagy are important in neurological disease. His lab has learned that protease function and proteolytic cleavage regulate key events in pathogenesis. His lab’s goal is to define molecular and cellular pathways by which neurons become dysfunctional and use this knowledge to devise rational therapies. Focus areas include: failure of protein quality control underlies all major neurological disease; Identification of genetic pathways that regulate autophagy and role of mTOR signaling in neuroprotection; altered gene transcription in neurological disease and retinal degeneration, and unrolling the complexity of CNS gene regulation, including microRNAs and non-coding RNAs; bioenergetics of neurons, and understanding mitochondria dysfunction in neurological disease, including mitophagy and mitochondrial dynamics; and cross-talk between the insulin signaling pathway and neurological disease pathways. In 2011, Dr. La Spada uncovered a novel mechanism regulating gene expression and transcription linked to Spinocerebellar ataxia 7, an inherited neurological disorder. The discovery promises to have broad ramifications, suggesting that abundant non-coding transcripts of ribonucleic acid (RNA) may be key players in neurological development and function, and could be powerful targets for future clinical therapies. The research was published in the June 22nd issue of Neuron, and was highlighted with a video abstract describing the work.

Dr. Fred Levine is continuing his research on the relationship between growth and differentiation of the human endocrine pancreas. The ultimate goal of this
work is to develop a sufficient understanding of beta-cell regeneration to allow for the development of a beta-cell replacement therapy for diabetes. To this end, Dr. Levine’s lab has developed cell lines from the endocrine cells and endocrine precursor cells of the human adult and fetal pancreas. The cell lines express low levels of islet hormones, and are being used as platforms for high-throughput screening, as well as for fundamental studies of beta-cell growth and differentiation. The laboratory is also studying primary adult human non-endocrine pancreatic epithelial cells. Having shown that they can function as endocrine progenitors, they are pursuing mechanistic studies to determine the molecular basis for beta-cell differentiation from those cells.

Dr. Alysson Muotri is interested in the mechanistic basis of neurodevelopmental disease, including Rett syndrome. His laboratory uses animal models, neural stem cells, human pluripotent cells and various other molecular tools to investigate fundamental mechanisms of brain development and mental disorders. He is particularly well known for his expertise in the application of induced pluripotent stem cell (iPSC) technology to the study of neurodevelopmental disease. Dr. Muotri’s laboratory also explores mobile elements, such as retrotransposons, as generators of diversity during neuronal differentiation. These mobile elements may be part of a conserved core process responsible for evoking facilitated complex non-random phenotype variation through which selection may act. In work published in Cell in 2010, Dr. Muotri and his team used induced pluripotent stem cells from patients with Rett syndrome to create functional neurons that provide the first human cellular model for studying the development of autism spectrum disorder (ASD) and could be used as a tool for drug screening, diagnosis and personalized treatment.

Dr. Robert Naviaux is conducting research into the cause of Alpers syndrome, a devastating disease of children and young adults that leads to seizures and liver failure. His team at the UCSD Mitochondrial and Metabolic Disease Center identified the first causative mutations in a gene called POLG—the mitochondrial DNA polymerase g. Since this discovery, dozens of new mutations have been found, and DNA testing has now become the gold standard for confirming the diagnosis of Alpers syndrome around the world. In addition, the Naviaux lab collaborates with labs across the country on projects ranging from the development of non-invasive methods for mitochondrial disease diagnosis to the role of mitochondria in embryogenesis, stem cell differentiation, cancer, diabetes, and tissue regeneration.

Dr. William Nyhan has had a long series of clinical studies and therapeutic trials, most notably including studies of Lesch-Nyhan disease. He has several long-standing protocols for systematic evaluation of purine metabolism, amino acid metabolism, and fatty acid oxidation. He is the PI of a project to investigate the efficacy of tetrahydrobiopterin in correcting neurotransmitter abnormalities in Lesch-Nyhan disease. Another clinical trial of nitisinone in alkaptonuria has been approved. He has recently re-established a facility for mutational analysis for HPRT deficiency in the laboratory.

TEACHING ACTIVITIES

Bruce A. Barshop, MD, PhD

Teaching is an integral part of the popular elective rotation in Genetics and Metabolism which brings pediatrics residents from UCSD and Balboa Naval Hospital to our dysmorphology and metabolic Clinics at Rady Children’s Hospital; a third year medical student is usually present as well. In addition to that venue for direct personal instruction, didactic sessions are presented at the RCHSD Resident Noon Lectures, and Dr. Barshop covers those sessions relating to metabolic diseases. Dr. Barshop lectures in the School of Medicine, including a session of Biomedical Science 223 on the topic of Newborn Screening and a session of Cell Biology and Biochemistry on the topic of Treatment of Genetic Disease, and he participates in the Objective Structured Clinical Examinations (OSCE) to second-year medical students. He has mentored undergraduate students in independent study projects. Dr. Barshop typically speaks at several conferences of medical professionals each year at UCSD, RCHSD, and other institutions in the area. Dr. Barshop and Dr. Naviaux developed a new set of lectures on genetics and metabolism for Chris Glass’s SOMC-229 ERM course on Endocrinology, Reproduction, and Metabolism. This is the first year that this new course has been offered, and the metabolism lectures received high marks from the students.
## Research Support

<table>
<thead>
<tr>
<th>Grant/Contract #</th>
<th>Annual Budget</th>
<th>Total Direct Dollars/Duration of Grant</th>
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<tr>
<td><strong>Bruce Barshop, MD, PhD</strong></td>
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<tr>
<td>Newborn Screening Metabolic Centers</td>
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<td>Genetic factors involving expression of 3-methylcrotonyl-CoA carboxylase deficient</td>
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<td>Proteomic based identification of cysteinylated proteins in cystinotic cells</td>
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<td>Improvement to Intracellular Cystine Measurement</td>
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<td>Preparation Methodologies for Intracellular Cystine Determination and Dynamics of Lysosomal Cystine in Cystinosis</td>
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<td><strong>Theodore Friedmann, MD</strong></td>
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<td>Bioinformatics Center</td>
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<td>Lesch-Nyhan Disease, A Model for Complex Genetic, Proteomic, and Metabolic Pathways</td>
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## Research Support (continued)

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<td>Models of SBMA Motor Neuron Degeneration</td>
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<td>7 R01 NS041648-10/NIH (NINDS)</td>
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<td>Role of Nna1 in Retinal and Cerebellar Neurodegeneration</td>
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<td>The PPAR-delta Pathway in neural function and Huntington's disease neuropathology</td>
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<td>Autophagy and Protein Translation in Neural Function &amp; Neurodegeneration</td>
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<td>CCCTC-Binding Factor (CTCF) in Trinucleotide Repeat Instability and Disease</td>
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<td>Mouse Models of FXTAS: Defining Critical Periods and Molecular Targets</td>
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<td>Modeling Motor Neuron Degeneration in SBMA</td>
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<td>Is the PPAR-Delta Signaling Pathway a Therapeutic Target in HD?</td>
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<td>Evaluation of PhotoThera Infared ATP Activation in HD Transgenic mice</td>
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<td>Development of ASO Therapies for SCA7 &amp; Related Neurodegenerative Disorders</td>
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<td>Modeling motor neuron degeneration in SBMA (MDA4340)</td>
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<td>Modeling Autism with Human Pluripotent Cells</td>
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<td>The impact of L1retrotransposition in the nervous system</td>
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<td>UCSD</td>
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<td><strong>William L Nyhan, MD, PhD</strong></td>
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<td>Diagnostic Center for Lesch-Nyhan Disease</td>
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<td>2008-1/Lesch-Nyhan Syndrome Childrens Research Foundation</td>
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<td>Tetrahydrobiopterin in Lesch-Nyhan Disease</td>
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<td>Core B -Vector Development Lab</td>
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### Lynne M. Bird, MD

Dr. Bird serves as a mentor and preceptor to the genetics residents. She participates regularly in Case Conferences, Morning Report, Resident CPC activities, Professor Rounds and Grand Rounds. For most of the year, a third-year UCSD medical student participates in one of her half-day clinics. She is also involved in resident training through the dysmorphology clinic in Mexico. Dr. Bird presents an average of four lectures per year to residents and faculty, as part of the Noon Conference series for the pediatric residents and medical students, Noon Conference series for the UCSD NICU and newborn nursery, the UCSD/SDSU Preventive Medicine residency, and invited lectures to various community hospitals. Dr. Bird serves as a preceptor for the Introduction to Clinical Medicine course and administers OSCE examinations to second-year medical students. For the past several years, she has been a preceptor for summer internships for pre-medical students, and also became involved in the UCSD Medical Scholars Clinical Rotation program. In 2009, she served as a small group instructor in the reorganized ‘Genetics in Medicine’ course for medical school and pharmacy school students.

### Theodore Friedmann, MD

Dr. Friedmann is a member of the Biomedical Sciences Graduate Programs and has served for a number of years on the Biomedical Sciences Minor Proposition Committees. He has recently served as chair of the thesis committee of one BMS student, as a member of several other thesis committees and has chaired and served on a number of BMS minor proposition committees. He lectures in a number of graduate and elective courses and has presented a yearly seminar course on biomedical ethics. During the spring 2011, Dr. Theodore Friedmann has continued presentation of the long-standing Human Gene Therapy Seminar series. He has also continued to serve as chairman of the genetics panel of the World Anti-Doping Agency. Dr. Friedmann gives several lectures throughout the world.

### Marilyn C. Jones, MD

Dr. Jones has served as program director for the ABMG Fellowship Program and the Medical Genetics Residency Program. Twice a week Dr. Jones supervises a third-year UCSD medical student in history taking, physical examination, and counseling. UCSD Pediatrics and Med/Peds
residents participate in outpatient clinics, as well as the cleft and craniofacial programs when they are on their genetics elective. The pediatric dental residents rotate monthly through Dr. Jones’ cleft palate and craniofacial clinics, and the dental residents each spend a day seeing general genetics patients during their two-year residency. Dr. Jones continues to mentor medical students from the Universidad Autonoma de Baja California at the Hospital Infantil de las Californias. Dr. Jones has lectured for Hillary Klopoff-Cohen’s elective course, Family and Preventive Medicine. In 2009, she served as a small group instructor in the reorganized ‘Genetics in Medicine’ course for medical school and pharmacy school students. Dr. Jones presents an average of four specialty conferences a year to UCSD students and residents, as well as one Grand Rounds presentation annually at UCSD or an affiliated hospital. She is an active participant in the bi-monthly Fetal Diagnosis Conference at UCSD.

Albert R. La Spada, MD, PhD
Dr. La Spada took over the organization of the Genetics in Medicine course in 2009 with Dr. Gabriel Haddad. This course, which is given to first year medical students and second year pharmacy students, is the only formal integrated genetics course that UCSD professional students receive. Drs. La Spada and Haddad reorganized the course to incorporate small group case discussions coordinated by sets of instructors. Dr. La Spada will be directing a clinical genetics monthly meeting, and instructs genetics residents and fellows in this venue and other teaching forums at Rady Children’s Hospital. Dr. La Spada is also involved in teaching BMS graduate students and neurosciences graduate students at UCSD.

Fred Levine, MD, PhD
Dr. Levine is a member of the Biomedical Sciences and Molecular Pathology Graduate Programs. Currently, he has one Biomedical Sciences and one Bioengineering PhD student in the lab. He has served for a number of years on the Molecular Pathology or Biomedical Sciences Minor Proposition Committees, and serves on three doctoral committees for a number of other students. He gives lectures in graduate courses, including Molecular Neurobiology Cell and Tissue Engineering, and Gene Therapy. As part of his clinical activities, he is involved in teaching medical students, residents and clinical fellows, particularly during his time on service in metabolism.

Robert K. Naviaux, MD, PhD
Dr. Naviaux teaches Biomedical Sciences 223, Human Genetics and Metabolism. This course is offered in the spring and is designed for advanced undergraduates, graduate students, and elective medical students with an interest in the genetics of human disease. Dr. Naviaux gives lectures and grand rounds presentation around the world, most recently at Vanderbilt University, Children’s Hospital of Orange County, the National Cancer Institute at the National Institutes of Health, and Manipal University, India. In addition, Dr. Naviaux directs the research of three undergraduate students and a master’s student currently on rotation in the lab. Dr. Naviaux and Dr. Barshop developed a new set of lectures on genetics and metabolism for Chris Glass’s SOMC-229 ERM course on Endocrinology, Reproduction, and Metabolism. This is the first year that this new course has been offered, and the metabolism lectures received high marks from the students.

William L. Nyhan, MD, PhD
Dr. Nyhan participates in the metabolic clinics at RCHSD, instructing pediatrics residents from UCSD and Balboa Naval Hospital and medical students. He has also lectured in Biomedical Sciences 223 on disorders of purine metabolism. Dr. Nyhan attended the Saturday, June 11, 2011, meeting of the Reunion du Conseil Scientifique de l’association Francaise Lesch-Nyhan Action Maladie Genetique in Paris at Broussais hospital under the aegis of Professor William Nyhan, President of the Scientific Council. He saw a number of patients and counseled families there. Another meeting is scheduled for two years hence.

Mary J. Willis, PhD, MD
Dr. Willis coordinates all genetics training activities at Balboa Naval Hospital for the residents, physician assistant students, and medical students of UCSD and the Uniformed Services University of the Health Sciences.
AWARDS, HONORS AND MAJOR PRESENTATIONS

Bruce A. Barshop, MD, PhD
Communicating Editor, Journal of Inherited Metabolic Disease
Informatics Chair, Secretary, Society for Inherited Metabolic Disorders
Biochemical and Molecular Genetics Resource Committee, College of American Pathologists
Guidelines Committee, California Newborn Screening Program
Web Site Oversight Committee, American College of Medical Genetics

Lynne M. Bird, MD
Member, Program Committee, American College of Medical Genetics

Theodore Friedmann, MD, PhD
Member, Sanford-Burnham Institute (La Jolla) Scientific Advisory Board
Chair, Lesch-Nyhan Research Foundation Scientific Advisory Board
Member, World Anti-Doping Agency Health, Medicine and Research Committee
Chair, World Anti-Doping Agency Genetics Committee
Member, Clinigene Intl Board; Member, Hastings Center (NY) Gene Therapy Project
Associate Editor, *Molecular Therapy*
Editorial Board, *Human Gene Therapy*
Editor, *Advances in Genetics*, Elsevier Publishing Company
Editor, *DNA Transfer*, Cold Spring Harbor Press

**Marilyn C. Jones, MD**
Member, Committee on Economics, American Cleft Palate-Craniofacial Assn, 2000-present
Past-president, American College of Medical Genetics 2007-present
Official Council, Western Society for Pediatric Research, 2006-present

**Albert R. La Spada, MD, PhD**
Editorial Board, *Human Molecular Genetics*
Member, “Faculty of 1000” American Society of Human Genetics Meeting Program Committee. Planning and Organizing Committee: 2006-2009
Scientific Advisory Board, Hereditary Disease Foundation Medical Review Advisory Board, National Ataxia Foundation Wassenberg Memorial Lecture on Genetic Disease (San Diego State University), 2011
Lifetime achievement award for repeat expansion mutation identification (Fifth Meeting on the Molecular Mechanisms Of Neurodegeneration; Milan, Italy), 2011

**Fred Levine, MD, PhD**
Director, Sanford Children’s Health Research Center, Sanford-Burnham Institute
Editorial Board, *American Journal of Physiology: Endocrinology and Metabolism*
Research Council, UC Industry-University Cooperative Research Program
Chair, Institutional Submission Selection Committee, UCSD School of Medicine

**Alysson Muotri, PhD**
NIH Director’s New Innovator Award, 2009
Emerald Foundation Young Investigator Award, 2009
National Center of Leadership in Academic Medicine, UCSD, La Jolla, CA, 2009

**Robert K. Naviaux, MD, PhD**
President, Mitochondrial Medicine Society, 2007-present
Associate Editor, *Mitochondrion*
US Chair, Indo-US Science and Technology Forum Conference on Mitochondrial Medicine and Research Co-chair of the Extramural Organizing Committee that established the Mitochondrial Transformative R01 Program at NIH
Medical Expert Council member for the Division of Vaccine Compensation, US Department of Health and Human Services
Trailblazer Award, Autism Speaks, 2011

**William L. Nyhan, MD, PhD**
Member Scientific Advisory Board, United Mitochondrial Disease Foundation

**PUBLICATIONS**


Beltrão-Braga PCB, Pignatari GC, Maiorka PC, Oliveira NAJ, Lizier NF, Wenceslau CV, Miglino MA, Muotri AR,* Keris I*.* Feeder free derivation of induced pluripotent stem cells from human immature dental pulp stem cells. *Cell Transplantation* (accepted 2011) *co-corresponding authors.*


The Division of Genome Information Sciences was established in the fall of 2009 and is led by Dr. Kelly Frazer in the UC San Diego School of Medicine’s Department of Pediatrics. Dr. Frazer’s laboratory is located in the Moores UCSD Cancer Center and works closely with physicians in the Department of Pediatrics, the Moores UCSD Cancer Center, and Rady Children’s Hospital. Genome Information Sciences collaborates frequently with the university’s Institute for Genomic Science and the Clinical and Translational Research Institute.

The main function of this division is to use genomic information as a basis for focusing on the predisposition for cancer and other complex diseases starting in childhood but spanning the whole age spectrum. Our research aims to understand genetic predisposition to disease or individual responses to treatment, such as the ability to tolerate or safely metabolize drugs.
FACULTY

Kelly A. Frazer, PhD, Professor of Pediatrics; Chief, Division of Genome Information Sciences
Olivier Harismendy, PhD, Adjunct Assistant Professor of Pediatrics
Christian Barrett, PhD, Assistant Project Scientist
Lynne Nazareth, PhD, Assistant Project Scientist
Erin Smith, PhD, Assistant Project Scientist

RESEARCH ACTIVITIES

The division’s current research activities are highly collaborative and focused on two main areas of study: Characterization of Inherited Variants and Cancer Genomics.

Characterization of Inherited Variants

The Division of Genome Information Sciences is working closely with Dr. Christina Chambers in the National Children’s Study. This study will examine the effects of the environment, as broadly defined to include factors such as air, water, diet, sound, family dynamics, community and cultural influences, and genetics on the growth, development, and health of children across the United States, following them from before birth until age 21 years. The goal of the Study is to improve the health and well-being of children and contribute to understanding the role various factors have on health and disease.

Dr. Frazer and Dr. Harismendy have initiated and are leading investigators for a large NHLBI supported multi-disciplinary project in collaboration with Dr. Juan Carlos Izpisúa Belmonte, Dr. Neil Chi, Dr. Sylvia Evans, Dr. Lawrence Goldstein, Dr. Daniel O’Connor, Dr. Michael “Geoff” Rosenfeld, and Dr. Gene Yeo. The goal of the project is to use iPSC-derived cardiomyocytes from 200 genotyped individuals as cellular models to investigate how human genetic variation influences the gene regulatory networks involved in cardiac biology and disease.

In collaboration with Dr. John-Bjarne Hansen at the University of Tromsø (Norway), Drs. Frazer, Harismendy, Nazareth and Smith are performing whole-exome sequencing of 850 individuals to identify genetic risk factors for venous thromboembolism (VTE), a common disease with high recurrence rate, serious short- and long-term complications, and potential fatal outcome.

In collaboration with Dr. Stephen Spector, Drs. Frazer, Harismendy, Nazareth and Smith are performing whole-exome sequencing of 500 individuals to identify the host genetic factors associated with HIV-associated neurocognitive disorders (HAND) in children.

In collaboration with Dr. Joe Gleeson we are using advanced genomic technologies to address genetic mechanisms underlying human structural brain defects. Our research goals are to identify new genes responsible for recessive structural brain defects in consanguineous families.

Cancer Genomics

Drs. Frazer and Harismendy are working closely with Drs. Richard Schwab and Barbara Parker to establish clinical sequencing in the Moores Cancer Center. This study has funding through a supplement to the UC San Diego CTSA. In collaboration with UC Irvine, our goal is to examine 100 breast cancer patients to determine if they are eligible for targeted therapy trials based on the molecular phenotype of their tumor. More broadly, this project is supported by the UCSD health system as well as a fundraising effort to Sequence One Thousand Oncology Patients (STOP) Cancer.

Drs. Frazer and Barrett are collaborating with Drs. Dennis Carson, Catriona Jamieson and Thomas Kipps at the UCSD Moores Cancer Center to examine leukemia stem cells from acute and chronic leukemias using advanced genomic technologies to verify mechanisms of drug action. We will study the effects of specific pathway inhibitors on both leukemia stem cells and hematopoietic stem cells using human xenograft models.

In collaboration with Dr. Barbara Parker at UCSD Moores Cancer Center, Drs. Frazer, Harismendy and Smith are conducting a pilot study of archival breast tumor specimens from the Women’s Healthy Eating and Living (WHEL) Diet Study. Using next-generation sequencing technology, we propose to compare the somatic mutation patterns in genomic DNA of triple-negative tumors from breast cancer patients who have remained without recurrence (ten plus years) to those of triple-negative breast cancers in patients who developed metastases.
In collaboration with Dr. Thomas Kipps at the UCSD Moores Cancer Center, Drs. Frazer, Barrett and Smith are conducting a retrospective matched case-control study comparing an early-progressing group of CLL patients with a later-progressing and a long-term indolent group. We will use second-generation sequencing methods to identify prognostic biomarkers to better predict and understand the progression of chronic lymphocytic leukemia (CLL).

Over-expression of B-cell lymphoma/leukemia-2 (Bcl-2) family genes has been observed in human blast crisis chronic myeloid leukemia (CML) and may fuel cancer stem cell (CSC) survival. In a study led by Dr. Catriona Jamieson at the UCSD Moores Cancer Center, Dr Barrett has recently shown using transcriptome data that human CSC express a panoply of anti-apoptotic Bcl-2 isoforms in response to extrinsic signals in vivo, indicating that a pan Bcl-2 inhibitor will be required to abrogate CSC survival.

Dr. Olivier Harismendy is leading a project undergoing ultra-deep targeted sequencing of cancer mutational hotspots in order to develop an assay that can reliably detect and accurately measure the frequency of multiple somatic mutations present only in a fraction of the cells in a heterogeneous tumor. Such an assay would facilitate translational research to study the selection of tumor subclones during disease progression and treatment, and could be used by clinicians to improve tumor characterization and selection of therapy choices during clinical trials. Dr. Harismendy received 2 years of funding from the NCI to continue the development of this approach.

Dr. Harismendy is leading a collaboration with Dr. Kesari at the UCSD Moores Cancer Center, to study the genetic differences between primary glioblastoma and patient derived pre-clinical models such as neurospheres, xenograft or lamin cell-culture. This study is important to validate tumor pre-clinical model used in the laboratory and ensure that they accurately represent the tumor genetics, for the development of novel therapies and the study of drug response.

TEACHING ACTIVITIES

Members of the division are actively involved in teaching UCSD graduate and medical students. Several members of the faculty (Frazer, Barrett, Smith) participated in teaching the graduate level course on quantitative methods in genetics as well as lectures in the Stem Cell Course and the medical genetics course. The faculty provide formal lectures in a variety of conferences on the UCSD campus attended by students and clinical residents including
the Bioinformatics graduate student lecture series, neuro-oncology lecture series and the Cardiovascular Research Conference. Dr. Harismendy is providing continuous Genomic Study Design and Analysis support to faculty and staff through his appointment at the Clinical and Translational Research Institute.

Kelly Frazer, PhD
Invited participant, NHGRI 10 year strategic planning meeting, Bethesda Maryland July 2010
Organizer, UCSD IGM Inaugural Symposium October 2010
Invited speaker, CIRM meeting on biobanking San Francisco November 2010
Invited speaker, Gordon Conference on Cancer Stem Cells February 2011
Invited speaker, Sequence based symposium Lawrence Berkeley National Laboratories May 2011
Invited speaker, Annual Frontiers of Clinical Investigation Symposium San Diego October 2011
Invited speaker, International Genomics meeting Chile October 2011

Olivier Harismendy, PhD
Targeted Sequencing in Cancer Genomics X-Gen Congress and Expo, San Diego, CA, March 2011
Deciphering the genetic basis of common diseases by integrated functional annotation of common and rare variants. Beyond the Genome, Boston, MA October, 2010
Presentation at AGBT (Winter 2011)

PUBLICATIONS
Goes FS, Rongione M, Chen YC, Karchin R, Elhaik E, Potash JB. Exonic DNA sequencing of ERBB4 in bipo-


Rady Children’s Heart Institute was created to integrate and coordinate the clinical, research and educational programs of the Cardiology and Cardiovascular Surgery Divisions at Rady Children’s Hospital-San Diego (RCHSD).

The Section of Cardiology currently includes 10 full time cardiologists. Recruitments since July 2009 include: Dr. Molkara (a graduating fellow from our institution and general cardiologist) who joined the Division in August 2009, Dr. Perry (a specialist in electrophysiology and pacing) who joined the Division in November 2009, and Dr. Nigam (a research cardiologist) who joined the Division in November 2009. Currently, there are active recruitments underway for a specialist in heart failure and cardiac transplantation, and for a cardiac intensive care specialist.
FACULTY

John W. Moore, MD, MPH, Professor of Clinical Pediatrics; Chief, Section of Cardiology, Department of Pediatrics, Medical Director of Division of Cardiology, RCHSD; Medical Director, Cardiac Catheterization Laboratory, RCHSD

Christopher K. Davis, MD, PhD, Assistant Clinical Professor of Pediatrics; Medical Director of Exercise Laboratory, RCHSD

Howaida G. EL-Said, MD, PhD, Associate Professor of Pediatrics

Jeffrey R. Frazer, MD, Associate Clinical Professor of Pediatrics

Raymond R. Fripp, MD, Clinical Professor of Pediatrics; Medical Director of Echocardiography Laboratory, RCHSD

Paul D. Grossfeld, MD, Associate Clinical Professor of Pediatrics; Director of Pediatric Cardiology Fellowship Program

Stanley E. Kirkpatrick, MD, Associate Clinical Professor of Pediatrics, retired (volunteer faculty)

Delaram Molkara, MD, Assistant Clinical Professor of Pediatrics

Vishal Nigam, MD, Assistant Professor of Pediatrics in Residence

James C. Perry, MD, Clinical Professor of Pediatrics; Medical Director of Electrophysiology, Pacing and Adult Congenital Heart Disease, RCHSD

Beth Printz, MD, Associate Professor of Clinical Pediatrics; Medical Director of Non-Invasive Cardiac Imaging, RCHSD

POSTDOCTORAL FELLOWS

Sushil Prabakaran, 1st year, UC San Diego
Sanjeeet Hedge, MD, 2nd year, UC San Diego
Andras Bratincsak, MD, 3rd year, UC San Diego
Shai Tejman-Yarden, MD, 3rd year, UC San Diego

CLINICAL ACTIVITIES

The Division is the only comprehensive tertiary care provider of cardiovascular services in the region (San Diego, Imperial, and South Orange Counties), and it receives referrals from Balboa Naval Medical Center, as well as the San Diego Regional Kaiser Medical Center. In addition, the Division is the major off island referral center for the State of Hawaii. The Division's Clinical Volumes for the academic year 2009-2010 were 10,280 total outpatient visits including 828 patients seen in satellite offices. Six hundred cardiac catheterizations were performed, about 70% of which were interventional catheterizations. The echocardiography laboratory performed 8,957 echocardiograms.

In the last five years there has been steady growth in all categories: about 25% increase in total outpatient visits, and about 50% increase in echocardiograms and catheterizations. The growth of the division clinical volumes has been related both to expanding the referral practice within Southern California and neighboring states, as well as to meeting previously unmet demand for services within the traditional referral regions. The Division’s Clinical Volumes place the program among the largest pediatric and congenital heart disease centers in the United States.

RESEARCH ACTIVITIES

The Section's basic and translational research program is anchored by Dr. Paul Grossfeld and Dr. Vishal Nigam.

Dr. Grossfeld investigates the genetic basis of congenital heart defects and Jacobsen's Syndrome (11qdel). His additional projects include induced Pluripotent Stem Cells to derive cardiac lineages from human Jacobsen syndrome patient fibroblasts ("Disease in a Dish"); defining gene regulatory pathways involving ETS-1 in cardiac neural crest cell development, and pathways that suppress the development of heart defects; and the genetic basis of cognitive and behavioral defects in Jacobsen syndrome.

Dr. Nigam's laboratory is focused on investigating the molecular and genetic mechanisms involved in aortic valve stenosis and in valve calcification. In addition, he is study-
ing the role of biomechanical stretch on activation of calciﬁcation pathways and the role of biomechanical stressors on cardiac defects, and the mechanism of how stretch and shear stress stimulate ventricular growth in utero.

The Section faculty and fellows have also been involved in a large number of clinical research projects. There are currently 24 active IRB approved clinical projects:

Christopher Davis, MD, PhD
- Outcome of Patients with one-and-a-half ventricles: A comparative assessment of cardiac function, exercise tolerance, morbidity and mortality (Retrospective Chart Review)

Howaida EL-Said, MD
- Closure of Perimembranous Ventricular Septal Defects with Aneurysmal Tissue Using the Amplatzer Duct Occluder: Lessons Learned and Medium Term Follow-Up (Retrospective Chart Review)
- The Hybrid Procedure as an Alternative to the Norwood Sano in High Risk Hypoplastic Left Heart (HLHS) Patients (Retrospective Chart Review)
- Coarctation of the aorta stent trial (COAST)
- Transcatheter closure of atrial septal defect using the Amplatzer Septal Occluder with transthoracic echocardiography or transesophageal echocardiography
- Congenital cardiac catheterization outcomes project
- Amplatzer Duct Occluder II – post approval

Jeffrey Frazer, MD
- Comparison of the Incidence of Coronary Artery Abnormalities in Febrile and Non-Febrile Children (Retrospective Chart Review)

Paul Grossfeld, MD
- Trial of beta blocker therapy (Atenolol) vs. Angiotensin II Receptor blocker therapy (Losartan) in individuals with Marfan Syndrome
- The role of NOTCH-1 in heart development and congenital heart disease
- Clinical studies related to identification of genes in cardiac development
- Identiﬁcation of genes that cause mental retardation and behavioral problems in the 11q terminal deletion disorder (Jacobsen syndrome)
- Additional genotyping of patients with Jacobsen syndrome (UCSD Pediatrics Clinical Research Fund)
- The role of ETs01 in the neural crest in cardiac development and disease (Hope 4 Tiny Hearts)
- The role of ETS-1 in the neural crest in cardiac development and disease (Children's Heart Foundation)

John Moore, MD, MPH
- ADO II Clinical Study
- Coarctation of the Aorta Stent Trial (COAST)
- Closure of Muscular Ventricular Defects with the Amplatzer Muscular VSD Occluder Post Approval Study (VPA)
- Congenital Cardiac Catheterization Outcomes Project (C3PO)
- Use of the Melody Transcatheter Pulmonary Valve as a Humanitarian Use Device under a Humanitarian Device Exemption
- Implantation of the Medtronic Melody Transcatheter Pulmonary Valve (TPV) in Patients with Dysfunctional Right Ventricular Outflow Tract (RVOT) Conduits: A Post Market Approval Study (Medtronic, Inc.)
- Transcatheter Closure of Atrial Septal Defect (ASD) using the Amplatzer Septal Occluder with Transthoracic Echocardiography or Transesophageal Echocardiography
- Percutaneous Coronary Intervention and Coronary Stent Implantation in Children (Retrospective Chart Review)

Vishal Nigam, MD
- Modeling Hemodynamic Stresses in Congenital Heart Disease (Retrospective Chart Review)
- Mechanisms of Notch1 in Aortic Valve Calcification (NIH)

James Perry, MD
- Transmural Atrial Leads in Adult Congenital Heart Patients: Lead Performance in Long-Term Follow-Up (Retrospective Chart Review)
- Assessment of Optimal Left Ventricular Myocardial and Blood Flow Kinetics in Patients with Cardiac Pacing Systems: Development of a Practical Clinical Technique to Improve Kinetic Efficiency
Major Goals and Plans

RCHSD and UCSD Cardiology and Cardiovascular Surgery programs are committed to fulfilling our mission to provide optimal care for infants, children and adults born with Congenital Heart Defects and to advance our knowledge and understanding of Congenital Heart Disease. To implement our strategic plan for Cardiac Services we have:

1. Funded and are in the process of physician recruitment for leadership positions in Cardiac Transplantation and Cardiac Critical Care. Additional faculty are also being recruited in the basic science areas regarding the diagnosis and treatment of congenital and acquired heart disease in infants, children and young adults.

2. Completed the installation of a dedicated pediatric Cardiac MRI Scanner. Completed the planning for the construction of a new dedicated Pediatric Cardiac Catheterization Laboratory. We are now working in our new cardiac operating room. We are creating a dedicated Cardiac Critical Care Unit, and expanding our Heart Center.

3. The Administrative and Board of Directors approval is in place to establish an in-house pediatric heart transplant program. We are preparing our UNOS application for cardiac transplantation with the long range goal of adding a program in lung transplantation.

Beth Printz, MD
• Echocardiographic Assessment of Cardiac Left Ventricular Strain, Torsion and Blood Flow Analysis in Pediatric and Adult Congenital Heart Patients
• MRI Imaging, Echocardiographic Imaging, and Computational Simulation of Cardiovascular Physiology

Shai Tejman-Yarden, MD
• Do beta-blockers shorten the QT Interval in patients diagnosed with Long QT Syndrome

TEACHING ACTIVITIES

The Division provides a comprehensive accredited educational program for fellowship training in pediatric cardiology. Dr. Grossfeld is the Fellowship Program Director, and the Program is supported by all of the faculty/staff. Fellows are offered clinical teaching and mentoring in all aspects of clinical cardiology: Outpatient care and evaluation, Inpatient and ICU care Echocardiography, CT and MRI, Diagnostic and Interventional Cardiac Catheterization, Electrophysiology and Pacing, Exercise Physiology and Clinical Research. A broad schedule of lectures and presentations are offered including: Weekly Surgery Conference, Weekly Catheterization Conference, Weekly Core Lecture, and Monthly Journal Club and Research Meeting. The three-year program has full ACGME accreditation.

The Division offers a fourth year position for an Advanced Fellow in interventional congenital cardiology. This position includes training and experience as operator or first assistant in approximately 200 procedures, teaching conferences, and training in clinical research.

Faculty/staff cardiologists are also active in training of pediatric residents and medical students. Rotation in pediatric cardiology is not mandatory for residents, but many selected the one month Pediatric Cardiology elective designed by Dr. Perry. This selective provides both inpatient and outpatient experiences.

Dr. Davis participates as an Instructor in the “Clinics” course required for second year medical students.

AWARDS, HONORS AND MAJOR PRESENTATIONS

Christopher Davis, MD, PhD
Screening young athletes to prevent sudden death. Given at Pediatric Grand Rounds, RCHSD, San Diego, CA, August 20, 2010
## Research Support

<table>
<thead>
<tr>
<th>Grant/Contract #</th>
<th>Annual Budget</th>
<th>Total Direct Dollars/Duration of Grant</th>
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<tr>
<td><strong>Paul David Grossfeld, MD</strong></td>
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<td>Marfan Trial</td>
<td>$50,000 per year</td>
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<td>Children’s Heart Foundation</td>
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<td>Jan. 2011 – Dec. 2013</td>
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<td>2009-PEDGENO</td>
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<td>Marfan Trial</td>
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<td>New England Research Institute</td>
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**Vishal, Nigam, MD**

| Mechanics Of Notch1 In Aortic Valve Calcification | $85,000 | Oct. 2009-Apr. 2012 |
| Nih/Nhlbi/7 K08hi086775-03                    |         |                     |
| AGA Medical Corporation                       | $432,567| Dec. 2008-Indefinite|
| ADO II Clinical Study                         |         |                     |

**John Moore, MD**

| STARFlex in Atrial Septal Defect- Long term Status Assessment of Patients | $2,900  | Aug. 2007-Indefinite |
| Following Closure of ASD with the STARFlex Septal Occlusion System in IDE Study |         |                     |
| G-960098 (SALSA)/NMT MEDICAL, INC.            |         |                     |
| Coarctation of the Aorta Trail (COAST)        | $198,865| Sept. 2007-Indefinite|
| Johns Hopkins University                      |         |                     |
| Closure of Muscular Ventricular Septal Defects with the Amplatzer Muscular VSD | $26,600| Sept. 2008-Indefinite|
| Occluder-Post Approval Study (Muscular VPA)   |         |                     |
| AGA Medical Corporation                       |         |                     |

**Peter Pastuszko, MD**

| Health Sciences Academic Senate             |         |                     |
Screening young athletes to prevent sudden death. Given at Pediatric Grand Rounds, Scripps Mercy Hospital, San Diego, CA, May 27, 2010

Unusual case presentation: Focal myocarditis. Given at the Advances in the Practice of Pediatrics, San Diego, CA, March 27, 2010

Poster Presentation, Davis CK, Pastuszko P, Lamberti J, Moore J, El Said H. The hybrid procedure for the borderline left heart. World Congress of Pediatric Cardiology and Cardiac Surgery, June 2009

Sudden cardiac death in children. Given at the 2009 Advanced Cardiac Topics, RCHSD, San Diego, CA, June 8, 2009

The cardiologist’s role in the evaluation of syncope. Given at the Advances in the Practice of Pediatrics, sponsored by RCHSD, San Diego, CA, February 15, 2009


**Howaida EL-Said, MD, PhD**


Bratincsak A, Moore J, EL-Said H. Use of TPA for femoral artery obstruction post catheterization. PICS, Boston, MA, July 2011

EL-Said H, Hegde S, Moore J. First report of atretic coronary sinus stenting resulting in dramatic improvement of ventricular function in functional single ventricle. PICS, Boston, MA, July 2011

Invited Speaker. EL-Said H. The abnormal fetal echocardiogram and post natal intervention. Genetic ultrasound, basic sonography and hands-on patient scanning. Schaeetzl Center, San Diego, CA, March 2011

Invited Speaker. EL-Said H. Transcatheter pulmonary valve implantation. Egyptian working group for pediatric cardiologists. The 3rd International Meeting, Cairo, December 2010

Invited Speaker. EL-Said H. PFO closure: What is the latest? Egyptian working group of interventional cardiology. The 15th Annual Scientific meeting, Cairo, December 2010

EL-Said H, Desoki M, Mofy A. Unusual presentation of a huge right coronary artery fistula; technical issues with device closure. PICS/AICS (Pediatric and Adult Interventional Cardiac Symposium) meeting, Chicago, IL, July 2010

EL-Said H, Murphy J, Bergester L, Forster S, Torres A, Vincent J, Moore J. 1 Adverse events associated with PDA closure: A prospective multicenter Experience (C3PO). PICS/AICS meeting, Chicago, IL, July 2010

Salkini A, EL-Said H. Bilateral multiple pulmonary artery-venous malformations associated with a coronary artery fistula - a case report in a 5-year-old girl. PICS/AICS meeting, Chicago, IL, July 2010

EL-Said H, Moore J. ASD device closure in a 2.7kg infant; feasibility and technical issues. PICS/AICS meeting, Chicago, IL, July 2010


EL-Said. The hybrid procedure in HLHS. Challenges in Cardiology, Cairo, April 2009


Davis C, Moore J, EL-Said H. Criteria for biventricular
repair in the era of hybrid. The World Congress of Pediatric Cardiology, Australia 2009
Pastuszko P, EL-Said H, Moore J, Lamberti J. Main pulmonary artery dilatation after the hybrid procedure exceeds neo-aortic dilatation after the Norwood/Sano procedure: Is this a cause for concern? The World Congress of Pediatric Cardiology, Australia 2009
EL-Said H, Moore J, Pastuszko P, Lamberti J. Serial Troponin as an early indicator for need to re-intervene after the hybrid procedure. The World Congress of Pediatric Cardiology, Australia 2009

Jeffrey R. Frazer, MD
Monthly Lecture on echocardiography topic at Echocardiography Conference

Paul D. Grossfeld, MD
Oral presentation, New basic and genetic insights into HLHS. American Heart Association, Orlando, FL, November 2011
The genetic basis of congenital heart disease: Clinical implications. Children’s Hospital of Orange County Residents’ Conference, Anaheim, CA, March 2011
The role of ETS-1 in causing heart defects in Jacobsen Syndrome. 7th biannual 11q Research and Resource Conference, San Diego, CA, July 2010
Oral presentation, Atenolol vs. Losartan for aortic root dilation in patients with Marfan syndrome. Western Society of Pediatric Cardiology, Phoenix, AZ, April 2010
The genetic basis of heart and brain defects in Jacobsen Syndrome: Implications for the general population. UCSD Department of Pediatrics Grand Rounds, San Diego, CA, April 2010
The genetic basis of congenital heart and brain defects in Jacobsen Syndrome: Implications for the general population. UCLA Pediatric Grand Rounds, Los Angeles, CA, January 2010
Identification of genes for heart and brain defects in Jacobsen Syndrome. UCSD Department of Pediatrics Faculty Research Series, San Diego, CA, November 2009
Oral presentation, Finding the heart gene for Jacobsen Syndrome: A ten-year odyssey. Sixth European 11q Research and Resource Group meeting, Pforzheim, Germany, 2009
Oral presentation, Deletion of ETS-1 in the cardiac critical region causes a subset of the congenital heart defects in Jacobsen Syndrome. Keystone symposium on cardiac development and regeneration, Asheville, NC, March 2009

John W. Moore, MD, MPH
Invited Speaker, Device closure of VSD, hybrid procedure for treatment of hypoplastic left heart, stent technology in congenital heart disease. 15th Annual Update on Pediatric and Congenital Cardiovascular Disease, Scottsdale, AZ, February 2011
Mullins Lecturer, Past present and future of stents in congenital heart disease. Society for Cardiovascular Angiography and Interventions, San Diego, CA, 2010
Invited Speaker, Difficult vascular access and retrieval of implanted or embolized devices. PICS-AICS, Chicago, IL, July 2010
Invited Speaker, Retrieval of embolized foreign bodies. PICS-AICS 09 at 5th World Congress of Pediatric Cardiology and Cardiac Surgery, Cairns, Australia, June 2009
Invited Speaker, VSD devices–Is the cat out of the bag? Western Society of Pediatric Cardiology, Yosemite, CA, May 2009
Chair and Moderator, ACC (American College of Cardiology) Intervention in Hypoplastic Left Heart...
Syndrome session, Orlando, FL, March 2009
Chair and Organizer, ACC Spotlight Committee for Pediatric and Congenital Live Case Sessions, Orlando, FL, March 2009

Delaram Molkara, MD

Vishal Nigam, MD

James Perry, MD
Arrhythmias in congenital heart disease. 6th Annual CHD Symposium, Berlin, January 2009
Sudden cardiac death in adult congenital heart disease. Adult Congenital Heart Association Symposium, Boston, MA, April 2009
Arrhythmia, heart failure and sudden death in adult congenital heart patients. San Diego Electrophysiology Society, Sharp Medical Center Grand Rounds, San Diego, CA, March 2010
Practical pediatric cardiology for the office. Temecula Valley Symposium, Temecula, CA, April 2010
Arrhythmias in adult congenital heart patients should (not) be managed by an adult electrophysiologist. Heart Rhythm Society Scientific Session, Denver, CO, May 2010
Multiple topics on Eeectrophysiology. Pediatric Cardiology Board Review, Laguna Nigel, CA, September 2010
Sudden cardiac death in adult congenital heart disease. Medtronic/San Diego Fellows Lecture, San Diego, CA, November 2010
Postoperative atrial arrhythmias in adult congenital heart disease. Pediatric Cardiac Intensive Care Society, Miami, FL, December 2010
Sudden cardiac death and malignant arrhythmias: The scope of the problem in adult congenital heart disease. Sudden Cardiac Arrest Symposium, Anaheim, CA, January 2011
Malignant arrhythmias in adult congenital heart disease. Western Society of Pediatric Cardiology, Rancho Palos Verdes, CA, March 2011
Recognition of IART and atypical flutter in adult congenital heart disease. Adult Congenital Heart Association National Symposium, Los Angeles, CA, March 2011

PUBLICATIONS


The Pediatric Cardiac Surgery Division of the Division of Cardiothoracic Surgery at the University of California, San Diego (UCSD) School of Medicine is based at Rady Children’s Hospital-San Diego (RCHSD). The Division, in conjunction with the Division of Pediatric Cardiology, provides cardiovascular surgery services for infants, children and adults with congenital and acquired heart disease. The Division serves the San Diego metropolitan area (population: 3.2 million) and it is a major referral center for Imperial and Orange Counties, Hawaii, New Mexico, Mexico, and the Pacific Rim Islands. Dr. John J. Lamberti is the Joyce and Eugene Klein Director of the Heart Institute at RCHSD. Dr. Lamberti also assumed the role of Division Chief of Cardiovascular Surgery when Dr. Jolene Kriett, the former Director of Cardiac Transplantation at RCHSD, retired on September 1, 2010. Dr. Peter Pastuszko, Associate Clinical Professor of Surgery at UCSD, is the Medical Director of Pediatric Cardiac Surgery Critical Care at RCHSD.

The Division's clinical volume for the academic year 2009-2011 remained steady when compared to previous academic years. The complexity of the caseload has increased due to increasing referrals from outlying areas in Southern California and the State of Hawaii. RCHSD is a “high volume” pediatric cardiac surgical program according to the Society of Thoracic Surgeons (STS) Congenital Heart Surgery Database. The Division's outcomes are comparable with other leading high volume centers. The STS analysis is based upon risk-adjusted data. The complexity score for RCHSD is
slightly higher than the national average reflecting our role as a major referral center.

FACULTY

Jolene M. Kriett, MD, Professor of Surgery (retired Sept. 2010)
John J. Lamberti, MD, Chief, Professor of Surgery
Peter Pastuszko, MD, Associate Clinical Professor of Surgery
Kelly R. Scholl, PA

POSTDOCTORAL FELLOWS

Siobhan Horan 2009-2011
Michael Sleet 2010-2011

CLINICAL ACTIVITIES
INPATIENT/OUTPATIENT

The Division of Cardiothoracic Surgery receives referrals from San Diego, Orange and Imperial counties; the Naval Medical Center, San Diego; the San Diego Regional Kaiser Medical Center; Tripler Army Medical Center, Honolulu, Hawaii; Kapiolani Medical Center for Women and Children, Honolulu, Hawaii; Straub Clinic, Honolulu, Hawaii and the Kaiser Permanente Medical Group, Honolulu, Hawaii. The Division's clinical volume for the academic years 2009-2011 included approximately 265 open-heart, 110 closed-heart and 150 miscellaneous cardiovascular surgical procedures. The faculty provides consultative services at UCSD Medical Center, RCHSD, and at all referral sites in Hawaii. In addition, faculty members provide support for adult patients with congenital heart disease undergoing treatment at all of the adult hospitals in San Diego County.

Dr. John Lamberti and Dr. John Moore organized and coordinated a three day symposium in January 2010. The symposium was entitled “Evolving Concepts in the Management of Complex Congenital Heart Disease II”. The symposium represented the second in a series of biennial meetings designed to address the management of the most complex forms of congenital heart
disease. The faculty consisted of multiple experts in surgery and cardiology drawn from the finest programs in North America.

RESEARCH ACTIVITIES

The Division participates in multiple longitudinal studies of congenital heart disease sponsored by the Congenital Heart Surgeon’s Society. Dr. John J. Lamberti is the principal investigator on multiple protocols involving complex congenital heart defects. The studies are designed to evaluate the natural history, including before and after surgical therapy, of relatively rare congenital heart defects in a multi-center collaborative effort.

**Optimal Management of Critical Left Ventricular Outflow Tract Obstruction: A Congenital Heart Surgeons’ Society Study**
IRB# 091156–APPROVED SEP 09
Sponsor: Hospital for Sick Children, Toronto, Ontario, Canada, John J. Lamberti, MD, P.I., Peter Pastuszko, MD, Sub-I

**Congenital Heart Surgeons’ Society (CHSS) Studies of Congenital Heart Disease**
IRB# 091162–APPROVED SEP 09
Sponsor: Hospital for Sick Children, Toronto, Ontario, Canada, John J. Lamberti, MD, P.I., Peter Pastuszko, MD, Sub-I

**Humanitarian Use of the Contegra Pulmonary Valved Conduit (HDE# H020003)**
IRB# 090357–APPROVED APR 09
Sponsor: Medtronic, Inc., John J. Lamberti, MD, P.I., Jolene Kriett, MD, Sub-I, Peter Pastuszko, MD, Sub-I

**SGAV HDE Protocol - CryoValve SG Aortic Human Heart Valve Combination Retrospective/Propective Multi-Center, Cohort Study**
IRB# 100648–APPROVED: MAY 6 2010
CTAS20103993 RCHSD PROJ#12420, CC 221-00957999, John J. Lamberti, MD, P.I.

**Use of the Melody Transcatheter Pulmonary Valve as a Humanitarian Use Device under a Humanitarian Device Exemption**
IRB#100445–APPROVED MAR 18 2010
RCHSD PROJ#12391 EPIC/SP#127

Sponsor: Medtronic, Inc., John W. Moore, MD, P.I.
John Lamberti, MD, Co-investigator

Dr. Peter Pastuszko is the primary cardiac surgeon involved in a series of research projects at the University of Pennsylvania in Philadelphia, PA. Dr. Pastuszko travels to Philadelphia five times a year for an intense schedule of experiments designed to evaluate the effects of cardiopulmonary bypass on brain structure and function in a neonatal piglet model.

TEACHING ACTIVITIES

Drs. Lamberti and Pastuszko participate in the following teaching activities:

- Daily morning and afternoon rounds at RCHSD with cardiac surgery fellows, cardiology fellows, ICU fellows, nurses, nurse practitioners, nurses in training, medical students, pediatric residents and cardiology attendings
- Biweekly teaching rounds with the PICU team and monthly teaching conferences with the NICU team
- Conferences at RCHSD and UCSD Medical Centers including the transplantation conference, adult cardiology/cardiothoracic surgery conference, pediatric cardiology/cardiothoracic surgery conference and cardiothoracic surgery resident teaching conference
- Cardiothoracic surgery outpatient and the Transplant clinics at UCSD and RCHSD
- Medical student rotations in CT surgery and Clinical Anatomy. Dr. Lamberti is the mentor, consultant and advisor to the congenital heart surgery program at Kapiolani Medical Center for Women and Children (KMCWC) in Honolulu, Hawaii.

KMCWC is the primary pediatric teaching hospital of the John A. Burns School of Medicine Department of Pediatrics at The University of Hawaii/Manoa. Since 1994, Dr. Lamberti has spent five weeks each year at KMCWC assisting in surgery, participating in pre and postoperative care and overseeing quality assurance aspects of the cardiac surgery program. Dr. Lamberti makes teaching rounds every morning during Hawaii Heart Week. He also chairs the peer review committee meeting at KMCWC, and participates in the case review conferences.
• In January 2011, Dr. Peter Pastuszko led a surgical team on a humanitarian teaching mission to the Heart and General Hospital in Jaipur, India

AWARDS, HONORS AND MAJOR PRESENTATIONS

John J. Lamberti, MD
Best Doctors in America, 2005-2011
Castle Connolly, America's Top Doctors, 2009-2011
The Pat Whinnery Expense Reduction Award: RCHSD, 2010-2011
Invited lecturer, The evolution of congenital heart surgery: The role of technology in advancing state of the art care. Biomechanics Seminar, UCSD Department of Mechanical and Aerospace Engineering, San Diego, CA, January 2009
Lecture and Guided Tour for Rady Children's Hospital Trustees. Heart surgery at RCHSD: Past, present and future, March 2009
Invited lecturer, Progressive dilatation of the aortic root in cono-truncal abnormalities. Western Society of Pediatric Cardiology, Yosemite, CA, May 2009
Invited lecturer, Reoperation to repair the A-V valve after prior repair of an atrio-ventricular canal defect. The 5th World Congress of Pediatric Cardiology and Cardiac Surgery, Cairns, Australia, June 2009
Invited presentation, Heart surgery at the Rady Children's Hospital in 2009. Children's 101 Mini-Internship Program, San Diego, CA, September 2009
Invited lecturer, Surgical care for infants and children with congenital heart disease. Pediatric Grand Rounds at Kapiolani Medical Center for Women and Children, Honolulu, HI, November 2009
Invited lecturer, Mitral valve repair or replacement following atrioventricular canal repair. 46th Annual Meeting of the Society of Thoracic Surgeons, Ft. Lauderdale, FL, January 2010
Invited lecturer, The clinical relevance of CFD modeling: One surgeon's perspective. First International Symposium on Computational Simulation in Congenital Heart Disease, La Jolla CA, February 2010
Guest speaker, Cardiac transplantation at Rady Children's Hospital. Loving Little Hearts fundraiser at the home of Jules and Michelle Arthur, March 2010
Invited presentation, Heart surgery at the Rady Children's Hospital in 2010. Children's 101 Mini-Internship Program, San Diego, CA, April 2010
Invited lecturer/moderator, Joint meeting of CHSS, ECHSA, Castaneda Society, and the Latin American Pediatric and Congenital Heart Surgery Societies, Antigua, Guatemala, July 2010
Invited lecturer, Care the heart: Cure the heart. Sixth Collaborative Neonatal and Pediatric Nurses Conference, Honolulu, HI, September 2010
Invited lecturer, Stage I palliation, pediatric critical care nursing. Contemporary Forums National Nursing Conference, La Jolla, CA, October 2010
Invited speaker, Bonita RCHSD Auxiliary Annual Luncheon by the Bay Meeting, San Diego, CA, December 2010
Invited lecturer, How randomized clinical trials impact pediatric cardiac surgical decision making. Pediatric Cardiac Intensive Care Society Biennial Meeting, Miami Beach, Florida, December 2010
Invited lecturer and moderator, What I have learned about the Fontan Operation in 40 years; Late reoperations after the arterial switch; Détente: Why I like the hybrid procedure. Pediatric Cardiology 2011, Scottsdale, Arizona, February 2011

Peter Pastuszko, MD
Invited lecturer, A quantitative study of simulated bicuspid aortic valves. 63rd Annual Meeting of the APS Division of Fluid Dynamics, Long Beach, CA, November 2010
Invited lecturer, Tetralogy of fallot, advanced cardiac topics. RCHSD, San Diego, CA, July 2010
Department of Surgery, UCSD, San Diego, CA, June 2010
Invited lecturer, Congenital heart surgery: Past, present, future. Pediatric Cardiac Surgery Program, Jaipur, India, January 2010
Invited lecturer, Surgical strategies to maximize neurological outcomes after cardiac surgery. Evolving Concepts in the Management of Complex Congenital Heart Disease II, January 2010, San Diego, CA
Invited lecturer, Hybrid HLHS patients have excessive neo-aortic root dilatation. Annual Meeting of the Congenital Heart Surgeons Society, Chicago, IL, November 2009
Invited lecturer, The effect of granulocyte colony-stimulating factor on expression of selected regulatory proteins responsible for cell injury or survival in the brain of newborn piglets following cardiopulmonary bypass and circulatory arrest. The 5th World Congress of Pediatric Cardiology and Cardiac Surgery, Cairns, Australia, June 2009

PUBLICATIONS

The Hematology/Oncology Division provides state-of-the-art care in the Peckham Center for Cancer and Blood Disorders. The division serves all of San Diego and Imperial counties, and patients in South Riverside County. Through collaboration with the UC San Diego Moores Cancer Center, the division is part of a National Cancer Institute designated Comprehensive Cancer Center. The Division of Pediatric Hematology/Oncology is also devoted to basic, translational, and clinical research, experimental therapeutics, and medical education.

The Division has the following programs:

- Stem Cell Transplantation Program and Comprehensive Clinic
- Sickle Cell Disease Program and Comprehensive Clinic
- Hemophilia Program and Comprehensive Clinic
- Neuro-Oncology Program and Comprehensive Clinic
- Long-Term Follow-Up Program and Comprehensive Clinic for cancer survivors
- Palliative Care Program, funded by a grant from the Peckham Family Foundation
- Integrative Medicine Program

Left to right: Jenny Kim, John Crawford, Deborah Schiff, Kate Madigan, Lanipua Yeh-Nayre, William Roberts, Amy Geddis, Faith Kung, Eric Anderson, Hyunah Ahn, Andrew Dietz, Roberta Romero, Andrew Martin, Jen Yu
• Comprehensive Psychosocial Services Program, funded in part by the Celebration of Champions through the Rady Children’s Hospital Auxiliary

In July 2007, an alliance was formed between St. Jude Children’s Research Hospital, Rady Children’s Hospital-San Diego (RCHSD), and UC San Diego (UCSD). The alliance focuses on the development of clinical, translational, and basic research in the area of childhood cancer. Several joint clinical trials have begun, and collaborations regarding other research efforts are underway. The faculty is actively involved in teaching through the UCSD/RCHSD Pediatric Residency Program and the UCSD School of Medicine. The division has a Pediatric Hematology/Oncology Fellowship Program accredited by the ACGME.

FACULTY

William D. Roberts, MD, Director, Clinical Professor of Pediatrics
Hyunah Ahn, MD, Assistant Clinical Professor of Pediatrics
Eric J. Anderson, MD, Associate Clinical Professor of Pediatrics
John R. Crawford, MD, MS, Assistant Professor of Neurosciences
Mitchell B. Diccianni, PhD, Associate Project Scientist
Donald Durden, MD, PhD, Professor of Pediatrics
Amy E. Geddis, MD, PhD, Associate Clinical Professor of Pediatrics
Jenny M. Kim, MD, Associate Clinical Professor of Pediatrics
Faith H. Kung, MD, Associate Professor of Pediatrics
Amy Lovejoy, MD, Associate Clinical Professor of Pediatrics
Catherine E. Madigan, MD, Assistant Clinical Professor of Pediatrics
Deborah E. Schiff, MD, Clinical Professor of Pediatrics
Jennifer R. Willert, MD, Associate Clinical Professor of Pediatrics
Jing Yang, PhD, Assistant Professor of Pediatrics and Pharmacology
Alice L. Yu, MD, PhD, Professor of Pediatrics

CLINICAL ACTIVITIES

INPATIENT/OUTPATIENT

The clinical program moved in October 2010 to the new RCHSD Acute Care Pavilion, occupying the entire second floor with a 38-bed inpatient unit which includes a 10-bed BMT unit, and an outpatient clinic containing an infusion center, procedure room, and exam rooms. The Center also includes a pharmacy, schoolroom, activity room, adolescent lounge, and conference rooms. The clinical team is made up of dedicated hematology/oncology physicians, nurse practitioners, nurses, pharmacists, psychologists, social workers, child life specialists, parent liaisons, dieticians, and translators.
There are over 14,000 outpatient visits per year and an average daily inpatient census of 35 patients. Approximately 200 new oncology patients are diagnosed per year, 120 patients are seen per year in the Sickle Cell Disease/Hemoglobinopathy program, and 250 in the Hemophilia/Bleeding Disorder/Thrombosis program. Approximately 20 related and unrelated hematopoietic stem cell transplants (HSCT) are performed each year. The program is a National Marrow Donor Program (NMDP) Unrelated Donor Transplant Center, and has achieved accreditation by the Foundation for Accreditation of Cellular Therapeutics (FACT). The HSCT program is a joint program with the adult HSCT program at UCSD, and includes combined endeavors in clinical care, quality, outcomes, and research.

The division also manages the following programs:

- **Neuro-Oncology**, a multidisciplinary team involved in the care of patients with central nervous system malignancies, as well as a specific Neuro-Oncology Tumor Board.

- **Long Term Follow-up**, which monitors survivors of childhood cancer who are more than two years from the completion of therapy, and which provides a wide range of services through a multidisciplinary team focused on issues affecting that population.

- **Palliative Care**, which offers assistance with medical decision-making, clinical care coordination, and family support for patients and their families undergoing intensive therapy and/or facing difficult decisions.

- **Integrative Medicine**, which offers support for patients through interventions such as biofeedback, acupuncture, and nutrition counseling.

- In addition, a Pain Management Program managed by the Anesthesiology Department works closely with the hematology/oncology patients, and provides sedation for patients undergoing procedures, such as bone marrow aspiration/biopsy and lumbar puncture.

### RESEARCH ACTIVITIES

**Eric J. Anderson, MD** is working on clinical trials in stem cell transplantation. He is the Director of the Stem Cell Transplantation Program. He is a member of the Hematology/Oncology Performance Improvement Committee. He is the Director of Outpatient and Infusion Services for Hematology/Oncology.

**John R. Crawford, MD, MS** is the director of the Neuro-Oncology Program. He was the RCHSD/UCSD PI for St. Jude SJHG04: A Phase I/II Trial of a New Tyrosine Kinase Inhibitor (Tarceva) During and After Radiotherapy in the Treatment of Patients with Newly Diagnosed High-Grade Glioma and Unfavorable Low-Grade Glioma. He is currently the RCHSD/UCSD PI for St. Jude SJYC07 Risk-Adapted Therapy for Children Less than 3 Years of Age with Embryonal Brain Tumors, High-Grade Glioma, Choroid Plexus Carcinoma or Ependymoma. He is conducting basic science research in the area of neuro-oncology.

**Donald Durden, MD, PhD** of the Durden laboratory is interested in understanding the mechanisms by which signals are transmitted from cell surface receptors to the cytoplasm and nucleus. The efforts are focused on the role of lipid and protein phosphorylation and dephosphorylation in the regulation of signal transduction. They are primarily interested in the regulation of signal transduction pathways in tumor cells as well as similar signaling events in myeloid and endothelial cells as they relate to the control of the tumor microenvironment. They aim to understand how the phosphorylation and dephosphorylation of cellular proteins and lipids results in regulated and coordinated signaling pathways and how components of other signaling pathways (e.g. PI-3 kinase, small G proteins, phosphatases, serine/threonine kinases, PLC, GAPs, protein kinase A, PKC, etc.) interact to fine tune and regulate cell signaling in the context of other environmental influences or when different receptors are activated at the same time. As more and more information accumulates concerning the fundamental mechanisms controlling specific components of signal relay, perhaps they will be able to propose an integrated model of how cells respond to a complex array of external environmental conditions in a coordinated and controlled manner. They are interested in converting target discovery and validation into drug discovery and drug development in particular as it relates to specific kinases and phosphatases and translating this basic science information from “bench to bedside.” They are actively involved in opening Phase I and Phase II clinical trials of novel targeted therapeutic agents in pediatric diseases including the areas of hematology and oncology.
Major Goals and Plans

- Strengthen basic, translational, and clinical research in hematology and oncology.
- Further develop the St. Jude Children’s Research Hospital/Rady Children’s Hospital/UCSD Alliance by developing additional clinical trials and scientific collaborations between investigators in each institution.
- Continue to expand the Hematology/Oncology Clinical Research Center to support enhanced early phase institutional clinical trials.
- Expand access to alternative donor stem cell transplantation at RCHSD.
- Collaborate with the San Diego Consortium for Regenerative Medicine, an entity including The Sanford Burnham Institute for Medical Research, the Salk Institute for Biological Studies, The Scripps Research Institute, and UC San Diego.

Amy E. Geddis, MD, PhD’s studies focus on megakaryocyte differentiation, including mechanisms of endomitosis and proplatelet formation and the study of mutations from patients that alter megakaryocyte and platelet development. She was the RCHSD principal investigator for a Randomized, Double-Blind, Placebo-Controlled Phase I/II Study to Determine the Safety and Efficacy of AMG531 in Thrombocytopenic Pediatric Subjects with Chronic Immune (idiopathic) Thrombocytopenic Purpura, sponsored by Amgen. She will be the RCHSD/UC San Diego PI for an Amgen Phase III Randomized, Double Blind, Placebo Controlled Study to Determine the Safety and Efficacy of Romiplostim in Thrombocytopenic Pediatric Subjects with Immune Thrombocytopenia (ITP). She is the RCHSD/UC San Diego PI for St Jude HOD05: Stanford V Chemotherapy with Low-Dose Tailored Field Radiation Therapy for Intermediate Risk Pediatric Hodgkin Disease. She is the Research Director of the Hemophilia/Bleeding Disorder Program.

Jenny M. Kim, MD is the Director of the RCHSD Comprehensive Sickle Cell/Hemoglobinopathy program. She was awarded a UCSD Health Sciences Clinical and Translational Research Institute (CTRI) innovative technology pilot project for 2011-12 for her project “Biomarkers of Sickle Cell Disease”. While she is the principal investigator, this project is a collaboration with Don Durden, MD (UCSD), Joel Linden, PhD (La Jolla Institute for Allergy and Immunology), and Kelly Frazer, PhD (UCSD) examining biomarkers of inflammation associated with vaso-occlusive pain in children with sickle cell disease in the hopes of finding new therapies to target these markers and improve the quality of life for people with sickle cell disease. She is a study committee member for Children’s Oncology Group Protocol ACNS0334 for the treatment of supratentorial PNET and medulloblastoma, and was the RCHSD principal investigator for the Norvartis EXJADE Expanded Access study.

Amy E. Lovejoy, MD is the Director of the Hemophilia/ Bleeding Disorder program. She is the principal investigator for the RCHSD/HTC Universal Data Collection Study regarding complications of hemophilia and serum testing/storage, and participates in the HTRS Registry, analyzing the epidemiology and treatment of circulating anticoagulants in patients with hemophilia and von Willebrand’s Disease. She is participating in the KidsDOTT trial to better determine the optimal duration of anticoagulation therapy in pediatric thrombosis patients.

Catherine E. Madigan, MD is involved in the Sickle Cell/Hemoglobinopathy Program. She is the RCHSD/UCSD PI for St. Jude HOD08: Reduced Duration Stanford V Chemotherapy with or without Low-Dose Tailored-Field Radiation Therapy for Favorable Risk Pediatric Hodgkin Lymphoma.

William D. Roberts, MD is a founding member of the Neuroblastoma & Medulloblastoma Translational Research Consortium (NMTRC). He is a study committee member and the RCHSD/UC San Diego principal investigator for the following NMTRC studies: a Phase II study of Nifurtimox in the treatment of recurrent neuroblastoma and medulloblastoma, and a Phase I study of TPI for the treatment of relapsed and refractory neuroblastoma and Medulloblastoma, a Feasibility Trial using
Molecular-Guided Therapy for the Treatment of Patients with Refractory or Recurrent Neuroblastoma, a Phase I Study of Vinblastine and Sirolimus in Pediatric Patients with Recurrent or Refractory Solid Tumors including CNS tumors, and a Phase I Trial for Refractory or Relapsed Neuroblastoma with DFMO alone and in combination with Etoposide. He is a co-PI of a study of the molecular basis of metastasis in the Ewing’s Sarcoma Family of Tumors with Dr. Jing Yang. In conjunction with Dr. Giovanni Paternostro at the Sanford-Burnham Institute, he is the co-PI of a translational study to assess the optimum microenvironment for assessing drug sensitivity of acute leukemia cells. Along with Drs. Paula Arisitizabal, and Raul Ribeiro, he has conducted outcome studies from a joint RCHSD/UCSD/St. Jude Children’s Research Hospital pediatric oncology international outreach program in Tijuana, Mexico.

Deborah E. Schiff, MD is the Physician Coordinator of the St. Jude Children’s Research Hospital/Rady Children’s Hospital Alliance. In conjunction with the St. Jude Children’s Research Hospital, she is the RCHSD/UCSD principal investigator for the following St. Jude studies: ALLR17 A Study of Pediatric Patients with Relapsed or Refractory Acute Lymphoblastic Leukemia, AML08: A Phase III Randomized Trial of Clofarabine Plus Cytarabine Versus Conventional Induction Therapy and a Phase II Study of Natural Killer Cell Transplantation in Patients with Newly Diagnosed Acute Myeloid Leukemia, SJBC3: Mature B-Cell Lymphoma and Leukemia Study III, and TBANK: A Protocol for Collecting, Banking, and Distributing Human Tissue Samples. She conducts outcome studies related to palliative care in her role as the Medical Director of the Hematology/Oncology Palliative Care Program.

Eric Anderson, MD
Dr. Anderson is an advisor for fellows in the Hematology/Oncology Fellowship Program.

Amy L. Geddis, MD, PhD
Dr. Geddis is the coordinator for the hematology/oncology rotation for fourth-year medical students from UCSD.
and is the coordinator for the Hematology/Oncology Fellowship Board Review Course and the Fellowship Scholarship Oversight Committee. She is an advisor for fellows in the Hematology/Oncology Fellowship Program.

**Jenny M. Kim, MD**
Dr. Kim is a resident advisor for residents in the UCSD/RCHSD Pediatric Residency Program and an advisor for fellows in the Hematology/Oncology Fellowship Program. She is a CPC Preceptor for UCSD/RCHSD pediatric residents.

**Amy E. Lovejoy, MD**
Dr. Lovejoy is an advisor for fellows in the Hematology/Oncology Fellowship Program.

**William D. Roberts, MD**
Dr. Roberts is the Director of the Hematology/Oncology Fellowship Program. He is also the coordinator for the hematology/oncology rotation for second-year pediatric residents in the UCSD/RCHSD Pediatric Residency Program. He is a resident advisor for UCSD/RCHSD pediatric residents and a member of the Intern Selection Committee.

**Deborah E. Schiff, MD**
Dr. Schiff serves as a faculty advisor for UCSD medical and pharmacy student independent study projects. She supervised a UCSD medical student in analyzing the effect of obesity on event free survival and overall survival of children with acute lymphoblastic leukemia. She supervised a UCSD Pharmacy student in studying Pharmacokinetic Modeling of Dapsone and its Metabolites, as well as a retrospective study of adverse effects of Dapsone when used as pneumocystis carinii pneumonia prophylaxis in children. She supervised a UCSD medical student in Evaluating a Pediatric Hem/Onc Supportive Care Decision-making Tool (DMT) for Families of Children with Life-threatening Illnesses. She is an advisor for fellows in the Hematology/Oncology Fellowship Program.

**Jennifer R. Willert, MD**
Dr. Willert is a resident advisor for residents in the UCSD/RCHSD Pediatric Residency Program and for fellows in the Hematology/Oncology Fellowship Program.

**AWARDS, HONORS, AND MAJOR PRESENTATIONS**

**John R Crawford, MD, MS**
The neurological examination: A dying art in the modern era of molecular medicine. Pediatric NeuroPsychology Grand Rounds, RCHSD, UCSD, San Diego, CA, September 2, 2009

Human herpesvirus-6 infection of the CNS: A cause or consequence of CNS disease. Neurosciences Grand Rounds. UCSD, San Diego, CA, February 26, 2010

Genelux Inc. Lecture Series on novel virologic clinical trials. Human herpesvirus-6 infection of the CNS: A cause or consequence? March 13, 2010

National Pediatric Hematology Oncology Conference, Brainstem gliomas in the 21st century, Tijuana, Mexico, May 21, 2010

Brain tumors. 1st Annual Collaborative Care Conference, UCSD Moores Cancer Center, San Diego, CA, January 15, 2011


7th International Conference on HHV-6 and HHV-7 differential gene expression profiling of acute and chronic HHV-6A-infected human malignant astrocytes. Reston VA, February 28, 2011

Chronic viral infection and CNS malignancy: A rebel without a cause? Cleveland Clinic Department of Pediatric Neurology Grand Rounds, April 20, 2011

A team work approach in the management of childhood brain tumors. 2nd Annual Neuro-Oncology Family Day, RCHSD, April 30, 2011

**Donald L. Durden, MD, PhD**

PI-3 kinase inhibitors in cancer therapeutics. Ninth Annual Molecular Targets in Cancer Therapeutics, Regents Hotel, Washington, DC, August 9, 2010
## Research Support

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Amy E. Geddis, MD, PhD
Co-chair, Non-immune Thrombocytopenia Registry of the International Society of Thrombosis and Hemostasis
Medical Advisory Board, Platelet Disorders Support Association
Editorial Board, Blood, 2006-present
American Society of Hematology Subcommittee Member, Hematopoietic Cytokines and Factors
Session chair, mouse models in megakaryocytes and thrombopoiesis. Gordon Research Conference, March 2009
Pathophysiology of ITP. ASHPO meeting, April 2009
Invited talk, Molecular biology of inherited thrombocytopenia. Nationwide Children's Hospital, Nov. 2009
Scientific committee speaker, Blood disorders in childhood (ontogeny of megakaryopoiesis), December 2009
Molecular basis of inherited thrombocytopenia. Hematology Rounds USC, April 2010
Thrombocytopenia in Paris Trousseau syndrome. 11q23 Family meeting, July 2010
Congenital thrombocytopenia. International Society of Laboratory Hematology, May 2011
ITP, does it run in the family? PDSA meeting, July 2011

Jenny M. Kim, MD
Dr. Kim was the recipient of the Combined Health Agencies 17th Annual Health Heroes Awards on March 16, 2011, honoring local businesses, medical professionals, and media personalities for their contributions, dedication and commitment to better health for all San Diegans. The RCHSD Sickle Cell Disease Program was given this award by the Sickle Cell Disease Association of America, San Diego Chapter, for their dedication to the care of children with sickle cell disease.

William D. Roberts, MD
International Outreach: Development of a pediatric hematology/oncology program in Tijuana, Mexico. Hematology/Oncology Grand Rounds, Children's Hospital Los Angeles, January 2010

Deborah E. Schiff, MD
Dr. Schiff was the recipient of the Emilio Nares Foundation 2011 Excellence in Pediatric Oncology Award

Jennifer R. Willert, MD
Umbilical cord blood: To bank or not to bank? Keynote speaker at Los Angeles Pediatric Society Annual CME meeting, October 9, 2010
Graf, R Newbury, D Stupack, J Willert. Poster Presentation-American Society of Pediatric Hematology/Oncology (ASPHO), Montreal, Canada, May 2010
The Association of Alpha-Thalassemia with congenital anomalies. Lynne Bird, Val Catanzarite, Tara Shea, Jennifer Willert, 2009 Accepted for poster at David W Smith meeting on Malformations and Morphogenesis, Philadelphia, PA, August 6-9, 2009

PUBLICATIONS
Aristizabal P, Velez G, Ribeiro RC, Roberts W, Day S. Developing a nursing education program in pediatric oncology in a low income country: The role of twinning. Accepted for publication in Pediatric Blood and
Research Support (continued)

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<td>Sub 021051(CA098543)/NATIONAL CHILDHOOD CANCER FOUNDATION</td>
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Cancer, October 2011.
Crawford JR, Rood BR, Rossi CT, Vezina G.


The Hospital Medicine program began in 1978, to serve three main functions: caring for unassigned patients, supervising housestaff on the inpatient service, and providing a user-friendly service for primary care providers who were unable to follow their inpatients. Since its inception, the division has grown to 16 physicians and three fellows. The hospitalists provide inpatient care at Rady Children’s Hospital-San Diego (RCHSD); Palomar Medical Center, located in the northeastern part of San Diego County; and, Sharp Grossmont Hospital, located in the eastern part of San Diego County.

The hospitalists serve as a clinical resource for community physicians and emergency departments to determine the need for acute care admission, discuss alternatives to admission, and provide a second opinion for patients with diagnostic challenges. All are board-certified pediatricians with acquired expertise in different fields outside of traditional hospital medicine. Most have had additional post-residency training through chief residency or fellowships.

The hospitalists work closely with hospital staff to optimize patient flow and hospital capacity and to address patient care issues across the organization. Additionally, the hospitalists coordinate transports of acutely ill pediatric patients at risk for clinical deterioration for San Diego and neighboring counties.

Left to right: Laurie Bernard-Stover, Kyung Rhee, Julia Beauchamp-Walters, Erin Stucky-Fisher, Cynthia Kuelbs, Jennifer Davis, Keith Vaux, Waheeda Samady, Premi Suresh, Alicia Cantu, Daniel Hershey, Ami Doshi, Sara Marchese, Heather Pierce, Lisa Benz, Amir Singh, Chris Cannavino
FACULTY

Cynthia L. Kuelbs, MD, Pediatrics and Hospital Medicine Division Chief, UCSD Clinical Professor of Pediatrics
Julia Beauchamp-Walters, MD, Associate Clinical Professor of Pediatrics
Laurie Bernard-Stover, MD, Associate Clinical Professor of Pediatrics
Christopher Cannavino, MD, Assistant Clinical Professor of Pediatrics
Alicia Cantu, MD, Assistant Clinical Professor of Pediatrics
Jennifer Davis, MD, Associate Physician
Ami Doshi, MD, Assistant Professor of Pediatrics
Edward Epstein, MD, MBA, CPE, Clinical Professor of Pediatrics
Daniel Hershey, MD, Assistant Clinical Professor of Pediatrics
Sara Marchese, MD, Assistant Professor of Pediatrics
Heather Pierce, MD, Assistant Professor of Pediatrics
Kyung Rhee, MD, Assistant Adjunct Professor of Pediatrics
Erin Stucky-Fisher, MD, Professor of Clinical Pediatrics
Premi Suresh, MD, Associate Physician
Keith Vaux, MD, Associate Clinical Professor of Pediatrics
Wendy Wright, MD, Clinical Professor of Pediatrics

CLINICAL ACTIVITIES

The Hospital Medicine Service accounts for approximately 25 per cent of all RCHSD admissions and the vast majority of general pediatric admissions. The average census varies by season, averaging 35 patients in winter months and 20 in the traditionally quieter summer months. Service activities include provision of inpatient care, consultation for sub-specialty and emergency department patients, housestaff and medical student teaching and coordination of approximately 100 emergency transports monthly. Additionally, the hospitalists provide acute and ongoing care to skilled nursing and subacute level convalescent patients at the Bernardy Center, located on the RCHSD campus.

The Hospital Medicine Service at Palomar Hospital began in July 2006, in partnership with local pediatricians. The census at this Rady-licensed unit ranges from 5 to 12 patients. This non-teaching facility is a collaborative program between community pediatricians, the hospitalists and nurse practitioners.

The hospitalists began providing services at the Rady-licensed unit at Sharp Grossmont Hospital in July 2008. This unit has an average daily census of four with plans to expand. This program is also a partnership with community pediatricians and provides families living in the area with easy access to RCHSD resources and hospital medicine physicians.

The hospitalists fulfill many leadership roles at RCHSD, Palomar, Grossmont, and the local community, including:

For RCHSD:

- Chief Medical Information Officer
- Director of Graduate Medical Education
- Medical Consultant, Home Care Services
- Medical Director, Clinical Documentation Improvement
- Medical Director, Inpatient Services
- Medical Director, Quality and Safety
- Medical Director, Continuing Medical Education
- Medical Staff, Department of Pediatrics Chair
- Medical Director, Chadwick Center for Children and Families
- Medical Director, Subacute Unit Bernardy Center

POSTDOCTORAL FELLOWS

Lisa M. Benz, MD
Waheeda Samady, MD
Amit Singh, MD
• Medical Director, RCH at Sharp Grossmont Pediatric Unit
• Medical Staff, Chair, Pharmacy and Therapeutics Committee
• Medical Staff, Chair, Quality Improvement Committee

For RCSSD/Medical Practice Foundation:
• Board of Directors
• Executive Board
• Board of Governance Committee

For UC San Diego:
• Pediatric Residency Associate Program Director
• Vice Chair for Clinical Affairs, Department of Pediatrics
• Executive Vice Chair, Department of Pediatrics
• Pediatric Clerkship Director

For Community Facilities:
• Medical Director, Juvenile Hall Services, San Diego County
• Medical Director, Polinsky Children’s Center
• Medical Director, San Diego Center for Children, Door of Hope and Clark Adolescent Center

In addition, hospitalists serve as Chair or members of key RCHSD, RCSSD, Palomar, Sharp Grossmont and UC San Diego (UCSD) committees including:
• Academic Affairs
• Academic Review and Appraisal Committee
• Assessing Medical Staff Quality
• Benefits
• Billing
• Bioethics
• Board of Directors
• Bylaws
• Credentialing
• Clinical Practice
• Clinical Leadership Council
• Clinical Pathway Committees
• Code Blue
• Continuing Medical Education
• Contracts
• Education/Human Resources/Creative Service Transition Committee

• Graduate Medical Education
• Information Technology
• Infection Control
• Intern Selection
• Liaison Committee on Medical Education (LCME), Educational Resources Committee
• Marketing
• Medical Staff Executive Committee
• Morbidity and Mortality Conferences including:
  • CHET
  • Pediatrics
  • PICU
  • Systems
  • Trauma
• New Hospital Building Ancillary Transition Committee: New Hospital Building Education Transition Committee
• Pediatric Leadership Council
• Pediatric Operations and Education
• Pediatric Department
• Peer Review
• Pharmacy and Therapeutics
• Quality Improvement
• Quality Management/Risk Management
• Radiology Task Force
• Sedation
• RCHSD Board Committees including:
  • Information Technology
  • Medical Affairs
  • Quality
  • Recruitment and Retention

RESEARCH ACTIVITIES
• Pediatric Research in the Inpatient Setting (PRIS). Clinical Survey of Pediatric Hospitalist Practice Patterns through the PRIS Network. (In collaboration with Children’s Hospital Boston/Harvard Medical School, Children’s Hospital Philadelphia, RCHSD/UC San Diego, and Children’s Hospital National Medical Center/George Washington Medical School)
• Apparent Life-Threatening Events: Creation of Admission Criteria and Assessment of Clinical Outcomes
• Diagnostic value of immature neutrophils (bands) in the cerebrospinal fluid of children with pleocytosis
• Predictors of respiratory failure in bronchiolitis and use of Heliox
• Orbital Abscess and Cellulitis Management and Outcome
• An Evaluation of the Safety, Efficacy, and Pharmacokinetics of Daptomycin in Pediatric Subjects Aged Seven to Seventeen Years with Complicated Skin and Skin Structure Infections Caused by Gram-Positive Pathogens
• Fulminant Myocarditis Associated with Pandemic H1N1 Influenza A Virus in Children
• CRP as a Criteria for Transition to Oral Therapy in Bone & Joint Infections
• A Comparison of Anavip & CroFab in the Treatment of Patients with Crotalinae (Pit Viper) Envenomation: A Randomized, Prospective, Blinded, Controlled, Comparative, Multicenter Study
• Comparative Molecular and Genomic Characterization of Invasive and Non-Invasive Pediatric Community-Acquired Methicillin-Resistant Staphylococcus aureus Infections

TEACHING ACTIVITIES

The hospitalists are the primary teaching faculty for all medical students and residents rotating on the RCHSD inpatient teaching service. All five local training institutions, including the Balboa Naval and Camp Pendleton Medical Centers send their trainees to RCHSD for pediatric training. Teaching instruction is given through both formal didactic and daily bedside sessions. Additionally, the hospitalists serve as pediatric resident advisors, fellowship directors, conference coordinators, rotation directors and participants in the pediatric residency selection process.

AWARDS, HONORS, AND MAJOR PRESENTATIONS


Christopher Cannavino, MD
Invited Speaker, Advances in the practice of pediatrics (Cannavino C, Dwek J). When worlds collide-Clinician vs. imagician, March 2010

Edward Epstein, MD, MBA
San Diego Magazine’s Top Doctors in San Diego, 2009

Daniel Hershey, MD
Society of Hospital Medicine, Pediatrics: Quality and Safety Committee, July 2009

Cynthia L. Kuelbs, MD
AAP representative to the AMA Council on Violence and Abuse
San Diego Magazine’s Top Doctors in San Diego—2009, 2010
Invited speaker, Abuse and medical care of teen delinquencies. 23rd Annual Conference on Child and Family Maltreatment, San Diego, CA, January 2009
Invited speaker, Sorting through the allegations and evidence of sexual and physical abuse. Juvenile Law Institute, Oakland, CA, February 2009
Consultant, Developing a hospital based child protection team, Karolinska Institute, Stockholm Sweden, 2009
Invited speaker, Chadwick Lecture – Moving Forward, Looking Back Child Maltreatment Conference 2011

Kyung Rhee, MD
Poster Presentation, Is a complete asthma action plan associated with reduced 30 day readmissions? (Yang J, Rhee K, Stucky-Fisher E) PAS 2011: Pediatric Academic Societies’ Annual Meeting, April 2011
UCSD Clinical and Translational Research Institute Course: Why are children overweight and what can we do about it? (CME) April 2011.
UCSD/Rady Children’s Specialists of San Diego, Grand Rounds: Parent role in childhood obesity, June 2011.

**Erin Stucky-Fisher, MD**

Chair, Pediatric Committee of the Society of Hospital Medicine (SHM)

Pediatric Research in the Inpatient Setting (PRIS) Executive Committee

Institute for Healthcare Improvement (IHI) 5 Million Lives campaign, AAP representative to the Pediatric Node. Node members: NACHRI, CHCA, NICHQ

American Academy of Pediatrics (AAP) Safer For Kids Program: Department of Practice, Division of Healthcare Finance and Quality Improvement—Pediatric Patient Safety Project Advisory Committee

IHI Pediatric Summer Series webcast planning group 2007-2010

Children’s Specialty Care Coalition. Statewide Pediatric Specialty Group Coalition lobbying for children’s healthcare. Representative for San Diego

Pediatric medication safety in emergency departments. Consensus Meeting of National Experts meeting, Duke University; Subsequent appointment to the National Steering Committee, created via this national meeting; American Academy of Pediatrics representative to the EMSC (Emergency Medical Services for Children), Durham, NC, February 23-24, 2009

AAP Section of Hospital Medicine–Executive Committee, November, 2009-2012

Society of Hospital Medicine–HQPS Quality Improvement Research Sub-Committee, Chair (Co-Chair: Nasim Afsarmanesh, MD), 2009-present

Best Doctors in America, 2009, 2011

The Excellence in Teaching Award for 2008, RCHSD, 2009

Fellow in Hospital Medicine (FHM). Society of Hospital Medicine. Elected based on longevity in specialty, demonstrated successful continuous work in leadership, quality, advocacy and education, and letters of recommendation, 2009

Senior Fellow in Hospital Medicine (SFHM), Society of Hospital Medicine, 2010

Master in Hospital Medicine Lifetime Achievement Award (MHM), 2011


Invited Plenary, Update in pediatric hospital medicine (Stucky-Fisher E). Society of Hospital Medicine Annual Meeting, Chicago, IL, May 2009

Invited Plenary, Quality Improvement Pre-course: Leadership in quality improvement (Halasyamani L, Novotny M, Stucky-Fisher E) May 2009


Visiting Professor (Invited), Enhanced education/training in pediatric medication safety: practicing clinicians (Stucky-Fisher E, Snow S). EMSC Pediatric Patient Safety Follow Up Meeting, Bethesda, MD, June 2009


Quality Improvement Workshop 101: Quality improvement in the hospital setting—What do I need to know and how


Pediatric Grand Rounds (Invited), Practical uses of clinical pathways and best practices RCHSD (Erin Stucky-Fisher, MD; Paul Kurtin, MD), August 2009

Visiting Professor (Invited) and Pediatric Hospital Medicine Division Consultation on Program Development in Quality Improvement. Children’s Hospital Los Angeles, August, 2009

• Noon Conference: Introduction to quality improvement—language and measures
• Workshop: Junior faculty career development
• Workshop: Welcome to quality improvement—basic tools, metrics and project design
• Workshop: Turning quality projects into scholarship
• Workshop: Strengthening the academic environment
• Pediatric Grand Rounds: Pediatric quality and safety: Who’s driving this bus and where’s my seat?

Visiting Professor and Pediatric Grand Rounds speaker (Invited), Pediatric hospital medicine and quality improvement telecast to all children’s hospitals in Canada. University of Calgary Faculty of Medicine, Alberta, Canada, February 2010

Visiting Professor (Invited), Alberta Children’s Hospital, Calgary, Alberta, Canada, February 2010

• Grand Rounds presenter, Pediatric quality and safety: National trends provider and family challenges
• Workshop: Clinical pathways and best practices
• Workshop: Teaching quality improvement to physicians

Visiting Professor (Invited), Society of Hospital Medicine Annual Meeting, Washington, DC


Visiting Professor (Invited), First Annual Academic Hospitalist Leadership Meeting, Washington, DC, April 2010

Visiting Professor (Invited), Pediatric Academic Societies’ Annual Meeting, Vancouver, BC, Canada, May 2010

• Workshop: Quality improvement 101: Quality improvement in the hospital setting: What do I need to know and how do I do it?
• Workshop: How to build an academic general pediatric fellowship program: A practical guide
• Poster: Safety and quality – Improving hospitalist - Primary care communication (Yang J, Hershey D, Epstein E, Stucky-Fisher E)

Association of Pediatric Program Directors (APPD) Annual Meeting, Miami, FL, March 2011

Donthi R, Byczkowski T, Mahan J. (NOTE: assisted with workshop preparation; unable to attend meeting)
Visiting Professor (Invited), Developing a pediatric hospital medicine division and quality improvement initiative. Northwestern University, Children’s Memorial Chicago, IL, April 2011

Society of Hospital Medicine Annual Meeting, Workshop: Designing, implementing, and disseminating a successful quality improvement curriculum. (Stucky-Fisher E (lead), Myers J, Asfarmanesh N, Vidyarthi A) Dallas, TX. May 2011
Pediatric Hospital Medicine Tri-Sponsored International Meeting, Kansas City, MO
Pediatric Hospital Medicine Tri-Sponsored International Meeting, Kansas City, MO
Pediatric Hospital Medicine Tri-Sponsored International Meeting, Kansas City, MO

Research Support

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<td>Prospective Multicenter Study of Bronchiolitis Admissions: Etiology and Disposition</td>
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<td>Sub 206190 (AI067693)/Partners Healthcare System, Inc.</td>
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<td>A Randomized, Double-Blind, Multicenter Trial to Evaluate the Safety and Efficacy of Sequential (intra-venous, oral) Moxifloxacin Versus Comparator in Pediatric Subjects with Complicated Intra-Abdominal Infection</td>
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<td>BAY 12-8039/11643/Bayer Healthcare Pharmaceuticals</td>
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<td>Developmental Aspects of Ampicillin Renal Clearance in Infants</td>
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<td>Intramural Competitive Grant, RCHSD and UCSD Pediatric Pharmacy Research Unit</td>
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<td>Safer Healthcare for Kids [Physicians Foundation for Health Systems Excellence: Pediatric Advisory Committee American Academy of Pediatrics: Landrigan (Boston Children’s), Miller (Hopkins), Frush (Duke), Kotagal (Cincinnati Children’s), Sharek (Stanford), Stucky-Fisher (RCHSD)]</td>
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<td>Cynthia L. Kuelbs, MD</td>
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<td>California Clinical Forensic Medical Training Center (CCFMT)</td>
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<td>EM10 14 1141/Cal Governor’s Emergency Services</td>
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• Workshop: Making the pediatric hospital medicine core competencies work for you. (Maniscaco J, Shah N, Chase L, Bauer B, Stucky-Fisher E, Ottolini M) July 2011

Excellence in Teaching Award for 2008, RCHSD, 2009

Fellow in Hospital Medicine. Society of Hospital Medicine, elected based on longevity in specialty, demonstrated successful continuous work in leadership, quality, advocacy and education, and letters of recommendation, 2009

Pediatric medication safety in emergency departments. Consensus Meeting of National Experts Meeting, Duke University. Subsequent appointment to the National Steering Committee created via this national meeting. American Academy of Pediatrics representative to the EMSC (Emergency Medical Services for Children), Durham, NC, February 23-24, 2009

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Society of Hospital Medicine–HQPS Quality Improvement Research Sub-Committee, Chair (Co-Chair: Nasim Afsarmanesh, MD), 2009-present


Senior Fellow in Hospital Medicine. Society of Hospital Medicine, 2010

Best Doctors in America 2011-2012

Master of Hospital Medicine 2011

Premi Suresh, MD

Munchausen syndrome by proxy. Child Protection Team Training, Sheriff’s Department, San Diego, CA, January 2009

Recognizing child abuse. Pediatric Transport Team, RCHSD, San Diego, CA, January 2009


Advanced medical issues in sexual abuse cases. IVAT Conference Training Institute, San Diego, CA, September 2009

Abusive head trauma. Indications of physical abuse. Training for the Investigator, San Diego, CA, December 2009

Wendy Wright, MD

Chairperson, California DEC Alliance

National Educational Coordinator and Curriculum Committee, National DEC Alliance


Invited speaker, Substance abuse issues in dependency court proceedings. Dependency Counsel Training Program, UCSD, November 2009

San Diego Magazine’s Top Doctors in San Diego, 2009

Keith Vaux, MD

The technology dependent child. Pediatrics and Hospital Medicine Fellowship Core Curriculum, April, 2009

Evidence based medicine and leading a health care team. UCSD Pediatric Fellowship Core Curriculum, San Diego CA, October, 2009

New genetics and personalized medicine. World Congress on Disabilities, Jacksonville FL, November, 2009

Genetics primer. UCSD Pediatric Resident Core Curriculum, San Diego CA, February, 2010

Common syndromes and genomic sciences: How genetics will change our understanding of human disease. Southern California Association of Neonatal Nurses (SCANN), San Diego, CA, May 10, 2010

Trisomy 13 and 18, a review and discussion. RCHSD Ethics Forum, San Diego CA, Nov, 2010

Genetic disorders of connective diseases. UCSD Pediatric Resident Core Curriculum. San Diego, Nov 2010

Recognition, management and etiology of pediatric seizures. Pediatrics and Hospital Medicine Fellowship Core Curriculum, 2011

PUBLICATIONS


Phillips S, Stucky-Fisher ER. Evidence based medicine. In:


The Division of Infectious Diseases provides clinical care, teaching, clinical and basic research as well as hospital epidemiology and infection control at Rady Children’s Hospital San Diego (RCHSD). The division has excelled in every aspect of its clinical and academic missions. Its reputation is demonstrated by the leadership roles of its divisional members nationally and internationally, and the success of the fellows graduating from the program.

**FACULTY**

**Stephen A. Spector, MD**, Co-Director; Distinguished Professor of Pediatrics

**John S. Bradley, MD**, Co-Director, Professor of Clinical Pediatrics

**Grant Campbell, PhD**, Assistant Project Scientist

**Christopher R. Cannavino, MD**, Assistant Clinical Professor of Pediatrics

**John Leake, MD, MPH**, Associate Clinical Professor of Pediatrics

**Alice Pong, MD**, Associate Clinical Professor of Pediatrics

Left to right: John Leake, John Bradley, Stephen Spector, Alice Pong, Mark Sawyer, Adriana Tremoulet, Rolando Viani, Chris Cannavino
POSTDOCTORAL FELLOWS

Amaran Moodley, MD
Juan Chaparro, MD

CLINICAL ACTIVITIES
INPATIENT/OUTPATIENT

The division’s clinical activity is primarily consultative assisting other medical and surgical divisions in the management of serious, complicated or unusual infections in children in both the inpatient and outpatient settings.

RESEARCH ACTIVITIES

John S. Bradley, MD is involved in Phase I through Phase IV clinical trials of antibacterials, antifungals, and non-HIV antivirals, and currently focuses on novel therapies for CA-MRSA. He has been involved in clinical trial design and evaluation of clinical trial data, as a member of the FDA’s Anti-Infective Drug Advisory Committee, incorporating pharmacodynamics and Monte Carlo Simulation into clinical outcome assessment. He is a member of the Foundation of NIH Biomarkers Consortium to create clinical trial design to better evaluate impact of anti-infective therapy.

John Leake, MD, MPH, has a primary clinical and research interest in tropical medicine, and has experience in field and laboratory investigation. He is currently collaborating with the UC San Diego (UCSD) Department of Medicine and Scripps Translational Science Institute on a leptospirosis immunogenetic susceptibility project. Other recent work includes a collaboration with UCSD and The Scripps Research Institute on study of the genetic basis of Plasmodium vivax chloroquine resistance in Indonesia. He also represents RCHSD through Baylor University/Texas Children’s Hospital in a multi-center U.S. collaborative project on meningococcal disease surveillance with eight other pediatric centers.

Alice Pong, MD has a keen interest in pediatric tuberculosis and participates in collaborative studies defining the cellular immune responses of children with acute and latent tuberculosis infections. Current research includes studying the efficacy of an interferon gamma assay to detect tuberculosis infection in children. She is also involved in clinical research studies related to infection control and currently is studying the impact of mupirocin on MRSA colonization in hospitalized children.

Mark H. Sawyer, MD focuses his research activities on immunizations through a contract with the San Diego County Health and Human Services Agency Immunization Program. This program is involved in all aspects of immunization including immunization policy, assessment of immunization coverage levels, education of providers and the community about immunizations, promotion of San Diego’s computerized regional immunization information system, and focused research into ways to improve immunization delivery.

Stephen A. Spector, MD is examining viral pathogenesis with a particular interest in host-viral interactions. He has sought to discover novel approaches for the detection, treatment, prevention and immunopathogenesis of HIV and human cytomegalovirus (CMV). Ongoing projects include the examination of genetic determinants for the risk of HIV mother-to-child transmission and disease progression in children, and pharmacogenetics of antiretrovirals and other compounds. Dr. Spector’s research also includes examination of the impact of Tat subtypes on HIV-1 pathogenesis and the role of autophagy in viral mediated disease. His laboratory has also identified an important role for autophagy in HIV pathogenesis, and is examining the ability of vitamin D3 (an inducer of autophagy) to inhibit both HIV and Mycobacteria tuberculosis.

Rolando M. Viani, MD, MTP, studies bi-national health for pregnant women and children infected with HIV. As part of the UCSD-Tijuana General Hospital Bi-National INFECTIOUS DISEASES
Major Goals and Plans

**Recruitment of laboratory based research faculty:** With the departure of Akihiko Saitoh and Victor Nizet being appointed as the division chief of Pharmacology and Drug Discovery, Stephen Spector is the only infectious diseases faculty member with a laboratory based research program, prompting the recruitment of at least two junior laboratory based researchers over the next 5 years.

**Clinical Program:** The Pediatric Infectious Diseases Division has established an outstanding clinical infectious diseases consultative service as well as an infectious diseases specialty service at RCHSD.

Members of the Division (AP primarily) are responsible for the Hospital Epidemiology Program, as well as the RCHSD Antimicrobial Stewardship Program.

**Molecular Diagnostic Laboratory:** As the medical director of the Molecular Diagnostic Laboratory, Dr. Spector's immediate objective of the laboratory is to implement an RT-PCR for H1N1 influenza. The goal over the next 5 years is to greatly expand the rapid molecular diagnostics capabilities at RCHSD such that the needs of clinicians for clinical care can be met. The objective is to integrate molecular diagnostics into every day clinical practice to facilitate patient care by improving microbial diagnosis and monitoring of bacteria, mycobacteria, viruses, fungi and parasites, and antimicrobial sensitivity testing.

**Teaching:** The Infectious Diseases faculty has an established record of outstanding teaching and mentoring of medical students, residents and fellows, with one of the ID faculty receiving the UCSD Pediatric Resident Attending of the Year Award (2011). The ID service begins rounds in the Microbiology Laboratory of RCHSD each day with traditional “plate rounds” to correlate clinical disease with the actual patient microbiology.

**Fellowship Program:** The Division is an ACGME approved program and has an outstanding track record of training fellows that go on to successful careers in academic medicine.

**Research:** The Infectious Disease Division plans to continue its involvement in developing new antiinfective agents in close collaboration with the Division of Pharmacology and Drug Discovery in the Department of Pediatrics. The clinical research program includes the study of new chemical entities and enhanced structure and function of current classes of therapeutic agents in Phase I through Phase IV development. The division also plans to conduct research with future generations of biologic response modifiers in the treatment of infectious diseases, most notably the sepsis syndrome. The division is currently collaborating with the FDA and the pharmaceutical industry to develop new agents and investigate pharmacokinetic exposure and clinical and microbiologic outcomes in populations not previously investigated. The division’s ultimate goal is to provide new, safe and effective agents to neonates, infants and children.

Research into the pathogenesis, diagnosis and treatment of tuberculosis in children is a priority for the division. With Dr. Alice Pong’s leadership, pediatric infectious diseases specialists provide care to children with TB at the San Diego County Pediatric Tuberculosis Clinic and the Rady Children’s Hospital Clinics.

Dr. Sawyer’s relationship with San Diego’s HHSA Immunization Program allows for studies into the delivery of immunizations including predictors of successful immunization and the evaluation of methods to improve the delivery of immunization in various medical settings. This program provides exposure to a major public health initiative.
Major Goals and Plans

Dr. Steve Spector’s laboratory is examining viral pathogenesis with a particular interest in host-viral interactions, and in particular, discovering novel approaches for the detection, treatment, prevention and immunopathogenesis of HIV and human cytomegalovirus (CMV). Ongoing projects include the examination of genetic determinants for the risk of HIV mother-to-child transmission and disease progression in children, and pharmacogenetics of antiretrovirals and other compounds. Other areas of HIV research include examination of the impact of Tat subtypes on HIV-1 pathogenesis and the role of autophagy in HIV pathogenesis viral mediated disease. Further, the laboratory is examining the ability of vitamin D3 (an inducer of autophagy) to inhibit both HIV and Mycobacteria tuberculosis.

Expand the UCSD-Tijuana General Hospital Bi-National Program: The Mother-Child-Adolescent HIV Program has established an excellent collaboration with investigators from Tijuana General Hospital. This program will provide the opportunity to expand research opportunities to other areas including tuberculosis and immunizations.

The Pediatric Infectious Diseases Research Center at Rady Children’s Hospital: Infectious diseases remain leading causes of morbidity and mortality of children. The recent H1N1 pandemic, methicillin resistant staphylococcus aureus, and multi-drug resistant tuberculosis are just a few examples of new challenges in infectious diseases. In order to meet these and other infectious challenges, the Pediatric Infectious Diseases Research Center at RCHSD was established in 2001.

Program, Dr. Viani has established a model of care that is being replicated throughout Mexico. Dr. Viani and colleagues have determined that over 1.2% of pregnant women tested for HIV during delivery were HIV-infected, more than 10 times the number estimated by Mexican health officials. In addition to demonstrating the higher-than-expected HIV seroprevalence among pregnant women, Dr. Viani also demonstrated that women were willing to be tested for HIV and were interested in learning how to prevent their babies from becoming infected. Dr. Viani’s studies at Tijuana General Hospital also identified the risk factors for HIV infection among women and established the current baseline antiretroviral resistance rate among this population. Dr. Viani is also a leader in research involving primary viral resistance in HIV-infected adolescents. In addition, Dr. Viani has been involved as study chair and co-chair in the development of a Phase I/II NIH sponsored studies on the use of novel antiretrovirals with diverse mechanisms of action such as vicriviroc, a novel CCR5 antagonist, etravirine, a non nucleoside analogue and dolutegravir, an integrase inhibitor in HIV infected treatment experienced children and adolescents. Recently, Dr. Viani has been studying the cellular immune response to tuberculosis in HIV infected children at both sides of the border.

TEACHING ACTIVITIES

The Division of Infectious Diseases provides care and on-service direct teaching of students, pediatric and pharmacy residents, and fellows in the diagnosis and management of pediatric infectious diseases. The ID service begins rounds each day in microbiology, where cultures, stains and histology are reviewed, followed by radiology rounds and ward rounds, and visits to the Emergency Department to provide a superb hands-on teaching experience.
John S. Bradley, MD
• National Faculty for AAP National Conference (Antibiotic Update)
• National Faculty, AAP PREP Course in Infectious Diseases
• Faculty, Pediatric Infectious Diseases Society Fellow’s Day
• Lecturer, RCHSD Noon Conferences
• Inpatient rounds and weekly case conferences, Pediatric Infectious Diseases

Christopher R. Cannavino, MD
• Lecturer, RCHSD Noon Conferences
• Inpatient rounds and weekly case conferences, Pediatric Infectious Diseases

John A. D. Leake, MD, MPH
• Lecturer, RCHSD Noon Conferences
• Lecturer, UCSD International Health and Microbiology courses
• Inpatient rounds and weekly case conferences, Pediatric Infectious Diseases
• ISP student and Pediatric Resident Advisor
• Clinicopathologic correlation preceptor
• Lecturer for Binational Border Health, Bioterrorism Preparedness, and other local and national conferences

Alice Pong, MD
• Lecturer, RCHSD Noon Conferences
• Inpatient rounds and weekly case conferences, Pediatric Infectious Diseases

Mark Sawyer, MD
• Directs a focused curriculum on immunizations for primary care residents
• Lecturer, Pediatric Infectious Diseases
• Inpatient rounds and weekly case conferences, Pediatric Infectious Diseases
• ISP student advisor

Stephen Spector, MD
• Instructor, Medical Microbiology for second-year medical students
• Instructor, Medical Microbiology Laboratory
• Lecturer, Core Basic Biology for first-year medical students
• Lecturer, Pediatric Infectious Diseases introductory lecture for third-year medical students
• Inpatient rounds and weekly case conferences, Pediatric Infectious Diseases
• Member of PhD committees for biomedical sciences students
• ISP student advisor

Rolando M. Viani, MD, MTP
• Lecturer, Pediatric Infectious Diseases introductory lecture for third-year medical students
• Proctors the Objective Structured Clinical Exam for second-year students
• Clinicopathologic correlation preceptor
• Inpatient rounds and weekly case conferences, Pediatric Infectious Diseases
• Lecturer, Pediatric HIV diagnosis and management, Annual CHHC Pediatric Infectious Disease Lecture
• Lecturer, Perinatal HIV Infection, Mercy Hospital Pediatric Infectious Disease Lecture
• ISP student advisor
• Lectures to International military scholars from Eastern Europe, former Soviet Union, Africa, Central Asia and Latin America
• Lectures and bedside training on Pediatric HIV management for physicians in South Africa’s Eastern Cape, Mpumalanga and Limpopo on behalf of the International AIDS Education and Training Center

AWARDS, HONORS AND MAJOR PRESENTATIONS

John S. Bradley, MD
Infectious Diseases Society of America: Task Force on Antimicrobial Drug Availability
CDC/IDSA National Guidelines Writing Group for the Diagnosis, Treatment and Prevention of Influenza
Chair, PIDS/IDSA Guidelines Writing Committee for Pediatric Community Acquired Pneumonia
Member, FNIH Biomarkers Consortium
Senior Advisor, PIDS Steering Committee on Antimicrobial Stewardship
National Biodefense Science Board, Workshop on Pediatric Anthrax Vaccine
UCSD Pediatric Residents Attending of the Year Award 2011

Christopher Cannavino, MD
Pediatric Residency Program Teaching Award, Attending of the Year 2008 and 2010

John Leake, MD, MPH
Supervises pediatric infectious diseases travel clinic at RCHSD
ICU M and M Committee

Alice Pong, MD
Chair, Pediatric-Tuberculosis Task Force, San Diego County Hospital Epidemiologist, RCHSD
Safety officer, Children’s Specialists of San Diego

Mark Sawyer, MD
Member, CDC Advisory Committee on Immunization Practices
Chair, California Immunization Committee
## Research Support

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<tr>
<th>Grant/Contract #</th>
<th>Annual Budget</th>
<th>Total Direct Dollars/Duration of Grant</th>
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<tr>
<td><strong>John A.D. Leake, MD, MPH</strong></td>
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<td>1 K23 AI073488-01A1/NIH (NIAID)</td>
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<td><strong>Alice Pong, MD</strong></td>
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<td>A Randomized Controlled Trial on the Effect of Intranasal Mupirocin on Methicillin-Resistant Staphylococcus Aureus (MRSA) Colonization in Hospitalized Pediatric Surgical Patients</td>
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<td>Apr. 2008-Mar. 2010</td>
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<td><strong>Mark Sawyer, MD</strong></td>
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<td>1 UO1 IP000189-01/PHS (CDC)</td>
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<td><strong>Stephen Spector, MD</strong></td>
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<td>1 R01 NS077874-01/NIH (NINDS)</td>
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<td>Pediatric HIV/AIDS Cohort Study Initiative (AMP Study)</td>
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<td>Sub AMP-PHACS FFP (HD052102)/Harvard University</td>
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## Research Support (continued)

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<tr>
<th>Grant/Contract #</th>
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<td>Identifying Genetic Association for Targeted AMP and SMARTT Phenotypes</td>
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<td>Aug. 2011-July 2012</td>
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<td>Vitamin D Inhibition of HIV and M. Tuberculosis Coinfection in Macrophages</td>
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<td>Sub 114074.0628 (HD052102)/Harvard University</td>
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<td>Pediatric HIV/AIDS Cohort Study Initiative (SMARTT Study)</td>
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<td>RYAN WHITE CARE ACT VR 18</td>
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<td>International Maternal Pediatric Adolescent AIDS Clinical Trials Group IMPAACT</td>
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<td>Leadership Award T007 (IMPAACT)</td>
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<td>Sub BRS-IMPCT-Q-060000118-T007 (AI068632)/Social &amp; Scientific Systems, Inc.</td>
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<td>Pediatric HIV/AIDS Cohort Study (PHACS): Enhances Data Collection</td>
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<td>Social &amp; Scientific Systems IMPAACT Network Host Genetic Laboratory</td>
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<td>Vitamin D Suppl. Enhances Immune Response to BCG Vaccination in Infants</td>
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<td>Mitochondrial Determinants of Metabolic Disease in HIV-Infected Children</td>
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<td>Sub none (NR012885)/University Of Miami</td>
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## Research Support (continued)

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<td>5001 AI68632-05/NIH/Social &amp; Scientific Systems/ARRA Funding</td>
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### Stephen Spector, MD

- President, California Immunization Coalition
- Board member, American Immunization Registry Association
- Elected to membership in the American Association of Physicians 2009
- Promoted to Distinguished Professor (above scale Professor X)
- Best Doctors in America, 2007-present
- Who’s Who in Medical Sciences Education
- Senior advisor, William Jefferson Clinton Foundation for Care and Treatment of Children with HIV/AIDS
- Panelist member, Guidelines for prophylaxis of opportunistic infections in patients with HIV infections, Department of Health & Human Services and Centers for Disease Control Advisory Board
- Panelist member, Perinatal HIV guidelines, Department of Health & Human Services
- External advisory panel, Bone marrow transplantation program project grant, Stanford University, Stanford, CA
- Data Safety Monitoring Board-Collaborative Antiviral Study Group
- Promoted to Distinguished Professor (above scale Professor X)
- Best Doctors in America, 2007-present
- Who’s Who in Medical Sciences Education
- Senior advisor, William Jefferson Clinton Foundation for Care and Treatment of Children with HIV/AIDS
- Panelist member, Guidelines for prophylaxis of opportunistic infections in patients with HIV infections, Department of Health & Human Services and Centers for Disease Control Advisory Board
- Panelist member, Perinatal HIV guidelines, Department of Health & Human Services
- External advisory panel, Bone marrow transplantation program project grant, Stanford University, Stanford, CA
- Data Safety Monitoring Board-Collaborative Antiviral Study Group

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### Rolando M. Viani, MD, MTP

- Elected to UCSD Standings and Promotions Committee July 2010
- Lecturer, Travel Medicine and Interesting Travel Related ID Cases. Workshop, Advances in the Practice of Pediatrics, AAP San Diego, 2011

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### PUBLICATIONS


Singh KK, Spector SA. Host genetic determinants of human immunodeficiency virus infection and disease


The Division of Neonatology has a full-time faculty of 14 board-certified Neonatologists and 13 neonatal nurse practitioners providing state-of-the-art neonatal services to Rady Children’s Hospital-San Diego (RCHSD) NICU and the NICU’s within the Scripps and Palomar/Pomerado Healthcare Systems (93 neonatal beds total). The division faculty provides clinical service and medical direction to 5 neonatal intensive care units (NICU’s). The division provides a regionalized approach to care, participating with all the major delivery services in San Diego, Imperial and Riverside Counties, and is focused on clinical excellence and evidence-based research and teaching. In addition, the division’s physicians provide medical and neuro-developmental evaluations of high-risk infant graduates from the NICUs serviced by the division.

The Neonatology group collaborates with the Academic Division at University of California, San Diego (UCSD)-Hillcrest. This collaboration includes essential teaching of the Neonatal fellows who spend a significant

Left to right: Mark Speziale, Amy Kimball, Crystal Le, Jose Honold, Paul Zlotnik, Charles Sauer, Jane O’Donnell, Brian Lane, Casey Wang, Denise Suttner, Gail Knight, Nabil Fatayerji, David Golembeski
period of time in their three year program at RCHSD NICU. There are only two teaching sites for this program and the rotations at RCHSD NICU allows the trainees to become familiar with neonatal cardiac disorders, including preoperative stabilization and diagnosis, and involve the trainees in post-operative care of these infants. The trainees learn Neonatal Extra Corporeal Membrane Oxygenation (ECMO), and are certified as being ECMO educated and functioning as ECMO specialists and learn about ECMO eligible conditions, criteria, and are involved in all aspects of the delivery of Neonatal ECMO, with a significant exposure to the use of ECMO in the post-operative cardiac neonate. At both sites the trainees are exposed to and become competent in the management of the surgical neonate and are involved in the organization and supervision of Neonatal transports. Our joint rotations involving RCHSD NCICU and the UCSD ISCC has resulted in our trainees having one of the best overall clinical exposures and education compared to any other program in the country. This collaboration is important for the Neonatal Match of recruits. We have expanded the training program with GMEC approval and additional funding for positions from RCHSD and will continue to recruit three new fellows every year.

The other major collaboration between the Academic Unit at UCSD and the RCHSD group involves research.

RCHSD is the only facility in San Diego and Imperial Counties that provides Extra Corporeal Membrane Oxygenation (ECMO), a high-tech therapy that temporarily performs the work of a baby's heart and lungs, giving the organs time to develop and repair themselves.

CSSD Division of Neonatology is responsible for the Medical Directorship of the Children's Hospital Emergency (Neonatal) Transport program which accounts for over 900 transports per year, the largest in California, 662 by ambulance, 59 by plane and 52 by helicopter.

FACULTY

Gail Knight, MD, Clinical Professor of Pediatrics, Chief, Division of Neonatology
Marva Evans, MD, Clinical Professor of Pediatrics
Nabil Fatayerji, MD, Associate Clinical Professor of Pediatrics
David Golembeski, MD, Clinical Professor of Pediatrics
Jose Honold, MD, Associate Clinical Professor of Pediatrics
Amy Kimball, MD, Associate Clinical Professor of Pediatrics
Brian Lane, MD, Associate Clinical Professor of Pediatrics
Jane O'Donnell, MD, Associate Clinical Professor of Pediatrics
Charles Sauer, DO, Assistant Clinical Professor
Michael Segall, MD, Clinical Professor of Pediatrics
Mark Speziale, MD, Clinical Professor of Pediatrics
Denise Suttner, MD, Associate Clinical Professor of Pediatrics
Casey Wang, MD, Assistant Clinical Professor of Pediatrics
Paul Zlotnik, MD, Clinical Professor of Pediatrics

CLINICAL ACTIVITIES

INPATIENT/OUTPATIENT

Rady Children's Hospital-San Diego

Physicians based at the NICU at RCHSD are “on service” for 18 weeks per year. During this time they provide direct patient care and supervise NNP’s and Neonatal Fellows in the care of up to 49 Level IIIC patients per day including pre and post op cardiac and ECMO patients, complex surgical patients and preterm infants.

The physicians at RCHSD write orders, including HAL, gtts, etc., manage ventilators, review ECGs, adjust pacemaker settings, evaluate bedside EEG and NIRS monitoring, prime ECMO circuits, provide "anesthesia" assistance for ECMO cannulations, decannulations and some chest explorations, standby for other operative procedures in the NICU including chest explorations, PDA ligations, bronchoscopy, emergency laparotomies, etc; do admissions, discharge notes and write daily progress notes (in addition to reviewing and cosigning the notes written by fellows and NNPs), put in lines, chest tubes and PD catheters, and occasionally pericardial drains. A member of the Neonatal team writes all the orders on all the patients, including surgical patients.
These physicians also attend a daily radiology conference to review films, US, CT and MRI and review later films during the day via the PACS system or by visiting the radiologist directly for consultation. They also interact with multiple consultants on a daily basis. While on service or post-call they round every morning with the Cardiology/CT surgery team and review all the pre and post-op cardiac patients, with the Neonatal Attending usually presenting the labs, I/Os, vent settings, pressors, etc. and assisting in formulating a plan for daily management. They also interact directly with the other specialty surgeons (Orthopedic Surgery, ENT, Neurosurgery, GI) and the general surgeons as well as the other medical consultants.

These physicians also take transport calls, triage admissions, and provide telephone consults for outside physicians (OBs, Pediatricians, etc.) and their own ER and PICU physicians on occasion. They also, on occasion, go on transports themselves. They are frequently asked to go to the Operating Room or to the cath lab to assist in the management of patients, including “off-site” ECMO cannulations.

While on service these physicians are in the NICU for the entire 10-12 hour day directly involved in patient care/teaching/daily parent conferences. In addition, they are in house at night 5-6 times per month, which involves the same activities as during the day and generally includes little or no time in the “call” room.

The division provides the medical directorship for the outpatient High Risk Infant Follow up Clinic. Dr. Brian Lane is the Medical Director and is involved daily with the patient follow up.

**RCHSD NICU at Scripps Hospital, La Jolla and Encinitas**
The NICU’s at Scripps Memorial Hospital, La Jolla and Encinitas are licensed beds by RCHSD. These units have medical directorship provided by the Division of Neonatology. There is a NICU physician onsite daily for consults, admissions and rounding. Additionally, these physicians provide 24 hour on call services to these NICU’s.

**Palomar Medical Center**
The NICU at Palomar Medical Center is also a licensed RCHSD facility. The physicians at Palomar Medical Center provide coverage for both Palomar Medical Center and Pomerado Hospital. These physicians are on service for 5 days per week in addition to 7 nights per month and 1 weekend per month. In addition to their direct clinical care for the NICU’s these physicians participate in weekly Tuesday morning patient care conferences, Quality Management Committee, Palomar Pomerado Health Executive Committee, Medical Staff Peer Review Committee, Birth Center Operations Committee, Palomar Physician Advisory Committee, Fetal Monitoring Strip Review, and the Department of Pediatrics. The physicians also provide the medical directorship to both of the NICU’s serviced. Additionally, Dr. Fatayerji serves as the Chief of Pediatrics at Pomerado Hospital. The group holds OB/Peds M&M lectures every other month in conjunction with Perinatology at Palomar Medical Center and various other teaching lectures throughout the year for staff and community at both Palomar and Pomerado Medical Centers. Dr. Golembeski is a board member of the National Children’s Study and a member of the Infection Control Committees at Palomar Pomerado Health as well as Southwest Healthcare.

**Rancho Springs Medical Center**
The Division of Neonatology also provides clinical coverage for the nursery at Rancho Springs Medical Center in Murrieta, California. These physicians round 3 days out of the month and also serve on the Inland Valley Pediatrics Committee.

**RESEARCH ACTIVITIES**

We recently concluded a multi-center randomized clinical trial listed below. We have also been major participants in non-network, multi-center clinical studies with publications in the *New England Journal of Medicine*, *Pediatrics*, and *Journal of Pediatrics*.

Co-PI: Golembeski D. Boston University Birth Defects Monitoring Project, Palomar Pomerado Health
Major Goals and Plans

Continue to refine best practices within Neonatology through the Divisions’ membership with CPQCC and participation in the state-wide CCS NICU collaborative. This goal will be complimented by the division’s continued membership and leadership participation in the California Association of Neonatologists.

Continue to pursue a clinical research agenda as the division remains committed to practicing the highest level of evidence-based medicine. The division remains committed to education the pediatricians of the future and training the neonatal-perinatal fellows, instilling in them the desire to evaluate unproven therapies and develop evidence for the best interventions for the unstable critically ill newborn infant.

PI: Kimball A. Inhaled nitric oxide, INOmax® IK-3001-BPD-301 for the prevention of bronchopulmonary dysplasia (BPD) in preterm infants requiring mechanical ventilation or positive pressure support on days 5-14 after birth. INO Therapeutics, LLC and RCHSD, 2009–present
PI: Knight GK. Impact of music on physiological measures of stress in neonates in the neonatal intensive care unit. RCHSD and The Neuroscience Institute, La Jolla, 2010–present
PI: Speziale M. Quality improvement initiative – neonatology. RCHSD, 2009–present
PI: Speziale M. Children’s Hospital Neonatology Consortium (CHNC): data sharing and quality improvement initiative. RCHSD, 2010–present
Physician site leader: Speziale M. CPQCC patent ductus arteriosus observational study. RCHSD, 2011
PI: Suttner D. Clarinet-clopidogrel to lower arterial thrombotic risk in neonates and infants. Sanofi Aventis. RCHSD, 2006–2010

RCHSD physicians have 1-2 Neonatal fellows in the NICU every month and on call at night that they directly teach on a daily basis. When they are “on service” with them they are directly involved in patient care of the fellows. In addition, there is daily teaching of NNPs, RNs, RTs, ALS nurses, etc. while on service and on twice a day bedside rounds. The physicians also teach neonatal Advanced Life Support Intubation Cat Lab to incoming pediatric residents.

Additionally, the group routinely teaches in the annual 3 day ECMO training course for fellows, nurses, cardi-

TEACHING ACTIVITIES

Dr. Michael Segall and the Division of Neonatology annually co-sponsor the Fetus and Newborn: State of the Art Care Conference. This year the conference celebrated its 25th Anniversary. The conference provides attendees with the latest innovations and therapies in neonatal care. Below, listed by site, are a variety of teaching activities.

RCHSD
Marva Evans, MD
Jose Honold, MD
Amy Kimball, MD
Gail Knight, MD
Brian Lane, MD
Jane O’Donnell, MD
Michael Segall, MD
Mark Speziale, MD
Denise Suttner, MD
Casey Wang, MD
Paul Zlotnik, MD
ologists and outside physicians every year from 1987 to the present time. The group also routinely lectures at the Neonatal Fellow Series. The group also hosts an Annual directed day symposium for community physicians on Post-Discharge Care of the High Risk NICU graduate in December 2007, which is planned to be offered on a recurrent basis every 1-2 years.

The physicians at RCHSD are also actively involved in teaching to other physicians within the RCHSD system as well as in the community and nationwide via invited lectures at The International Fetus and Newborn Conference among many other conferences. Locally they also present at RCHSD Grand Rounds. They are involved in a monthly lecture series for medical students that rotate at RCHSD.

The Neonatal Chet Medical Directorship is provided by Dr. Mark Speziale. He conducts teaching sessions with the CHET providers on a reoccurring basis.

Dr. Jose Honold is the International Liaison for RCHSD. In addition to attending and speaking at many international conferences he teaches medical student shadows and residents from Tijuana, Mexico.

Palomar/Pomerado

Nabil Fatayerji, MD
David Golembeski, MD
Charles Sauer, DO

The physicians based within the Palomar Pomerado Health System provide daily education to RN’s, RT’s, ALS Nurses and NNP’s. Additionally, every Wednesday the physicians conduct a weekly conference with social workers, Dietary, Nursing and various other specialties to review and discuss cases. The group additionally speaks frequently to providers in the community such as the statewide NANN conference. They mentored 3 NNP students during their clinical rotations and mentored Dr. Catherine Nakibuule from Uganda while here on an exchange program.

Dr. Golembeski and Dr. Fatayerji have both been voted Physician of the Year at Palomar and Pomerado Medical Centers.

AWARDS, HONORS AND MAJOR PRESENTATIONS

Marva Evans, MD
Director, RCHSD Hearing Screen
Chair, NICU M&M Committee, RCHSD
Co-Chair, Annual San Diego Regional Extracorporeal Membrane Oxygenation Program Conference
Member, QIC Committee, RCHSD
Member, RSV/Immunization Committee, RCHSD
Member, Transfusion Committee, RCHSD
Member, Pediatric Surgery M&M, RCHSD

Nabil Fatayerji, MD
Chief of Pediatrics, Pomerado Medical Center
Member, Birth Center Operations Committee, Pomerado Medical Center
Member, Executive Committee, Pomerado Medical Center
Member, Medical Staff Peer Review Committee, Pomerado Medical Center
Member, Quality Management Committee, Pomerado Medical Center
Presenter, Congenital syphilis. Palomar Medical Center, June 2010
Presenter, Fetal hydrops. Palomar Medical Center, February 2011
Presenter, Hyperbilirubinemia in the newborn. December 2009
Presenter, Impact of diabetes on the fetus and newborn. Pomerado Medical Center, April 2011
Presenter, Necrotizing enterocolitis. Palomar Medical Center, July 2009
Presenter, Necrotizing enterocolitis. Pomerado Medical Center, July 2009
Presenter, Neonatal jaundice. Palomar Medical Center, August 2009

David Golembeski, MD
Medical Director, Palomar Medical Center NICU
Board Member, California Association of Neonatologists
Board Member of the National Children’s Study, San Diego Chapter
Member, American Academy of Pediatrics
Member, Biomedical Ethics Committee, Palomar Medical Center
Member, Breastfeeding Taskforce Committee, Palomar Medical Center
Member, Division of Neonatology Steering Committee, RCSSD
Member, Infection Control Committee, Palomar and Rancho Springs Medical Centers
Member, Interdisciplinary Practice Committee, Palomar Medical Center
Member, Medical Staff Peer Review Committee, Palomar Medical Center
Member, Physician Advisory Committee PMC Downtown, Palomar Medical Center
Member, Professional Advisory Committee, Palomar Pomerado Home Care
Member, Program Services Committee, March of Dimes, San Diego-Imperial Division
Member, Quality Management Committee, Palomar Medical Center

March of Dimes Recognition from State Assemblywoman
Presenter, Maternal PIH and neonatal consequences. Palomar Medical Center, October 2009
Presenter, Later preterm birth. March of Dimes, Chula Vista, November 2009
Presenter, Neonatal Abstinence Syndrome. Palomar Medical Center, January 2010
Presenter, Fetomaternatal hemorrhage and Twin to Twin Transfusion Syndrome. Palomar Medical Center, March 2010
Presenter, Hyperbilirubinemia. Rancho Springs Medical Center, April 2010
Presenter, Von Willibrands Disease. Palomar Medical Center, April 2010
Presenter, Neonatal hyperbilirubinemia. Palomar Medical Center, April 2010
Presenter, Pediatric care of the NICU graduate. Grand Rounds Palomar Medical Center, October 2010
Presenter, Neonatal nutrition. Palomar Medical Center, December 2010

Jose Honold, MD
Coordinator, Neonatal Nurses Education, RCHSD
Director, International Relations, RCHSD

Liaison, Imperial Valley Medical Center
Member, QIC Committee, RCHSD
Member, Physician Leadership Committee, RCHSD
Member, NICU M&M Committee, RCHSD
Member, Perinatal M&M Committee, RCHSD
Member, IT Committee, CSSD
Member, Marketing Committee, CSSD

President of Fundacion Castro-Limon America
Presenter, Complicated cases in the delivery room. Northwestern Pediatric Conference Ensenada, Mexico, July 2009
Presenter, Evaluation and Management Of Infants With Suspected Heart Disease. Fetus & Newborn Conference, San Francisco, CA, October 2009
Presenter, Current treatment approaches for a PDA. Indomethacin, ibuprofen or no treatment. National Neonatal Medicine Conference, Tijuana, Mexico, March 2010
Presenter, Post surgical management of the neonate with congenital heart disease repair. National Neonatal Medicine Conference, Tijuana, Mexico, March 2010
Presenter, Hypoxic isquemic encephalopathy, management with total body hypothermia. Instituto Mexicano Del Seguro Social Conference, Mexicali, BC, September 2010
Presenter, Is there a use of steroids in the management of severe hypotension in the neonate. Instituto Mexicano Del Seguro Social Conference, Mexicali, BC, September 2010
Presenter, Newer therapies in the management of persistent pulmonary hypertension of the newborn. Instituto Mexicano Del Seguro Social Conference, Mexicali, BC, September 2010
Presenter, Post surgical management of the infant with congenital heart disease. Regional Neonatal Conference, Mazatlan, Mexico, September 2010
Presenter, Hypoxic isquemic encephalopathy, management with total body hypothermia. Regional Neonatal Conference, Mazatlan, Mexico, September 2010
Presenter, Newer Therapies in the management of persistent pulmonary hypertension of the newborn. Regional Neonatal Conference, Mazatlan, Mexico, September 2010
Presenter, Ikaria National Meeting, Mexico City, October 2010
Presenter, Practical approaches to ventilator strategies. Fetus & Newborn Conference, Chicago, IL, October 2010
Presenter, Evaluation and management of infants with suspected heart disease. Fetus & Newborn Conference, Chicago, IL, October 2010
Presenter, Evaluation and management of infants with suspected heart disease. XVI Neonatal National Congress Conference, Cancun, Mexico, February 2011
Presenter, The late preterm infant. XVI Neonatal National Congress Conference, Cancun, Mexico, February 2011
Presenter, Resuscitation of complicated cases. XVI Neonatal National Congress Conference, Cancun, Mexico, February 2011
Presenter, Evaluation and management of infants with suspected heart disease. Annual Congressional Pediatric Conference, Saltillo, Mexico, June 2011
Presenter, The late preterm infant. Annual Congressional Pediatric Conference, Saltillo, Mexico, June 2011
Presenter, Resuscitation of complicated cases. International Neonatal Congress Conference, Puebla, Mexico, June 2011
Presenter, Necrotizing enterocolitis, is there something new? International Neonatal Congress Conference, Puebla, Mexico, June 2011
Presenter, Hypothermia for the management of perinatal asphyxia. International Neonatal Congress Conference, Puebla, Mexico, June 2011

Amy Kimball, MD
Neonatology Fellowship Coordinator, RCHSD
Member, Pain Committee, RCHSD
Member, Sedation Committee, RCHSD
Member, IRB Committee, UCSD
Member, MedImmune Advisory Board/RSV Synagis, Lectures given to medical community regarding RSV Prophylaxis, 2007-present
Director of Neonatal Respiratory Care Program, RCHSD
Presenter, Idiopathic persistent pulmonary hypertension: Congenital alveolar dysplasia

Gail Knight, MD
Chief, Division of Neonatology, CSSD
NICU Medical Director, RCHSD
Chief of Staff Elect, RCHSD

Member, Academic Council Workgroup/Teaching Committee, RCHSD
Member, Benefits Committee, CSSD
Member, Board of Directors, CSSD
Member, Board of Trustees Finance Committee, RCHSD
Member, Board of Trustees IDS IT Task Force Committee, RCHSD
Member, Board of Trustees Quality, Safety and Medical Affairs Committee, RCHSD
Member, Board of Trustees, RCHSD
Member, Clinical Information Advisory Council, RCHSD
Member, Clinical Leadership Council, RCHSD
Member, Compensation Committee, CSSD
Member, Compensation Oversight Task Force, CSSD
Member, Developmental Committee, RCHSD
Member, Compensation Division of Neonatology Steering Committee, RCSSD, RCHSD
Member, Emergency Medicine Division Chief Search Committee, RCHSD
Member, High Risk Infant Follow-Up Committee, RCHSD
Member, Infectious Disease Committee, RCHSD
Member, Medical Staff Credentialing Committee, RCHSD
Member, Medical Staff Executive Committee M&M, RCHSD
Member, Medical Staff Executive Committee, RCHSD
Member, Medical Staff Quality Improvement Council, RCHSD
Member, NICU M&M Committee, RCHSD
Member, NICU Move Task Force, RCHSD
Member, NICU Operations Committee, RCHSD
Member, NICU Quality Improvement Council Committee, RCHSD
Member, NICU Transition Committee, RCHSD
Member, PAAT Committee, RCHSD
Member, Scripps Encinitas Joint Operations Committee, RCHSD
Member, Scripps La Jolla Joint Operations Committee, RCHSD

Brian Lane, MD
Executive Vice Chief, Neonatology, RCHSD
Medical Director, High Risk Infant Follow-Up Program, RCHSD
Member, Code Blue Committee, RCHSD
Member, Transfusion Committee, RCHSD
Member, Breastfeeding Task Force, RCHSD
Member, Pediatric Airway and Aerodigestive Team, RCHSD
Member, Q12 Quality Initiative Task Force, RCHSD
Member, Anticoagulation Task Force, RCHSD
Evaluation of Neonatal Lab Values for PICU CHET Team, RCHSD, October 2009

Jane O'Donnell, MD
NICU Medical Director, Scripps Memorial Hospital La Jolla
Member, Bioethics Committee, RCHSD
Member, Board of Directors, CSSD
Member, Contracts Committee, CSSD
Member, Division of Neonatology Steering Committee, RCHSD
Member, Neonatology Scheduling Committee, RCSSD
Member, Pediatric Supervisory Committee, Scripps Memorial Hospital La Jolla
Member, Pediatric Supervisory Committee, Scripps Memorial Hospital Encinitas
Member, Scripps Encinitas Joint Operations Committee, RCHSD
Member, Scripps La Jolla Joint Operations Committee, RCHSD

Charles Sauer, DO
Member, American Academy of Pediatrics
Member, Biomedical Ethics Committee, Palomar Medical Center
Member, Breastfeeding Taskforce Committee, Palomar Medical Center
Annenberg Center Scholarship Recipient, 2009
CBS Evening National News report by Dr. Sanjay Gupta “Mother's Milk a Lifesaver for Preemies,” 2009
MedImmune Pediatric Fellowship Grant $35,000 for research in follow-up care of the premature infant during the first twelve months of life
Pediatric Academic Society Young Investigator’s Travel Grant, 2009
Pediatric Academic Society Young Investigator’s Travel Grant, 2010
Presenter, Pregnant Mother with Maternal Liver Disease and Care of the Infant, Palomar Medical Center, 2010
Presenter, Nutrition in the NICU, Southern California Association of Neonatal Nurses, 2011

Research Presentations/Other work:
Wide variability in caloric density of expressed human milk can lead to major under- and overestimation of nutrient content, Charles W. Sauer, and Jae H. Kim. Abstract presented in a Poster Presentation at the Pediatric Academic Society Conference, May 2009
Neonatal intubation attempts do not increase risk for intraventricular hemorrhage in very low birthweight infants, Charles Sauer, Juin Kong, Neil Finer, and Tina Leone, MD. Abstract presented in a Poster Symposium at the Pediatric Academic Society Conference, May 2010

(Work In Progress)
Wide variability in caloric density of expressed human milk can lead to major under- and overestimation of nutrient content, Charles W. Sauer and Jae H. Kim
Neonatal intubation attempts do not increase risk for intraventricular hemorrhage in very low birthweight infants, Charles Sauer, Juin Kong, Neil Finer, and Tina Leone
Individualized adjustable fortification of breast milk, a randomized blinded controlled trial, Charles W. Sauer, and Jae H. Kim

Michael Segall, MD
Physician's Medical Group (PMG), President Board of Directors (term ended 12/31/10)
Conference Co-Chair, Fetus & Newborn State of the Art Care Conference
Executive Board Member, California Coalition for Children’s Physicians Medical Group (Pediatric I.P.A.)
Executive Board Member, Children's Specialty Care Coalition
Governance Committee Member, Integrated Delivery System, RCHSD
Member, Advisory Committee Miracle Babies
Member, Board of Directors, CSSD
Member, CHN IDS Steering Committee, RCHSD
Member, Clinical Practice Committee, RCHSD
Member, Marketing Committee, RCSSD
Member, QM/Risk Management Committee, RCSSD
Member, Neonatology Search Committee, UCSD
Member, NICU Reimbursement Models Subcommittee, CCS/CAN
Member, Perinatology Strategic Planning Committee, RCHSD
Member, Physician Advisory Council, Palomar Medical Center
Member, Program Planning Committee, CAN
Member, QM/Risk Management Committee, RCHSD
Member, Regional Development Workgroup, RCHSD
Member, Scripps Encinitas Joint Operations Scripps Encinitas Committee, RCHSD
Member, Scripps La Jolla Joint Operations Scripps La Jolla Committee, RCHSD
Member, Integrated Delivery System, RCHSD
Past President and Board Member, California Association of Neonatologists
Regional Trainer, Neonatal Resuscitation Program
Presenter, Neonatal emergencies and other surprises in the delivery room: Case studies of complex situations. Fetus and Newborn State of the Art Care Conference, San Francisco, CA, October 2009
Presenter, Respiratory distress in a term newborn. Fetus and Newborn State of the Art Care Conference, San Francisco, CA, October 2009
Presenter, Neonatal emergencies and other surprises in the delivery room: Case studies of complex situations. Fetus and Newborn State of the Art Care Conference, Chicago, IL, October 2010
Presenter, Neonatal hematology: Why should we strive for a transfusion-free nursery? Fetus and Newborn State of the Art Care Conference, Chicago, IL, October 2010

Mark Speziale, MD
Medical Director, Neonatal Emergency Transport Program, RCHSD
Chair, Infection Control Committee, RCHSD
Lead Physician, NICU Blood Stream Infection Committee, RCHSD
Member, Allied Health Professional/Interdisciplinary Practice Committee, RCHSD
Member, Antimicrobial Stewardship Committee, RCHSD
Member, Benefits and Pension Committee, RCHSD
Member, CCS NQI Committee, RCHSD
Member, Contracts Committee, CSSD
Member, Division of Neonatology Steering Committee, RCHSD
Member, Electronic Medical Record Committee, RCHSD
Member, Interdisciplinary Practice Committee, RCHSD
Member, Medical Staff Quality Improvement Council, RCHSD
Member, NICU M&M Committee, RCHSD
Member, NICU Quality Improvement Committee, RCHSD
Member, Revenue Cycle Committee, RCSSD
Member, Vascular Access and Devices Committee, RCHSD
Physician Liaison, Extremely Low Birth Weight Committee
Regional Trainer, Neonatal Resuscitation Program
Regional Trainer
STABLE Instructor
Team Leader, Vermont-Oxford Neonatal Network and California Perinatal Quality Care Collaborative, RCHSD (2001) and Rady Children's Hospital at Scripps Encinitas (2008), CHND (2007-present)
Expert Panel, Speaking the same language: The role of the antenatal, perinatal and neonatal provider in the high risk event. March Of Dimes 10th Annual Conference for the Health Professional: Toward Improving the Outcome of Pregnancy: Best Practices in Maternal and Neonatal Care, Hyatt Regency, Irvine, CA, March 2010
Presentation, Operative and postop management of hypoplastic left heart syndrome and the single ventricle. Neonatal Fellows’ Lecture Series, RCHSD, San Diego, CA, March 2010
Presentation, Proven and unproven management for persistent pulmonary hypertension of the newborn. 1st Annual Regional Congress of Northeast Neonatology, Tijuana, Mexico, March, 2010
Denise Suttner, MD  
Medical Director, San Diego Regional Extracorporeal Membrane Oxygenation (ECMO) Program  
Director, Neonatal Cardiac Intensive Care Unit, RCHSD  
Executive Vice Chief, Neonatology, RCHSD  
Scheduling Coordinator, NICU, RCHSD  
Member, of QIC Committee, RCHSD  
Member, NICU M&M Committee, RCHSD  
Member, Extracorporeal Life Support Organization (ELSO) International Conference  
Member, Pharmacy and Therapeutic Committee, RCHSD  
Member, Quality and Risk Management Committee, RCHSD  
Member, Q12 Task Force for Quality Improvement, RCHSD  
Member, Cardiac Institute Executive Board Committee, RCHSD  
Presenter, hypoxic respiratory failure in term and near-term neonates. INOmax Conference, Honolulu, HI, February 2011  
Presenter, Failure to wean from ECMO: Role of adjunctive therapies. Annual ELSO Conference and AMSECT Perfusion Conference, St. Petersburg, FL, September 2010  

Paul Zlotnik, MD  
Quality Improvement Committee, CPQCC  
Database Committee, CPQCC  
Chief Medical Informatics Officer, Children's Specialists of San Diego  
Member, Integrated Delivery System Steering Committee, RCHSD  
Certificate in Biomedical Informatics

PUBLICATIONS


Casey Wang, MD  
Medical Director, NICU, RCHSD at Scripps Encinitas  
Chair, NICU M&M Committee, RCHSD at Scripps La Jolla  
Member, Pediatric Supervisory Committee, Scripps La Jolla  
Member, Joint Venture Committee, RCHSD at Scripps La Jolla  
Member, Joint Venture Committee, RCHSD at Scripps Encinitas  
Member, Late Preterm Committee, Scripps La Jolla  
Member, Ethics Committee, RCHSD
The following represents an overview of the activity of the Division of Neonatology at UC San Diego (UCSD) Medical Center and School of Medicine. The Neonatal Division at UCSD provides leadership and coverage for the Infant Special Care Center (ISCC) of the UCSD Medical Center. Initially, this medical center was set up as approximately a forty bed Neonatal Intensive Care Unit, primarily to provide care for the high risk infants born through the Perinatology Service at the medical center and to provide the support for infants transported from other centers. The overall program is a largely inborn perinatal service, with a concentration of very low birth weight and extremely low birth weight infants, and also provides care to near term and term infants with disorders of transition, congenital anomalies, infections, hypoxic-ischemic injuries, and provides surgical support for general surgical disorders. There is a focus on neonatal resuscitation, clinical nutrition, hypoxia-ischemia, and clinical trials to evaluate newer approaches and treatments including medications.

Left to right: Douglas Blank, Erin Studer, Lars Bode, Jennifer Shepherd, Jae Kim, Tina Chan, Lisa Stellwagen, Anup Katheria, Amber Pope, Tina Leone, Delene Richburg, Neil Finer, Greg Heldt, Rich Song, Bheru Gandhi
FACULTY

Neil N. Finer, MD, Chief, Division of Neonatology, UCSD, Professor of Pediatrics
Gregory P. Heldt, MD, Professor of Pediatrics
Jae Hong Kim, MD, PhD, Assistant Clinical Professor of Pediatrics
Tina A. Leone, MD, Assistant Clinical Professor of Pediatrics
Frank L. Mannino, MD, Director, Infant Special Care Center, Professor of Pediatrics
Evan Y. Snyder, MD, PhD, Professor, Director, Stem Cell and Regeneration Program, Sanford-Burnham Institute for Medical Research
Yvonne E. Vaucher, MD, MPH, Director, Infant Special Care Follow-Up Program, Professor of Pediatrics
Donna M. Garey, MD, Associate Physician
Anup Katheria, MD, Associate Physician
Krishelle T. Leong, MD, Associate Physician
Lars Bode, PhD, Assistant Professor of Pediatrics In-Residence

POSTDOCTORAL FELLOWS

Anup Katheria, MD (2007-2010)
Krishelle Leong, MD (2007-2010)
Charles Sauer, DO (2007-2010)
Juin Yee Kong, MD (2008-2011)
Carl Shangle, MD (2008-2011)
Crystal Le, MD (2008-2011)
Aleksandra Zabrocki, MD (2008-2011)
Delene Richburg, MD (2009-2012)
Bheru Gandhi, MD (2009-2012)
Christina Chan, MD (2010-2013)
Amber Pope, MD (2010-2013)
Richard Song, MD (2010-2013)

RESEARCH ACTIVITIES

The UCSD ISCC, Dr. Finer and Wade Rich are the lead site, PI and lead coordinator for the SUPPORT trial which randomized extremely low birthweight infants to the treatment with either CPAP following delivery or early surfactant, and using a factorial design, randomized infants to a lower or higher range of pulse oximetry management. This trial completed enrollment by the beginning of March 2009 with a total of 1316 infants enrolled in this trial. This remains the largest study of its kind ever done and is unique with its factorial design. In addition, it is the first trial to prospectively randomize infants to different levels of oximetry to determine the most optimal range for such infants. We have now been able to analyze the results and the two initial papers were published in the New England Journal of Medicine. I anticipate that there will be at least 10-20 manuscripts arising from the SUPPORT trial because of the multiple secondaries involved in that study. The secondaries included comparison of ultrasound evaluation at 36 weeks post conceptional age with MRI, with over 600 infants in that study. Other secondaries include a pulmonary evaluation follow-up study, which looks at the infants’ pulmonary morbidity, and readmission to hospital and later pulmonary status, a nutritional study, which evaluated growth of infants in this trial, and monitoring secondaries, which looked at the occurrence of intermittent events on the basis of the pulse oximetry data.

Our research in resuscitation has continued to progress. We have published additional studies on the use of a carbon dioxide disposable sensor and demonstrated that airway obstruction is very frequent in the extremely low birthweight infant (Finer et al, Pediatrics, 123(3):865-9, 2009) and the newest iteration of the NRP guidelines, 2011, now uses the duration of 30 seconds for intubation as we reported in a number of studies, and the use of targeted SpO2 during resuscitation which we were the first to pioneer in the USA.

The division had made a commitment to recruit a full-time basic/translational scientist and, with assistance from the department, we were able to recruit Dr. Lars Bode who was previously at The Burnham Institute. Dr. Bode is now a full-time member of the division, a PhD whose interest is in nutrition and, specifically, in human milk oligosaccha-
rides. Dr. Bode has developed a model of necrotizing enterocolitis. He has already been successful in obtaining additional grant funding, and actively collaborates with Dr. Jae Kim in a number of research studies relating to nutrition and we are excited to have Dr. Bode as a part of our faculty. Dr Bode has been accepted for the next NCLAM class.

In the spring of 2009, Dr. Tina Leone became the Director for the Neonatal-Perinatal Fellowship Training Program. Dr. Leone is enthusiastic in her role as leader of this program and is totally committed to improving the training program of our neonatal fellows.

Our Program has become unique in that we now train our neonatal fellows to perform functional echocardiography. We have now seen the first class of fellows who have been successfully trained in this area, and their expertise is truly impressive and clinically useful. We believe that this is the direction of the future for training of such individuals and that UCSD is a leader in this area.

Our Fellowship Program expanded to nine trainees for July 2010. We are very fortunate that we matched well in the 2011 competition for neonatology fellows. We had placed two positions in the match and both positions were filled among our top choices. One of the three incoming fellows, for the coming year, is Dr. Jennifer Shepherd, who is a graduate of the UCSD Pediatric Residency Training Program.

Neil N. Finer, MD continues as the Principal Investigator of the SUPPORT Trial. The SUPPORT Trial has completed enrollment, but will be continuing for the completion of the follow-up for these infants. We believe the trial will have a significant impact on care for extremely low birthweight infants. He leads our research in resuscitation and we have developed a laboratory lie environment in our dedicated resuscitation room in which we video record all resuscitations and also acquire analogue data from all monitored parameters. These are reviewed every 2 weeks in our QA approved Video Review, the only one of its kind in the USA. In addition, Dr. Finer was a consultant for the Vermont Oxford Network (NICQ 2009 Initiative) and Dr. Finer served as the expert for the seven centers who chose to develop improvement in neonatal resuscitation. He leads our research in resuscitation and we have developed a laboratory lie environment in our dedicated resuscitation room in which we video record all resuscitations and also acquire analogue data from all monitored parameters. These are reviewed every 2 weeks in our QA approved Video Review, the only one of its kind in the USA. In addition, Dr. Finer remains active in publishing the results of his research and has presented the results of these activities both in the USA and abroad, which can be seen from the attached appendices.

Gregory P. Heldt, MD continues to evaluate newer surfactants and his laboratory continues to provide biologic assays for the synthetic surfactant, KL-4. In addition he is utilizing video-microscopy of the lung to evaluate the actual biological effects of administered liquid surfactant and aerosolized surfactant. Dr Heldt has a large contract with Discovery Laboratories and we believe that this contract will continue for at least the next 2-3 years, which allows us to keep this very important laboratory not only functional but available and partially funded for other trials involving neonatal faculty and fellows. This laboratory is supervised by Raymond Ward and he is assisted by Tracy Mitchell, Daniella Steele, and John Freiling. Dr. Heldt has continued to work in the Steering Committee of the Asthma Care Network, which is sponsored by the NHLBI.

Jae Hong Kim, MD, PhD is the Principal Investigator for a number of local trials and is the Director of our SPIN (Supporting Premature Infant Nutrition), which focuses on the utilization of breastmilk. Dr. Kim is now involved in studies looking at the effectiveness of probiotics, and has worked with the industry to calibrate a milk analyzer that will provide detailed information about the nutritional and caloric contents of actual mothers’ milk. In addition, Dr. Kim is evaluating the use of impedance evaluations for infants with potential reflux. He is an active mentor of a neonatal training research and is the lead organizer for a meeting on pediatric gastroenterology, which is held in Southern California on an annual basis. Dr. Kim also continues to evaluate and perfect techniques for the ultrasound examination of the intestine, both its motility and perfusion and is working with General Electric to develop improved devices for the determination of catheter positions in neonates. Dr. Kim has also developed an active collaboration with Dr. Lars Bode and together they continue to develop further clinical and translational protocols.

Lars Bode, MD is dedicated to research on the biosynthesis and functions of Human Milk Oligosaccharides (HMO). In the past two years, Dr. Bode’s lab has successfully established a rat model of necrotizing enterocolitis...
Major Goals and Plans

The division is involved in actively designing the new NICU for the Jacobs Medical Center on the Thornton site. This design is almost complete and this facility will include a dedicated neonatal MR, a procedures room, and family centered care areas throughout. For the future, our division will be recruiting for additional academic clinicians/scientists to service the needs of our expanding NICU population as well as providing increased support for translational research and mentorship for neonatal fellows. We are preparing for the retirement of our senior staff and the majority of such recruitments into the future will be for such replacements. We are actively involved in the design and testing of potentially useful new unique equipment for the critically ill neonate and are working with industry to develop dedicated neonatal ultrasound devices, laryngoscopes, delivery room monitors, and an appropriate integrated monitor for the resuscitation environment.

(NEC), and has shown that HMO in general and a single HMO in particular can prevent NEC in this animal model. To investigate the underlying mechanisms, Dr. Bode's lab has developed a tagged probe of this particular oligosaccharide that is currently used to identify receptors and response pathways. In addition, the lab has shown that the particular oligosaccharide strengthens the intestinal barrier and prevents bacterial translocation in vivo and reduces barrier disruption in vitro. The lab shown that the particular oligosaccharide prevents formula-induced microorganism changes in the ileum prior to pathological signs of NEC. The lab has shown that HMO induce the expression of antimicrobial peptides in human goblet cells and alters the glycocalyx composition in human intestinal epithelial cells, which might be explain for changes in bacterial colonization and microbiota composition. With support of Dr. Jae Kim in the division, the Bode lab has initiated a prospective clinical study with multiple centers around the country to assess whether the concentration of the particular oligosaccharide in the mother’s milk inversely correlates with NEC incidence in the breast-fed neonate. To our knowledge, this is the most comprehensive study that aims to link NEC with milk composition. We anticipate that the combined results of the in vitro model and the human study will provide a rationale for an oligosaccharide supplement for formula-fed infants as well as a new, non-invasive biomarker for breast-fed infants at risk to develop NEC. A patent for the use of the particular oligosaccharide to treat or prevent NEC is pending, and a manuscript is in preparation.

In addition, the Bode lab has had a breakthrough in developing a model that will allow the dissection of how HMO are synthesized in the human mammary gland. In collaboration with Dr. Peter Hartmann’s group in Australia, the Bode lab developed a model based on human mammary gland epithelial cells that were derived from progenitor cells that Dr. Hartmann’s lab isolated from fresh human milk. Upon stimulation with prolactin, these cells synthesize the entire array of HMO and the lab now develops a strategy to use small molecules and siRNA to dissect the biosynthetic pathway of HMO.

The Bode lab is collaborating with Dr. Mark McGuire’s lab at the University of Idaho and has shown that the oligosaccharide composition in human milk strongly correlates with the lactobiota composition, i.e. the bacteria that are present in the milk before it is excreted. The Bode lab has shown that this correlation is not merely based on bacteria metabolizing the oligosaccharides, and has evidence that suggests that the oligosaccharides trigger a metabolic switch in certain bacteria that may reduce their virulence.

The Bode lab is collaborating with Dr. Frances Gillin’s lab at UCSD and has shown that HMO reduce E. histolytica attachment and cytotoxicity. E. histolytica, a colon parasite, causes amebiasis, the third most common parasitic
disease worldwide. The Bode lab has identified individual HMO that are responsible for the protective effect and has shown that Galactooligosaccharides, currently used to supplement infant formula, also inhibit E. histolytica attachment and cytotoxicity. These Galactooligosaccharides are inexpensive and proven safe for the use in infants, and the Bode lab is currently exploring opportunities to test these oligosaccharides in human field studies in areas where amebiasis is endemic. A patent for the use of Galactooligosaccharides to treat or prevent amebiasis is pending, and a manuscript is in preparation.

The Bode lab has shown that HMO inhibit the binding of the HIV-1 envelop gp120 to human DC-SIGN, which led to the hypothesis that HMO might contribute to the low mother-to-child HIV-1 transmission rate via breast-feeding. The Bode lab is now collaborating with Dr. Louise Kuhn at Columbia University to gain access to valuable milk samples from an HIV-1 cohort in Zambia to address the question whether a certain HMO composition correlates with HIV-1 transmission risk. A pilot project was supported by the UCSD Center for AIDS Research and the generated data allowed us to secure R01 funding (PI: Louise Kuhn; subawardee: Lars Bode).

The Bode lab has also secured an R21 from NIAID to develop a novel antimalarial drug based on the notion that G6PD-deficiency protects from malaria. The Bode lab has established a high-throughput assay and screen several pilot compound libraries for enzyme inhibitors and is currently validating these hits parasite culture assays. In addition, the Bode has secured an NIH FastTrack Award that provides free resources from a NIH MLCPN high-throughput screening center, the screening of their 350,000 compound library as well as several rounds of hit-to-lead optimization by medicinal chemistry.

Frank L. Mannino, MD is the Medical Director of the Infant Special Care Center and, as such, is actively involved in all treatment protocols within the Unit. He has led the Quality Improvement Initiative on nosocomial infections and this has resulted in a dramatic decrease in our nosocomial infection rates. We have gone as long as 280 days without a single infection. Our overall rates have fallen dramatically so that we are in the lowest quartile of the Vermont Oxford Network and much of this success is related to Dr. Mannino’s enthusiastic leadership of this Program. Dr. Mannino remains the Chair of the Neonatal Technical Advisory Committee for the California Dept. of Health.

Evan Y. Snyder, MD, PhD provides part-time coverage to our Unit and is an internationally recognized leader in stem cell research. He remains extremely productive and is an excellent clinician who stimulates significant ideas for research. He continues to lead our monthly Bench-to-Bedside discussions and stimulates fellows to think about areas in need of research and works with them to trim these ideas into actual projects.

Yvonne E. Vaucher, MD, MPH is the Director of our Neonatal Follow-up Program. This program has now taken on the responsibility of following infants from the Sharp Mary Birch Nursery. With her MPH in Statistics and Epidemiology, Dr. Vaucher helps almost all of the neonatal residents design their research projects and assists them with any needed statistical evaluations.

Dr. Vaucher is the sole neonatologist serving on the San Diego County Fetal and Infant Mortality Review (FIMR) Work Group and the FIMR advisory council, and also serves as a Chapter 3 representative to the District IX Section on Perinatal Pediatrics and is the AAP Chair of the Fetus and Newborn Committee for our local Chapter 3. In addition, she serves as a Neonatal/Perinatal consultant at the Mulago Hospital Special Care Nursery (SCN) at the University of Makerere. She continues to teach resuscitation to medical, residents and nursing staff at Makerere University, Mulago Hospital and also at the Lira Regional Hospital which is the only referral maternity unit in a large district in Northern Uganda. As the Pediatric Program Director of Health Volunteers Overseas (www.hvousa.org) at Makerere University, Dr Vaucher works with the Department of Paediatrics and Child Health to provide health professional education and training.

Dr. Vaucher is also co-chair of the APA International Health Special Interest Group Steering Committee. She has organized an annual meeting at PAS to discuss global health topics of interest, and has been responsible for coordinating the APA International Health Award.

Donna Garey, MD has been a neonatal attending at UCSD since 2009. She helped design the longitudinal neonatal resuscitation curriculum, which is completed by all pediatric residents at UCSD. In addition, she is trained in functional echocardiography. In July 2011, she began
her role as Director of the UCSD High Risk Infant Follow-up Clinic. Her role in the HRIF clinic includes performing developmental evaluations and neurologic exams, coordinating interventions for these high risk infants, and participating in research projects that involve neurodevelopmental evaluations. Her research interests include long-term developmental outcomes in pre-term infants and resident education. Furthermore, Dr. Garey is currently completing her Masters of Public Health at John Hopkins Bloomberg School of Public Health.

TEACHING ACTIVITIES

The Infant Special Care Center at UCSD remains the core teaching unit for our pediatric residents and is the lead program for our Neonatal-Perinatal Training Program. In addition, we work with other facilities to help train neonatal nurse practitioners, nurses, and respiratory therapists. Our NICU remains a member of both of the California Perinatal Quality Care Collaborative (CPQCC) and Vermont Oxford Network. The entire faculty is active in the training programs, both in teaching at the bedside for all trainees as well as medical students that rotate through the Unit, and for our full-day Wednesday conferences, as well as our morning video resuscitation reviews held alternate Tuesdays and Fetal Diagnosis held on alternate Tuesdays. We also provide a four week resuscitation simulation training program for all pediatric residents.

In community activities, our division continues to be active in supporting local, regional, and national CME activities. Dr. Vaucher is active in the San Diego Breastfeeding Coalition, Fetal and Infant Mortality Advisory Committee and the CCS/CPQCC/HRIF Quality Care Initiative. Dr. Neil Finer continues his activity in CPQCC and PQIP working to develop new projects to improve perinatal outcomes and evaluate outcomes. Drs. Finer and Leone were two of the principal authors of the CPQCC toolkit for neonatal resuscitation, and Dr. Finer is the lead author of two other CPQCC toolkits on postnatal steroids and CPAP and surfactant. Dr. Mannino continues his essential role as Chair of the CCS Neonatal Intensive Care Technical Advisory Committee.

Dr. Frank Mannino is the Medical Director of the Neonatal Intensive Care Unit at the University of California, San Diego Medical Center, and spends about 30% of his time as the attending physician in the NICU. Outside of the unit, Dr. Mannino also serves as Chair of the CCS Neonatal Intensive Care Technical Advisory Committee (TAC), and has in this past year, created an infection control initiative (the CCS Quality Improvement Project), a rigorous program designed to improve the rate of infection across regional centers and decrease the rate of infection in neonatal intensive care units. In addition, he serves as Chair of the March of Dimes State Program Services Committee, and is on the March of Dimes State Board.

Dr. Yvonne Vaucher is the Director of the Infant Special Care Follow-up Program and was successful in recently receiving a state grant to assist the Follow-Up Program. She has worked with RCHSD and Sharp Mary Birch to begin the development of a single city-wide broad based neonatal neurodevelopmental follow-up program. In addition, Dr. Vaucher is a member of Health Volunteers Overseas. She has maintained a close working relationship with the Department of Pediatrics and Child Health at Makerere University, School of Medicine where she returns annually to teach Neonatal/Perinatal medicine to Pediatric residents and medical students and to supervise housestaff and medical students during their NICU rotation. This annual award gives young pediatric faculty from developing countries the opportunity to travel to the US to present their clinical research at PAS and then visit programs in the US in order to meet colleagues with similar interests and to foster collaborative research. For the past five years, Dr. Vaucher has worked with Dr. Alvin Zipursky to participate in the Pediatric Program for Global Research Workshop and Symposium, presented in conjunction with PAS, which focuses on identifying important issues for global pediatric research.

Dr. Evan Snyder continues to lead an active basic science laboratory, in addition to active participation on the neonatology clinical service; directs both the Stem Cell and Regenerative Biology Program and the Stem Cell Research Center at the Sanford-Burnham Institute for Medical Research; and is a member of the Scientific Steering Committee of the San Diego Consortium for
Regenerative Medicine. He served on the FDA’s Cell, Tissue and Gene Therapy Advisory Committee; is a charter member of the NIH Clinical Neuroplasticity & Neurotransmitter (CNNT) study section; serves on the editorial board of a number of journals including Cell Stem Cells, Current Protocols in Stem Cell Biology, and Experimental Neurology (as the Development Section Head). He was elected President of the American Society for Neural Therapy and Repair (ASNTR) and serves on the scientific advisory boards of a number of foundations, including the Brain Tumor Society, the World Congress of the Tissue Engineering & Regenerative Medicine International Society (TERMIS), and American Society for Gene Therapy (Embryonic/Somatic Stem Cell & Tissue Engineering Committee). Locally, he sits on the BioTech Advisory Committee of the Reuben H. Fleet Science Center (San Diego), is an Advisor for NIH-sponsored Medical Scientist Training Program (MSTP) program at UCSD School of Medicine, is on the faculty of UCSD Biomedical Sciences Graduate Program, and sits on the UCSD Genetics Training Grant Retreat Committee. One of his most important contributions to the Department of Pediatrics and the Division of Neonatology has been launching and running an innovative program for trainees called “Bedside-to-Bench” rounds in which fellows are taught to break down clinical problems into testable hypotheses and then design studies to do so.

Dr. Tina Leone is a clinical neonatologist in the department and has instituted the clinical program for the use of functional echocardiography in the neoatal intensive care unit. She is currently providing an educational program for neonatal fellows to learn functional echocardiography. Dr. Leone has been participating as a faculty member for a functional echocardiography course at the University of Southern California/ Los Angeles County Hospital. She is also mentoring fellows in ongoing research projects in both functional echocardiography and neonatal resuscitation. Dr. Leone is the Program Director of the Neonatal Training Program and the Chairperson of the Scholarship Oversight Committee for the neonatal fellows. She is also the Division representative to the Pediatrics Department Residency Committee, a member of the Graduate Medical Education Committee and is the faculty advisor for the neonatal nurse practitioner group. Dr. Leone is a Co-Chairperson for the annual workshop for California neonatology fellows, conducted at the California Association of Neonatologists meeting.

Dr. Bode serves the international and national science community as an elected executive board member for the International Society for Research in Human Milk and Lactation (ISRHML) and as the Chair of the Lactation Research Interest Section of the American Society for Nutrition (ASN). Dr. Bode has chaired several scientific sessions at national and international conferences, including Experimental Biology in Washington D.C. and the first International Conference on the Glycobiology of Human Milk Oligosaccharides in Copenhagen, Denmark.

Locally, Dr. Bode has chaired the “Pathway to Independence” event organized by the UCSD Postdoctoral Office and designed to help junior scientists on their path to an independent investigator. Dr. Bode is also an active member of a UCSD committee that works with the Dean’s office to improve the infrastructure at the Hillcrest research campus.

Newborn Nursery
The Newborn Service at UCSD Medical Center, Hillcrest, is part of the UCSD Division of Neonatology. The medical director, Dr. Lisa Stellwagen, and faculty, Drs. Eustratia “Tia” Hubbard and Michelle Roy, care for well and at-risk newborns in a family-centered care environment. The unit is the main newborn teaching site for UCSD Pediatric Residents and Medical Students. Residents learn about newborn care, breastfeeding, car seat safety, and a variety of newborn medical conditions. The interns receive one-on-one teaching from Dr. Ken Lyons Jones on the finer aspects of the newborn physical exam, as well as attending a weekly fetal/placental pathology lecture given by Dr. Kurt Benirschke. The Neonatology Fellows and pediatric subspecialists provide daily educational lectures to the interns on the Newborn and NICU rotations. The interns, in turn, provide educational lectures for the nursing staff as well as completing a program improvement project during their month rotation.

The newborn unit of the Family Maternity Care Center (FMCC) is a leader in the care of the Late Preterm Infant, whose special needs and vulnerabilities are receiving increasing attention in the past years. Our materials on breastfeeding support, medical management, and parental education are widely used and available on the SPIN website. We also
screen all infants for hyperbilirubinemia, and this combined with our intensive lactation support has led us to have a very low newborn readmission rate.

As one of only a few academic medical centers in the US to be certified as a Baby Friendly Hospital, UCSD Medical Center continues to strive to optimally support lactation on all our mother baby units and has been recently recertified. Starting in the prenatal period, and continuing to Labor and Delivery, the Birth Center, and the postpartum unit, mothers are provided with support and education to breastfeed their child. Mothers who deliver ill or high-risk infants receive additional support for expression of their milk to assure human milk nutrition for these compromised infants. Pediatric medical staff work closely with nursing and lactation to provide these services. Recently, national attention is being focused on the rates of exclusive breastfeeding at newborn discharge, both CHART and The Joint Commission have quality measures for exclusive breastfeeding rates and we rank high in these measures.

The Supporting Premature Infant Nutrition (SPIN) Program in our Infant Special Care Center has continued to develop. Drs. Lisa Stellwagen, Jae Kim, and Yvonne Vaucher provide leadership on this innovative nutritional program for the very low birth weight infant. Our early program development has led to improvements in nutrition, reduction in necrotizing enterocolitis, and high levels of human milk feeding in our unit. Research on human milk nutrition concerning improving maternal milk production and composition, improving methods of milk handling, human milk analysis and fortification are underway. We are sharing our methods and outcomes with other units through educational lectures and on the SPIN Website: spin?program.ucsd.edu (supported by March of Dimes). The Premature Infant Nutrition Clinic (PINC) staffed by Dr. Eyla Boies has been operating for 1 year now and provides post-discharge nutrition and lactation assistance for NICU grads and Late Preterm Infants, the only clinic of its kind in San Diego. Our program was nationally featured in April of 2009 by Dr. Sanjay Gupta on the CBS evening news. We continue to work on program improvement and research to improve neonatal outcomes by optimization of nutrition.

AWARDS, HONORS AND MAJOR PRESENTATIONS

**Lars Bode, PhD**

Presenter, Human milk oligosaccharides: A research perspective. Abbott Nutrition. Columbus, OH, 2010
Presenter, Human milk oligosaccharides in the prevention of necrotizing enterocolitis. Pediatric Grand Rounds, UCSD, San Diego, CA, 2010
Presenter, Human milk oligosaccharides prevent necrotizing enterocolitis in a rat model. Selected Speaker, Experimental Biology, Anaheim, CA, 2010
Presenter, Human milk oligosaccharides prevent necrotizing enterocolitis in an animal model. Annual Meeting of the Pediatric Academic Societies, Vancouver, Canada, 2011
Presenter, Human milk oligosaccharides. 5th Glycan Forum, Berlin, Germany, 2011
Presenter, Human milk oligosaccharides in amebiasis and necrotizing enterocolitis. The first International Conference on the Glycobiology of Human Milk Oligosaccharides. Copenhagen, Denmark, 2011

**Neil N. Finer, MD**

Presenter, The concept of DR intensive care and whole body hypothermia for neonates with HIE. XXII Congreso de Neonatologia y Medicina Perinatal, Valencia, Spain, October 2009
Presenter, Potpourri on neonatal resuscitation. ANOSC Conference, Children’s Hospital of Orange County, Orange County, CA, November 2009
Presenter, Current issues in DR resuscitation. Santa Clara Valley Medical Center Neonatology Conference, San Jose, CA, November 2009
Presenter, Crew resource management. UCSD Patient Safety Conference, San Diego, CA, November 2009
### Research Support

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<td>HD40461/NIH (NICHD)</td>
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<td>20071039/Ino Therapeutics</td>
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<td>Sub 1-312-0208838 (HD036790)/Research Triangle Institute</td>
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<td>Multiple Dose Pharmacokinetic Study of Meropenem in Young Infants (&lt;91 days) with Suspected or Complicated Intra-abdominal Infections</td>
<td>$120,793</td>
<td>$161,999 Aug. 2008-Mar. 2010</td>
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<td>Sub (HHSN267200700051C)/Duke University</td>
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<td>Sub none (HD057956)/Duke University</td>
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<td>Planning Grant for PRESOX Trial</td>
<td>$100,000</td>
<td>$154,500 May 2009-Apr. 2011</td>
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<td>1 R34 HD060736-01/NIH (NICHD)</td>
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<td>Non-Invasive iNO in Preterm Infants</td>
<td>$4,568</td>
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<td>Sub FY11.032.008 (HL084923)/Children’s Hospital Of Denver</td>
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<td>Lars Bode, PhD</td>
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<td>1 R21 A1082434-01/NIH (NIAID)</td>
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<td>Fusing Glycobiology and Nutritional Sciences to Prevent Necrotizing Enterocolitis</td>
<td>$184,093</td>
<td>$939,715 Sept. 2009-June 2012</td>
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<td>4 R00 DK078668-03/NIH (NIDDK)</td>
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<td>Screening for Human Milk Oligosaccharides that Protect Infants from HIV Infection</td>
<td>$13,939</td>
<td>$46,537 July 2009-Aug. 2011</td>
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<td>7 R03 HD059717-02/NIH (NICHD)</td>
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<td>FELLOWSHIP MKF BRODE</td>
<td>$56,000</td>
<td>$56,000 Feb. 2010-Jan. 2011</td>
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<td>MKF-Jantscher-Krenn/Max Kade Foundation</td>
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<td>Milk oligosaccharide profiling of ST3Gal knockout mice</td>
<td>$54,052</td>
<td>$291,093 May 2010-Dec. 2012</td>
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<td>20100543/Pfizer</td>
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## Research Support (continued)

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<td>Effect and Mechanisms of Disialylated HMO in a rat NEC model 20104112/Abbott Laboratories</td>
<td>$290,992</td>
<td>$449,582</td>
<td>July 2010-July 2012</td>
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<td>Oral transmission of HIV through breastfeeding Sub 2 (ACCT. #5-39431) (DE021238)/Columbia University</td>
<td>$98,865</td>
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<td>Human Milk Screening 20120362/Abbott Laboratories</td>
<td>$232,569</td>
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<td>Gregory P. Heldt, MD DEVELOPMENT OF AN IMPROVED TRIGGER FOR INFANT SIMV Sub 958048 (HL65121)/Jaycor</td>
<td>$66,137</td>
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<td>July 2009-July 2003</td>
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<td>Sanjay Nigam, MD FACTORS MEDIATING URETERIC MIGRATION AND MORPHOGENESIS DK57286/NIH (NIDDK)</td>
<td>$207,000</td>
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<td>Systems Biology of Anionic Drug and Metabolite Handling 1 R01 GM088824-01/NIH (NIGMS)</td>
<td>$250,000</td>
<td>$1,923,564</td>
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<td>SNPs in Handling of Small pox Antivirals &amp; Other Drugs 1 R01 AI057695-01A2/NIAID</td>
<td>$191,250</td>
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<td>Combined Computational and Wet Lab Screening for Drugs Tested via OATs. 1 R01 NS062156-01/NIDDK</td>
<td>$218,750</td>
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<td>Defining the effects of Uloric (Febuxostat) on chronic renal disease, kidney stones and hypertension due to hyperuricemia 20120657/Takeda Chemical Industries, Ltd.</td>
<td>$330,992</td>
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<td>FELLOWSHIP SOT NIGAM SOT (DNYANMOTE)/Soc Of Toxicology</td>
<td>$38,500</td>
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<td>CCS High Risk Infant Follow-up Program (HRF)</td>
<td>$249,000</td>
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<td>Sub 06-55274 (none)/CAL H&amp;W Health Care Services</td>
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<tr>
<td>Long-term Followup After Head Cooling for Neonatal Encephalopathy</td>
<td>$1,112</td>
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Presenter, Pediatric Grand Rounds. University of Colorado School of Medicine, Denver, CO, November 2009
Presenter, Pulmonary concurrent sessions at American Academy of Pediatrics NeoPrep. Newport Beach, CA, February 2010
Presenter, Pediatric Grand Rounds and enhancing delivery room management of the ELBW. University College Cork, Cork, Ireland, February 2010
Presenter, Revised CPQCC toolkits: Surfactant. Pre-CAN (California Association of Neonatologists) meeting, Coronado, CA, March 2010
Presenter, Pediatric Grand Rounds. Schneider Children’s Hospital, NS-LIJ Health Care System, New York, NY, March 2010
Presenter, Reanimacion del recien nacido and manejo con hipertemia del RN con EHI. Es factible nuestro media? Congreso Regional de Neonatologia del Noroeste Conference, Tijuana, MX, March 2010
Presenter, Oxygen at birth: What do we know? Academy of Neonatal Nurses Advanced Practice Conference, San Francisco, CA, March 2010
Presenter, The first golden minutes. 25th International Workshop on Surfactant Replacement, Moscow, Russia, June, 2010
Presenter, SUPPORT Trial. REaSoN Conference, University of Warwick, Coventry, UK, July 2010
Presenter, Enhancing delivery room management. 4th Annual Neonatology Conference, Scott & White Hospital, Temple, TX, November 2010
Presenter, Neonatal intensive care. PCICS 8th International Conference, Miami, Florida, December 2010
Presenter, Surfactant or CPAP in the delivery room - Is there a rational choice? Western Perinatal Research Meeting, Banff, Canada, February 2011
Presenter, Bags, cries and videotape: Neonatal resuscitation—the reality show. National Canadian Association of Neonatal Nurses Conference, Calgary, Canada, February 2011
Presenter, CPAP versus surfactant for the ELBW infant- the argument for CPAP. California Association of Neonatologists meeting, Coronado, CA, March 2011
Presenter, Neonatology: The first golden minutes of life of the preterm infants. Pediatric Academic Societies meeting, Denver, CO, April and May 2011
Presenter, Videorecording in the DR. European Scientific Collaboration Neonatal Resuscitation meeting, Berlin, Germany, May 2011
Presenter, SUPPORT Trial: Focusing on ROP and BPD. German Society of Neonatology and Pediatric Intensive Care Medicine, Mannheim, Germany, May 2011
Presenter, Neonatal Resuscitation . neoFORUM 2011 meeting, Morristown, NJ, June 2011
**Donna Garey, MD**
Presenter, Supplemental neonatal resuscitation training for pediatric residents. Neonatal Joint Fellows’ Conference (Southern California), Tri-City Medical Center, Oceanside, CA, May 2009

**Gregory P. Heldt, MD**
Member, Human Research Protection Program
Member, Review and Appraisal Committee
Member, Scholastic Oversight Committee in the Division of Neonatology

**Eustratia “Tia” Hubbard, MD**
Monthly Pediatric/OB Rounds with the medical students, nurses, and residents on Labor & Delivery
Advisor to current and past UCSD Pediatric Residents
Presenter, Growing the late preterm infant-from delivery room to home. Academy of Breastfeeding Medicine, 14th Annual International Meeting, Williamsburg, VA, November 2009
Presenter, Proper nourishment of the late preterm infant—breastfeeding enough? Continuing education presentation at Women of Many Backgrounds, Women’s Services at Scripps Memorial Hospital, La Jolla, CA, October 2010
Presenter, Is breastfeeding late preterm infants enough? General Pediatric Grand Rounds, Scripps Mercy Hospital, January 2011

**Anup Katheria, MD**
Fellow of the Year Teaching Award—Department of Pediatrics at UCSD, 2010
Presenter, Improving neonatal care: The use of cardiac ultrasound. 14th Annual Conference Inland Counties Association of Neonatal Nurses, Riverside, CA, October 2009

**Jae Hong Kim, MD, PhD**
Director, Neoventure (UC San Diego Neonatal and Pediatric Device Consortium)
Board Executive for California Association of Neonatologists

**Michelle Leff, MD**
Presenter, The national children’s study. UCSD/RCHSD Grand Rounds, July 2009
Presenter, Newborn orthopedic issues. Mercy Hospital Pediatric Grand Rounds, San Diego, CA, January 2011

**Tina A. Leone, MD**
Chair, Neonatology Scholastic Oversight Committee and in services for neonatal resuscitation
Presenter, DR Management: Current evidence from the SUPPORT trial. European Respiratory Society. Barcelona, Spain, September 2010
Presenter, PPHN and assessment of pulmonary arterial pressure and cyanotic infant without congenital heart disease. Functional echocardiography in the neonate course. USC Medical Center, Los Angeles, CA, September 2010

Presenter, Early respiratory SUPPORT for the extremely preterm infant. Academic Day for Neonatologists of Southern California, Orange, CA, November 2010

Frank L. Mannino, MD
Past Chairman, March of Dimes
Member, Point of Care Testing Committee, Capital Equipment Committee, Perinatal Practices Committee, Regional Task Force on Perinatal Care, Grossmont Community College-Respiratory Therapy School Advisory Committee, and California Perinatal Quality Improvement Panel


Presenter, The newborn worth rearing: Infant resuscitation from Aristotle to Apgar. California Association of Neonatologists Annual Meeting: Current topics and controversies in perinatal/neonatal medicine, Coronado, CA, March 2010

Evan Y. Snyder, MD, PHD
Speaker, What is critical for advancing regenerative therapies in the immature brain? Neuronal regeneration/degeneration: Response to injury in developing and mature nervous systems, International Symposium on Cerebral Blood Flow, Metabolism, and Function and 9th International Conference on Quantification of Brain Function with PET, Chicago, IL, July 2009

Speaker, New developments and ethical challenges in stem cell research. UCSD Biomedical Ethics Seminar Series, San Diego, CA, July 2009

Keynote Speaker, Cross-talk and developmental programs in stem cell biology – a key to regenerative medicine. 25th annual Goldberg Family, Dept. of Neurology and Center for Translational Neuromedicine, University of Rochester, Rochester NY, September 2009

Speaker, Cross-talk and developmental programs in stem cell biology – a key to regenerative medicine. The LM Stephenson Lectureship (Annual Discovery Day Featured Speaker), Drexel University College of Medicine, Philadelphia, PA, October 2009

Presenter, Cross-talk and developmental programs – a key to stem cell-mediated approaches to neurological abnormalities of the newborn. Inaugural Gerald Merenstein Keynote Speaker, 2009 American Academy of Pediatrics National Conference & Exhibition (NCE), Washington DC, October 2009

Chairman, Nanosymposium on Stroke, 2009 Annual Meeting of the Society for Neuroscience. Chicago, IL, October 2009

Speaker, Breaking through tomorrow: Science pushes the limits of the imagination and health care & regenerative medicine. 2nd Annual Israeli Presidential Conference: Facing Tomorrow 2009, Jerusalem, Israel, October 2009

Speaker, Cross-talk and developmental programs in stem cell biology – a key to regenerative medicine. University of Florida-Gainsville, Dept. of Pediatrics and McKnight Brain Institute, Gainsville, FL, October 2009

Keynote Speaker, Is there a role for stem cells in neurogenetic diseases? Late Onset Tay-Sachs Disease Research and Education Foundation, Los Angeles, CA, November 2009

Chairman, Session on Epigenetics, 4th Annual Stem Cell Meeting on the Mesa, La Jolla, CA, November 2009

Speaker, Cross-talk in stem cell biology and developmental programs. Hot Topics in Neonatology, Washington DC, December 2009


Panelist, Stem cells – what does the future hold? Leadership, Legacy, Life Organization (Leaders Building Legacies for Life), San Diego, CA, March 2010

Presenter, Cross-talk and developmental programs in stem cell biology. Brain Awareness Symposium, St. Louis University School of Medicine, St. Louis, MO, March 2010

Chairman, Session on use of large animal models in stroke,
2nd Stem Cell Therapies as an Emerging Paradigm for Stroke (STEPS) Workshop on stroke therapeutics, Houston, TX, March 2010
Seminar Speaker, Cross-talk and developmental programs in stem cell biology—a key to regenerative medicine. Dept. of Anatomy and Neurobiology, Medical College of Virginia, Richmond, VA, April 2010
Chairman, Session on Movement Disorders, 34th Annual Meeting of the American Academy of Neurology, Toronto, ON, Canada, April 2010
Presenter, Cross-talk and developmental programs in stem cell biology—a key to regenerative medicine. University of Nebraska Medical Center, Omaha, Nebraska, April 2010
Presenter, Neural stem cells for CNS repair and neurodegeneration International Child Neurology Congress (ICNC), Cairo, Egypt, May 2010
Presenter, Stem cells: The role in brain tumor genesis and therapy. Danny Thomas Lecture Series, St. Jude's Children's Research Hospital, Memphis, TN, June 2010
Keynote Speaker, Cross-talk and developmental programs in stem cell biology—a key to translational neuroscience. 6th International Symposium of Neuroprotection and Neurorepair, Rostock-Warnemünde, Germany, October 2010

Lisa Stellwagen, MD
Presenter, Supporting premature infant nutrition. The UCSD SPIN Program. San Diego Breastfeeding Coalition Conference, San Diego, CA, October 2009
Presenter, Supporting premature infant nutrition. March of Dimes community presentation at California Border Healthy Start-EHQ, San Diego, CA, November 2009
Presenter, SPIN Workshop. Long Beach, CA, December 2009
Presenter, Newborn Update Workshop for Family Medicine at UCSD, March 2010
Presenter, SPIN Workshop. Walnut Creek, CA, June 2010
Presenter, SPIN Workshop. Little Rock, AK, June 2010
Presenter, Milk production in the mother of NICU infants. Breastfeeding taskforce of greater LA; Clinical updates for health care providers, Los Angeles, CA, August 2010
Presenter, Supporting premature infant nutrition; the UCSD SPIN Program. Breastfeeding taskforce of greater LA; Clinical updates for health care providers, Los Angeles, CA, August 2010
Presenter, Breastfeeding support at a baby friendly hospital; WIC regional event. UCSD Medical Center, San Diego, CA, August 2010
Presenter, SPIN Workshop. Natick, MA, September 2010
Presenter, SPIN Workshop. Queens, NY, September 2010
Presenter, Working together, UCSD SPIN Program Workshop. Oregon Breastfeeding Coalition, Portland, OR, October 2010
Presenter, Breastfeeding the late preterm infant. Academy of Breastfeeding Medicine National Meeting, San Francisco, CA, October 2010
Presenter, Evaluation of antenatal hydronephrosis. UCSD Fetal Diagnosis Meeting, February 2011
Presenter, SPIN Program. Imperial County Breastfeeding Coalition, Brawley, CA, March 2011

Yvonne E. Vaucher, MD, MPH
Member, Perinatal Practices Committee at UCSD; Perinatal Morbidity and Mortality Committee at Scripps Mercy Hospital; Fetal Infant Mortality Case Review Committee, County of San Diego, Department of Health Services; Fetal and Infant Mortality Advisory Committee
Member, Regional Perinatal System for Perinatal/Neonatal Health, San Diego and Imperial Counties; San Diego County Breastfeeding Coalition
PUBLICATIONS


The Division of Pediatric Nephrology is active in patient care, research and education.

Clinically, the division is the only service in San Diego and Imperial County that provides comprehensive care to children with kidney diseases, including acute and chronic dialysis and renal transplantation. The new clinical facilities and arrival of outstanding clinical faculty have energized and revitalized the clinical practice. In 2011, we are recognized as the top 29th program in Pediatric Nephrology in the U.S. News and World Report.

The laboratory of Dr. Robert Mak is focused on the neuroendocrinology of cachexia and cardiovascular complications of chronic kidney diseases as well as biomarker discovery for non-invasive novel diagnostic tests for vesicoureteral reflux. Dr. Wilson Cheung is a research scientist who works in Dr. Mak’s laboratory. Dr. Vivian Reznik is part of the leadership of the NIH funded Center of Excellence in Research in Health Disparities which is conducting research on genetic, biochemical and environmental aspects of health disparities in hypertension, the metabolic syndrome and HIV. In addition, the division is actively involved in clinical research in a variety of diseases and conditions.
The division has a three-year accredited subspecialty fellowship designed to prepare fellows for a career in academic pediatric nephrology. The fellowship program was reviewed by the ACGME in 2008 and was accredited for an additional five years. We have been successful in consistently recruiting outstanding fellowship candidates. Medical students and pediatric residents take electives in pediatric nephrology, spending two to four weeks on both the inpatient and outpatient services with kidney conditions.

FACULTY

Robert Mak MD, PhD, Professor of Pediatrics and Division Chief, UCSD, RCHSD
Nadine Benador, MD, Clinical Associate Professor of Pediatrics, Director of Hemodialysis, Peritoneal Dialysis and Apheresis programs, RCHSD
Elizabeth Ingulli, MD, Associate Clinical Professor of Pediatrics, Director of Renal Transplantation, RCHSD
Vivian Reznik, MD, MPH, Clinical Professor of Pediatrics, Assistant Vice-Chancellor
Peter Yorgin, MD, Clinical Professor of Pediatrics, Clinical Director, RCHSD

POSTDOCTORAL FELLOWS

Caitlin Carter, MD
Sujana Gunta, MD
Anna Mathew, MD

RECENT GRADUATES

Sun-Young Ahn, MD
James Tee, MD

RESEARCH SCIENTIST

Wilson Cheung, PhD

CLINICAL ACTIVITIES

INPATIENT/OUTPATIENT

Most children from San Diego and Imperial Counties with kidney diseases are hospitalized at Rady Children’s Hospital- San Diego (RCHSD). In addition, the division provides consultations for inpatients with kidney diseases, hypertension and fluid and electrolyte abnormalities. The average inpatient census is 12.

There are six half-days of outpatient clinics weekly, each staffed by two faculty members. One clinic is primarily for the follow-up of patients after renal transplantation. In the other five clinics, the division sees new and established patients with kidney diseases. In addition, there is a fellows’ continuity clinic, which is staffed with an attending. The division has a contract with Kaiser Permanente to see new and established patients with kidney diseases in three weekly half-day clinics. The division performs 10-15 transplants annually and follows more than 80 transplantation patients. The division also sees inpatient consults at Kaiser Permanente and in the Newborn Intensive Care Units at UCSD Medical Center and Sharp Mary Birch Hospital.

Children are treated with either chronic hemodialysis or peritoneal dialysis at UCSD Medical Center and RCHSD. There are daily hemodialysis unit rounds. There are two monthly peritoneal dialysis clinics. The average census of patients on chronic dialysis is 25. We have also taken over the acute dialysis services previously provided by UCSD Medical Center. We are also taking over the apheresis services previously provided by an outside company. The dialysis/apheresis unit is being renovated and expanded. This is now adjacent to the outpatient nephrology clinics so that we are moving towards our long-term goal of a Comprehensive Kidney Care Center.
RESEARCH ACTIVITIES

Nadine Benador, MD is active in clinical research. She participated in the development of the protocol for the national Chronic Kidney Disease in Children Study, and was the local investigator for two multicenter trials of IV iron in pediatric hemodialysis patients. Dr. Benador is the central principal investigator for ongoing clinical studies.

Elizabeth Ingulli, MD is active in clinical research. She is conducting outcomes studies in pediatric renal transplantation. She is a recognized expert on immune aspects of renal transplant rejection and is frequently invited speaker in national meetings.

Robert Mak, MD, PhD is active in basic and translational research: (1) Pathophysiology of uremic cachexia. Dr. Mak recently published a number of papers on the significance of cytokine signaling in the pathogenesis of uremic cachexia. Pharmacologic blockade of cytokine signaling through the central melanocortin system as well as the sympathetic nervous system are exciting novel therapeutic strategies; (2) Novel mechanism of cardiovascular complications in chronic kidney disease involving vitamin D and inflammatory pathways; (3) Biomarkers for Vesicoureteral Reflux (VUR). Dr. Mak has discovered novel urine biomarkers for VUR. He is working on developing novel non-invasive diagnostic tests for VUR; (4) Epidemiology of chronic kidney disease (CKD) in children. Dr. Mak is a co-Principal Investigator for a NIH funded national study of CKD in children, which follows 540 patients. He also chairs the progression committee. This study has gone extremely well and the investigator team has been renewed for another five years.

Vivian Reznik, MD, MPH is a recognized expert in the use of prenatal ultrasound examinations to diagnose congenital renal disease, focusing on research into longitudinal outcomes of children with congenital renal disease. She has an interest in the newly emerging field of children with chronic renal disease who are beginning to transition to adulthood.

This year, she examined and presented the largest longitudinal patient cohort with VATER syndrome and chronic kidney disease. She is currently engaged in a study to improve patient physician communication using systems redesign.

This work has been presented to the Pediatric Academic Society meetings and the current subject of several manuscripts. Dr. Reznik is the Scientific Director and Co PI of a Center of Excellence in Health Disparities from the Office of Minority Health and Health Disparities (NIMHD).

The Center supports research in hypertension and cardiovascular disease focused on issues of health disparities including providing pilot funding to young investigators. It also has designed, implemented and evaluated efforts to promote and integrate URM junior faculty in the School of Medicine.

Peter Yorgin, MD is active in clinical research. He is conducting outcomes studies in pediatric dialysis. He is working on the creation of a Southern California Quality Initiative for pediatric hemodialysis patients. He is a recognized expert on anemia in chronic kidney disease and is frequently invited speaker in national meetings.

EDUCATIONAL ACTIVITIES

Robert Mak, MD, PhD
• Director of the Pediatric Nephrology Fellowship Program; Accredited by the ACGME for an additional five years until 2013.
• Director, Peds Course 434, Medical Student Pediatric Nephrology Rotation Program; Curriculum recently revised (2011)
• Actively involved in training medical students, pediatrics residents and fellows in Nephrology: An average of 12 pediatric residents per year elect to spend a month in nephrology, and between three and four medical students a year take the nephrology elective
• Participates in clinical and didactic teaching for medical students and pediatric resident trainees who elect to spend a month in nephrology
• Member of the Education Committee of the American Society of Pediatric Nephrology
Major Goals and Plans

1. National recognition for care of children with kidney disease
2. Recruitment of two additional faculty to meet clinical and research needs
3. Increase nurse coordinator staffing
4. Expand current dialysis and apheresis services
5. NIH T32 training grant for fellowship program

Nadine Benador, MD
- Actively involved in training medical students, pediatrics residents and fellows in nephrology
- Part of the clinical teaching service for inpatient and outpatient pediatrics training for medical students
- Participates in clinical and didactic teaching for medical students and pediatric resident trainees who elect to spend a month in nephrology
- Teaches nursing staff in the dialysis area

Elizabeth Ingulli, MD
- Coordinates Grand Rounds for RCHSD starting 2011
- Actively involved in training medical students, pediatrics residents and fellows in renal transplantation; is the Medical Director of the Pediatric Renal Transplant Program
- Participates in clinical teaching for medical students, pediatric resident trainees, nephrology fellows, and pharmacy students; participates in didactic lectures for medical students, pediatric resident trainees, and nephrology fellows in general nephrology.
- Participates in didactic lectures to PICU, IMU and clinic nursing staff in the Management of Pediatric Transplant Patient and Transplant Immunology, The Basics

Peter Yorgin, MD
- Actively involved in training medical students, pediatrics residents and fellows in nephrology
- Part of the clinical teaching service for inpatient and outpatient pediatrics training for medical students
- Participates in clinical and didactic teaching for medical students and pediatric resident trainees who elect to spend a month in nephrology
- A regular advisor for medical student Independent Student Projects (ISPs)

Vivian Reznik, MD, MPH
- Director of the UCSD junior faculty development program, the National center of Leadership in Academic Medicine [NCLAM]
- Lecturer for the following courses: Principles to Practice, UCSD SOM; Problem Solving in Healthcare, California Western School of Law

AWARDS, HONORS, AND MAJOR PRESENTATIONS

In 2011, we are recognized as the top 29th program in Pediatric Nephrology in the U.S. News & World Report.

Robert Mak, MD, PhD
Who's Who in America, 2011
Editorial Board, Nature Reviews Nephrology, 2005–present
Consulting Editor, Pediatric Research, 2004–2010
## Research Support

<table>
<thead>
<tr>
<th>Grant/Contract #</th>
<th>Annual Budget</th>
<th>Total Direct Dollars/Duration of Grant</th>
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<td><strong>Nadine Benador, MD</strong></td>
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<td>Chronic Kidney Disease in Children Study (CKiD)</td>
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<td><strong>Robert Mak, MD, PhD</strong></td>
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<td>Chronic Renal Insufficiency in NAPRTCS Patients</td>
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<td>Sub 07-005 (DK066143)/Children’s Mercy Hospital</td>
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<td>Therapeutic Benefit of Vitamin D on Cachexia, Cardiovascular Disease and Survival in CKD</td>
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<td>20101653/Cystinosis Research Foundation</td>
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<td>Hispanic Center of Excellence</td>
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Associate Editor, *Pediatric Nephrology*, 2006–2010
Co-chair, Kidney Disease Progression Committee, NIH U01 on Chronic Kidney Disease in Children, 2003–2013
Invited lecturer, Obesity and the kidney. Western Society of Pediatric Nephrology Meeting. Pasadena, CA, April, 2010
Invited lecturer, Growth retardation and muscle wasting in cystinosis. Cystinosis Research Foundation Symposium. Newport Beach, CA, April 2010
Oral platform presentation, Vitamin D receptor activation ameliorates cachexia and inflammation in chronic kidney disease. Society for Pediatric Research Annual Meeting, Vancouver, Canada, May 2010
Oral platform presentation, Vitamin D receptor activation ameliorates cachexia and muscle wasting in chronic kidney disease. American Society of Nephrology Annual Meeting, Denver, CO, November 20, 2010
Co-chair, Western Society of Pediatric Nephrology Annual Meeting, San Diego, CA, February 2011
Invited lecturer, Extraskelatal effects of vitamin D in health and disease. Western Society of Pediatric Nephrology Annual Meeting, San Diego, CA, February 2011
Invited lecturer, Energy homeostasis and muscle wasting in cystinosis. International Cystinosis Research Symposium, Newport Beach, CA, April, 2011

**Nadine Benador, MD**

**Elizabeth Ingulli, MD**
Best Doctors in America, National Award, 2009–2010
Best Doctors in America, National Award, 2011–2012
Post transplant care of the pediatric renal transplant recipient. Solid Organ Transplantation Conference. UCSD/RCHSD, July 23, 2009
Caring for the pediatric transplant recipient. 44th Annual Uniformed Services Pediatric Seminar, American Academy of Pediatrics, San Diego, CA, March 7, 2010
Antibody-mediated rejection. Western Society of Pediatric Nephrology Annual Meeting. Pasadena, CA, April 18, 2010
Special considerations for the young transplant recipient. American Society of Nephrology Annual Meeting. Denver, CO, November 20, 2010
The role of vitamin D in the immune system. PAS/SPR Annual Meeting. Denver, CO, May 1, 2011

**Vivian Reznik, MD, MPH**
Best Doctors of San Diego, 2009, 2010
Inducted into San Diego County Women’s Hall of Fame, 2011
AAMC Task Force on Financial Conflict of Interest in Clinical Care–In the Interest of Patients: Recommendations for Physician Financial Relationship and Clinical Decision Making, June 2010
AAMC www.AAMC.org
Sonnino R, Loveland K, Mylona E, Nelson K, Reznik V, Wadland W. Partnering in faculty affairs research: A
new process for GFA collaborative proposals. AAMC Faculty Affairs Professional Development Conference San Francisco, CA, August 7-9 2009
Reznik V, Morton L. Teaching interdisciplinary collaboration between law and medicine. Center for Law, Health and Society Conference on Interdisciplinary Clinical Education, Atlanta, GA, September 24, 2009
Reznik V. Leadership in academic medicine women in nephrology. American Association of Nephrology, San Diego, CA, October 31, 2009
Reznik V. Promoting equity and leadership for women in academic medicine. American Society of Nutrition, Experimental Biology 2010, Anaheim, April 27, 2010
Daley S, Reznik V. The science of eliminating health disparities: Bridging research, teaching, interventions and policy for junior faculty promotion and tenure. AAMC Minority Faculty Career Development Seminar, Carlsbad, CA, September 26, 2010

Peter Yorgin, MD
CARES Award, RCHSD, 2011
Chair, Western Society of Pediatric Nephrology Annual Meeting, San Diego, CA, February 2011
Invited lecturer, Crisis in the dialysis unit: How do we respond? Western Society of Pediatric Nephrology Annual Meeting, San Diego, CA, February 2011

Wilson Cheung, PhD
Young Investigator Award, National Kidney Foundation 2008-2010

PUBLICATIONS

Robert Mak, MD, PhD


Mak RH, Ikizler TA, Kovesdy CP, Raj DS, Stenvinkel P,

**Nadine Benador, MD**

**Elizabeth Ingulli, MD**

**Vivian Reznik, MD, MPH**

**Peter Yorgin, MD**
The Division of Pediatric Neurology provides comprehensive consultation, assessment, and management of disorders of the brain, spinal cord, nerves and muscles, that affect infants, children and adolescents. In addition to general childhood neurological disorders, special areas of expertise among the division members include neurodevelopmental disabilities (e.g., autism, developmental delay), epilepsy, metabolic disorders, brain tumors, neurogenetic disorders, headache, movement disorders, neuromuscular disorders, pediatric stroke, gait disturbances, ataxia, cerebral palsy, and neonatal neurology.

Members of the division are also actively engaged in basic, translational, and clinical research to better understand the mechanisms of brain development and disease, and to advance treatment modalities for children with neurological disorders. The division provides inpatient and outpatient clinical services, including consultations, ongoing care, advice and support regarding neurological issues for the greater San Diego area and contiguous counties. Members of the division also receive referrals for consultations from all parts of the United States and from many other countries around the world.
FACULTY

Doris Trauner, MD, Professor of Neurosciences and Pediatrics, Co-Director
William Lewis, MD, Clinical Professor of Neurosciences, Co-Director
Angela Ballantyne, PhD, Project Scientist
Jonathan Bui, MD, PhD, Assistant Adjunct Professor of Neurosciences
John R. Crawford MD, Assistant Adjunct Professor of Neurosciences
Jennifer Friedman, MD, Associate Clinical Professor of Neurosciences
Joseph Gleeson, MD, Professor of Neurosciences and Pediatrics
Carla Grosmann, MD, Associate Clinical Professor of Neurosciences
Richard Haas, MD, Professor of Neurosciences and Pediatrics
MJ Harbert, MD, Assistant Clinical Professor of Neurosciences
Robert Leshner, MD, Clinical Professor of Neurosciences
David Lieberman, MD, PhD, Assistant Adjunct Professor of Neurosciences
Andrew Mower, MD, Assistant Clinical Professor of Neurosciences
Mark Nespeca, MD, Clinical Professor of Neurosciences
Sharon Nichols, PhD, Project Scientist
Michelle Sahagian, MD, Assistant Clinical Professor of Neurosciences
Sonya Wang, MD, Assistant Clinical Professor of Neurosciences
Michael Zimbric, MD, Assistant Clinical Professor of Neurosciences

PEDIATRIC NEUROLOGY FELLOWS

Shifteh Sattar, MD
Ana Grijalvo-Perez, MD
Jeffrey J. Gold, MD PhD
Marisela Dy, MD

CLINICAL ACTIVITIES INPATIENT/OUTPATIENT

The Division of Pediatric Neurology has an active outpatient clinic adjacent to Rady Children's Hospital-San Diego (RCHSD), and sees approximately 13,000 patient visits per year. Faculty members also see patients at satellite clinics in Escondido, Encinitas, Murietta, and Oceanside, California.

Inpatient admissions and consultations to the pediatric neurology service number approximately 1,400 per year. In addition to inpatient coverage at RCHSD, the division provides neurologic consultation services to the Neonatal Intensive Care Units at the University of California, San Diego (UCSD) Medical Center, Sharp Mary Birch Hospital, and Scripps Mercy Hospital in San Diego.

The Clinical Neurophysiology Laboratory provides comprehensive EEG and EMG services and conducts over 2,000 EEGs and 100 EMGs annually. An active inpatient epilepsy monitoring unit provides continuous EEG monitoring for epilepsy patients. Continuous EEG monitoring is provided in the Pediatric Intensive Care Unit and the Neonatal Intensive Care Unit as well.

Patients with all types of neurological conditions are seen by our faculty. In addition to general neurology clinics, there are a number of specialty clinics at the main site, including autism, new onset seizures, headache, movement disorders, neuromuscular disorders, Rett syndrome, neuro-metabolic, cerebrovascular, neuro-oncology/brain tumor, and neurocutaneous syndrome clinics.

FACULTY AREAS OF CLINICAL INTEREST

Jonathan Bui, MD, PhD
Dr. Bui has broad clinical interests with a focus on neuroimaging, as well as cerebrovascular and behavioral neurology.

John Crawford, MD
Dr. Crawford is a pediatric neuro-oncologist who specializes in diagnosis and management of children with brain
tumors. These include children with neuro-cutaneous syndromes such as neurofibromatosis and tuberous sclerosis. He also has interests in immunological disorders affecting the brain, such as demyelinating diseases. Dr. Crawford is also the Director of the Pediatric Neurology Training Program.

**Jennifer Friedman, MD**
Dr. Friedman is a specialist in movement disorders in children and adults. Her clinical interests include movement disorders (including but not limited to dystonia and Tourette syndrome), neurogenetics and neurometabolic disorders.

**Joseph Gleseson, MD**
Dr. Gleseson’s clinical interests focus particularly on neurogenetic disorders and parallel his extensive research interests.

**Carla Grosmann, MD**
Dr. Grosmann specializes in neuromuscular disorders and electromyography. She directs the Muscular Dystrophy Clinic at RCHSD and coordinates a monthly neuromuscular pathology conference for clinicopathological correlation of neuromuscular pathology. She participates in the Mutation Registry for Dystrophinopathies. She also has an active clinical practice in adolescent neurology.

**Richard Haas, MD**
Dr. Haas’ clinical interests include neurometabolic disease, Rett syndrome, neuromuscular disease and neonatal neurology. He directs the UCSD Mitochondrial and Metabolic Disease Center where the research focus is on improving diagnostic testing for mitochondrial disease, the role of mitochondrial DNA in disease and the mitochondrial role in neurodegenerative disease.

**William Lewis, MD**
Dr. Lewis is the Co-Director of the Division of Child Neurology (RCHSD). He is an active clinician with broad clinical interests, and specific interests in pediatric headache syndromes.

**David Lieberman, MD, PhD**
Dr. Lieberman sees children with general neurological problems, and has particular interests in neurogenetic disorders and autism.

**Andrew Mower, MD**
Dr. Mower is a pediatric epileptologist who specializes in children with seizure disorders.

**Mark Nespeca, MD**
Dr. Nespeca is the program consultant/medical director of the Clinical EEG laboratory at RCHSD. He is an active clinician with specific expertise in childhood epilepsy.

**Michelle Sahagian, MD**
Dr. Sahagian provides consultation and follow-up care for a wide variety of neurological disorders. She has an interest in cerebral palsy and neuromuscular disorders as well.

**Doris Trauner, MD**
Dr. Trauner is the Co-Director of the Division of Pediatric Neurology. Her clinical interests encompass neurodevelopmental disorders, including autistic spectrum disorders, language and neurobehavioral disorders, epilepsy and epileptic behavior syndromes, and neurocutaneous syndromes.

**Michael Zimbric, MD**
Dr. Zimbric is a general pediatric neurologist with a wide range of interests in clinical neurological disorders affecting children.

### RESEARCH ACTIVITIES

**Jonathan Bui, MD, PhD** conducts neuroimaging research with an emphasis on the development of new magnetic resonance imaging techniques to facilitate neurological diagnosis and therapeutics.

**John Crawford, MD** focuses his research on immune mechanisms involved in brain tumor formation, with a goal of developing more effective treatments for childhood brain tumors. He also conducts clinical trials in neuro-oncology in collaboration with St Jude’s Hospital, the University of Vermont Consortium, and the Children’s Oncology Group.

**Jennifer Friedman, MD** conducts research on movement disorders and neurogenetics. Her current research involves motor learning in DYT1 dystonia.
Joseph Gleeson, MD is focusing his research on understanding the genetic and molecular basis of pediatric brain disorders, with a particular focus on cerebellar and cortical malformations.

Richard Haas, MD directs the UCSD Mitochondrial and Metabolic Disease Center. The UCSD Mitochondrial Disease Laboratory is one of only four laboratories in the United States routinely handling fresh tissue for mitochondrial isolation and diagnostics. The laboratory is essential to the clinical activities of the Mitochondrial and Metabolic Disease Center at UCSD and Rady Children’s Hospital San Diego. The research focus is on improving diagnostic testing for mitochondrial disease, the role of mitochondrial DNA in disease and the mitochondrial role in neurodegenerative disease. Another active research project is the study of the pharmacokinetics of intravenous levetiracetam in neonates.

David Lieberman, MD, PhD is conducting research on the role of synapse formation and function in animal models of neurodevelopmental disorders, including autism.

Mark Nespeca, MD participates in clinical investigations relating to childhood epilepsies and conducts research on Angelman’s syndrome.

Doris Trauner, MD focuses her research on cognitive development in children, with specific interests in plasticity in the developing nervous system following perinatal stroke, and cognitive impairments associated with genetic/metabolic disorders and autistic spectrum disorders.

TEACHING ACTIVITIES

The division runs an ACGME-accredited training program in pediatric neurology in conjunction with the adult neurology training program at UCSD Medical Center and UCSD School of Medicine. Trainees rotate at UCSD Medical Center and the San Diego Veterans Administration Medical Center for adult neurology training, and at RCHSD for pediatric neurology training.
Graduate students and postdoctoral research fellows are also an active part of the divisional teaching activities. Faculty members participate in several graduate programs, including the UCSD Neurosciences Program, the UCSD-SDSU Joint Doctoral Program in Clinical Psychology, the UCSD-SDSU Joint Doctoral Program in Speech-Language Pathology, and the UCSD Graduate Program in Cognitive Science.

The division faculty also provides both formal lectures and bedside/clinic teaching to residents in Pediatrics, Neurology, Psychiatry, Emergency Medicine, and Family Practice, and to medical students both in the preclinical and clinical years. An elective rotation that includes both inpatient and outpatient training is open to fourth year medical students.

The faculty in pediatric neurology provides daily teaching rounds on the inpatient service at RCHSD, as well as weekly teaching rounds in the three major Neonatal Intensive Care Units for which they provide neurological coverage.

Didactic sessions in child neurology include weekly lecture series for child neurology trainees, monthly journal club, monthly noon lecture series for pediatrics house staff and students, monthly case conferences, monthly neuro-radiology rounds, monthly neuropathology conference, monthly quality improvement activities, and yearly lecture series to adult neurology residents and child psychiatry fellows.

One of the most recent additions is the establishment of a formal curriculum for Pediatric Neuro-Oncology Rotation for residents and fellows.
Neurology Skills Workshop for Pediatrics Housestaff: This is a newly developed addition to the training of pediatric housestaff. As part of an educational study, pediatric housestaff perform a neurological examination on selected neuro-oncology patients with interesting findings. Following a 15 minute exam, the residents document their findings on a blank progress note. The patient is then examined by a Neurology Attending with the resident and feedback is given. The residents’ neurological examinations will be analyzed to determine relative strengths and weaknesses in the neurological examination during pediatrics residency. The goal is to track the progress of residents during their entire training period. It is the hope that the project can serve as a model for other pediatric residency programs.

LEADERSHIP OF EDUCATIONAL PROGRAMS

John Crawford MD, Director, Child Neurology Training Program
Michael Zimbrick MD, Director, Fourth Year Medical Student Elective
Andrew Mower MD, Coordinator, Third Year Medical Student Rotations in Pediatric Neurology and monthly case conferences
Richard Haas MD, Faculty Coordinator, Pediatric Neurology Journal Club
Mark Nespeca MD, Coordinator, monthly Pediatric Neurology lectures for Pediatric housestaff

AWARDS, HONORS AND MAJOR PRESENTATIONS

Jonathan Bui MD, PhD
• Keck Graduate Institute (The Claremont Colleges), Center for Rare Diseases-Therapies, Board of Experts, 2008-present

John Crawford MD, MS
• The Neurological Examination: A Dying Art in the Modern Era of Molecular Medicine. Pediatric NeuroPsychology Grand Rounds, RCHSD, UCSD, September 2, 2009
• Human Herpesvirus-6 Infection of the CNS: A Cause or Consequence of CNS Disease. Neurosciences Grand Rounds, UCSD, February 26, 2010
• Genelux Inc. Lecture Series on Novel Virologic Clinical Trials Human herpesvirus-6 Infection of the CNS: A Cause of Consequence? March 13, 2010
• Brainstem Gliomas in the 21st Century. National Pediatric Hematology Oncology Conference, Tijuana Mexico, May 21, 2010
• Brain Tumors: 1st Annual Collaborative Care Conference, UCSD, Moores Cancer Center, January 15, 2011
• Sound Wave Symposium American Academy of Audiology Ototoxicity Assessment in Children Receiving Cisplatin Chemotherapy, San Diego, CA, February 11, 2011
• 7th International Conference on HHV-6 and HHV-7 Differential Gene Expression Profiling of Acute and Chronic HHV-6A-Infected Human Malignant Astrocytes. Reston, VA, February 28, 2011
• Chronic Viral Infection and CNS Malignancy: A Rebel Without a Cause? Cleveland Clinic Department of Pediatric Neurology Grand Rounds, April 20, 2011
• A Team Work Approach in the Management of Childhood Brain Tumors. 2nd Annual Neuro-Oncology Family Day, RCHSD, San Diego, CA, April 30, 2011

Jennifer Friedman, MD
• California School Board Golden Bell Award—Understanding Differences Program (K-6 educational program teaching about disabilities and tolerance), December 2010
• VO Games Patient Presentation, First Place/Gold. 15th International Congress of Parkinson’s Disease and Movement Disorders. Toronto, Canada, June 2011
• BH4 Disorders with Normal Phenylalanine-PKU and BH4. Scientific Development Summit, New York, NY, April 2011
Research Support

Joseph Gleeson, MD

- Fraternal twins with sepiapterin reductase deficiency, a rare form of dopamine responsive dystonia (DRD). 15th International Congress of Parkinson’s Disease and Movement Disorders, Toronto, Canada, June 2011
- Sepiapterin Reductase Deficiency-Treatment Options in Phenylketonuria and Related Pediatr Neurotransmitter Disorders. Satellite Meeting for the 11th International Congress of Inborn Errors of Metabolism, San Diego, CA, August 2011
- Non-Surgical Treatments for Dystonia. John H. Menkes Children & Family Dystonia Symposium, Chicago, IL, August 2011

Joseph Gleeson, MD

- Investigator, Simons Foundation Autism Research Initiative, 2010
- Presidential Lecture, Sanford-Burnham Medical Research Institute, 2010
- Inaugural Keynote Lecture, Dorris Neuroscience Center, TSRI, 2010
- Guroff Memorial Lecture, NINDS, NIH, 2011
- Keynote UCSD Neuroscience Graduate Student Lecture

Carla Grosmann, MD

- Member, Muscular Dystrophy Association Executive Committee
- Annual appearance on televised MDA Jerry Lewis Telethon

Richard Haas, MD

Robert Leshner, MD
- Best Doctors in America 2009, 2010 (Child Neurology and Neuromuscular Diseases)
- Visiting Professor, Pompe Disease. University of Indiana, March 2009
- Visiting Professor, Metabolic Myopathies. Cleveland Clinic, June 2010
- Treatment of Pompe Disease. XII International Congress on Neuromuscular Diseases, Naples, Italy, July 17, 2010
- Guest Lecturer, 33rd Annual Carrell-Krusen Neuromuscular Symposium, Dallas, TX, February 2011

Andrew Mower, MD
- Professional Advisory Board for the Epilepsy Foundation

Mark Nespeca, MD
- Best Doctors in America, 2009

Doris Trauner, MD
- Bruce Berg lectureship, University of California San Francisco Division of Pediatric Neurology, April 2009
- Women Who Mean Business Award, San Diego Business Journal, October 2009
- American Academy of Neurology Awards Committee, 2009-present
- Invited speaker, Perinatal cerebrovascular disease. American Society of Pediatric Hematology/Oncology annual meeting, San Diego, CA, May 14, 2009
• Invited speaker, Neuropsychological disturbances in nephropathic cystinosis. 40th European Working Group on Psychosocial Aspects of Children with Chronic Renal Failure, College De Valk, Leuven, Belgium, June 4, 2009
• Invited speaker, Second International Cystinosis Research Symposium, Irvine, CA, April 8, 2010
• Invited speaker, Cystinosis Research Foundation, Newport Beach, CA, May 2010

Michael Zimbric, MD
• Golden Neuron Award for Excellence in Teaching, UCSD Department of Neurosciences, 2009

PUBLICATIONS


Iannaccone ST, Hynan LS, Morton A, Buchanan R,


The Pathology Division is responsible for all anatomic and clinical pathology diagnostic services and the educational programs in pediatric pathology for medical students, residents, and fellows. Additionally, the pathology staff contributes to and supports an array of activities including professional societies, public service agencies, and media productions. The pathologists are actively engaged in collaborative research occurring within the institution, at the University of California, San Diego (UC San Diego) School of Medicine, and with investigators from other institutions around the country. The pathologists are also intimately involved in the day-to-day administrative management of the laboratories.

**FACULTY**

**Robert O. Newbury, MD,** *Director,* Clinical Professor of Pathology  
**Henry F. Krous, MD,** Director of Pathology Research, Clinical Professor of Pathology  
**Eric Breisch, PhD,** Associate Clinical Professor of Surgery

Left to right: Hart Isaacs, Denise Malicki, Henry Krous, Linda Ellis, Robert Newbury, Katayoon Shayan
Hart Isaacs, Jr., MD, Clinical Professor of Pathology
Denise Malicki, MD, PhD, Associate Clinical Professor of Pathology
Katayoon Shayan, MD, Associate Clinical Professor of Pathology
Linda Ellis, MD, Associate Clinical Professor of Pathology

POSTDOCTORAL FELLOWS AND RESIDENTS

Pamela Archuletta, MD
Dave Azar, MD
William Ryan, MD
Catherine Nguyen, MD
Bradly Harward, MD
Allen Kremp, MD
Lawrence Willes, MD
Shouying Du, MD
Mariah Baughn, MD
Parham Minoo, MD
Khaing Win, MD
Caron Steinmetz, MD
Angela Bachman, MD
Lily Jih, MD
Lisa Smith, MD

CLINICAL ACTIVITIES INPATIENT/OUTPATIENT

• The Pathology Division successfully maintained licensure by the State of California and Federal Drug Administration (FDA), is certified by CLIA, and maintained accreditations from the College of American Pathologists, American Association of Blood Banks, and the Joint Commission on Accreditation of Hospital Organizations (JCAHO).
• The pathologists serve as CAP inspectors of pathology departments at other children’s hospitals in the U.S.
• Annually, the clinical laboratory performs more than 1,500,000 tests, and transfuses over 13,000 blood products to more than 2,500 patients.
• Diagnostic services include bacterial and fungal cultures, molecular diagnostic testing for infectious diseases, routine chemistry, sweat chloride testing, glucose tolerance testing, serology, urinalysis, hematology, selected coagulation studies, toxicology, and blood banking.
• The Division uses polymerase chain reaction (PCR) to identify enteroviruses, HSV, VZV, CMV, and Bordatella pertussis, which serves not only Rady Children’s Hospital-San Diego (RCHSD), but other community hospitals including Naval Medical Center San Diego, Paradise Valley, Sharp Memorial, Scripps Clinic, UC San Diego, Tri-City, Palomar/Pomerado, Alvarado, Grossmont, and Scripps Chula Vista.
• The Division also participates in the Drug Endangered Children (DEC) Forensic Pathology Program for detecting drug exposure in children.
• The Division provided diagnostic services on approximately 55,000 separate surgical specimens from over 13,000 accessioned cases.
• Greater than 100 new malignancies were identified annually.
• The pathologists performed approximately 300 frozen section diagnoses from over 200 patients.
• Approximately 20 postmortem examinations are performed annually and the findings of many of them are presented at various medical staff conferences.
• Electron microscopy was performed on nearly 220 specimens.
• The Division continues to provide electron microscopy services to Naval Medical Center San Diego, Children’s Hospital Central California, and Children’s Hospital in Omaha, NE.
• The Division also provides renal biopsy consultations and interpretations and technical support to many hospitals in San Diego County.
**Major Goals and Plans**

- Provide anatomic and clinical pathology consultations and services to all of the clinical programs at RCHSD.
- Continue to moderate and/or support medical staff educational, clinicopathologic, and quality assurance conferences.
- Continue to serve as the pediatric pathology training experience for medical students, pathology residents, and surgical pathology fellows.
- Continue to support extramural and community activities involving professional societies and governmental agencies.
- Continue research efforts as reflected by: Continued participation in the "CJ SIDS Without Walls," a multidisciplinary, multi institutional research project involving Harvard, Yale, Dartmouth, Columbia, and in San Diego SIDS/SUDC Research Project directed by Dr. Henry Krous.
- Continued participation in sudden unexplained death in childhood (SUDC) research through the San Diego SIDS/SUDC Research Project, directed by Dr. Henry Krous.
- Continue collaborative efforts with investigators, particularly in dermatology, gastroenterology, and hematology/oncology.

**RESEARCH ACTIVITIES**

**Robert O. Newbury, MD**
- Eosinophilic esophagitis
- Tufting enteropathy

**Hart Isaacs, Jr., MD**
- Neoplasia of the fetus and early childhood

**Eric Breisch, PhD**
- Morphometry of infant cranium and dura
- Foreign body response to spinal implants

**Henry F. Krous, MD**
- Sudden infant death syndrome (SIDS)
- Sudden unexplained death in childhood (SUDC)
- Sudden death in infancy and childhood

**Linda Ellis, MD**
- Angiogenesis and neovascularization in osteosarcoma

**TEACHING ACTIVITIES**

The pathologists participate in numerous educational activities including conferences and lectures within and across departments and institutions. They are:
- Tumor Board
- Neuro-Oncology Tumor Board
- Neuropathology Conference
- Otolaryngology Conference
- Uropathology Conference
- Orthopedics Conference
- Gastrointestinal Pathology and Hepatic Pathology Conference
- Renal Pathology Conference
- UC San Diego Pediatric Department CPCs
- Morbidity and Mortality Conferences
- UC San Diego SOM 208 Human Disease Course
- UC San Diego SOM 213 Histology Course
- UC San Diego SOM first year problem based learning curriculum
• UC San Diego Clinical Laboratory Scientist program lectures
• CME course for Dermatologic Surgeons
• Superficial Anatomy and Surgery of the Head and Neck
• UC San Diego SOM medical students Gross Anatomy

The pathologists also teach UC San Diego surgical pathology fellows, residents, medical students and Naval Medical Center pathology residents who rotate through the department.

AWARDS, HONORS AND MAJOR PRESENTATIONS

Henry F. Krous, MD
Guest editor, Journal of Forensic and Legal Medicine
Presenter, Forensic considerations in sudden infant death.
Dartmouth University School of Medicine, Hanover, NH, August 20, 2009
Presenter, Epidemiology of sudden infant death in San Diego County. Harvard Medical School, Boston, MA, August 21, 2009

PUBLICATIONS


**Research Support**

<table>
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<tr>
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<td>San Diego SIDS/SUDC Research Project</td>
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<td>Children’s Specialist Foundation Internal Award</td>
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The Division of Pediatric Pharmacology and Drug Discovery comprises four integrated components that establish bridges between the University of California, San Diego (UCSD) Department of Pediatrics and the new Skaggs School of Pharmacy and Pharmaceutical Sciences.

1) Basic and translational research programs in microbial pathogenesis and immunology focuses on novel treatment strategies for infectious diseases are sought from novel natural product chemical resources, targeted neutralization of bacterial virulence phenotypes, pharmacologic augmentation of host innate immune functions, and modulation of host inflammatory responses.

2) A Pharmacometrics Unit, recognized internationally for its leadership in pharmacokinetic and pharmacodynamic modeling, including sparse data collection techniques and population analysis methodologies that enable appropriate dosing in pediatric subpopulations. The UCSD Pharmacometrics Unit leads the NICHD Pediatric Trials Network in clinical pharmacology modeling and simulation activities.
The Clinical Pharmacology and Assay Laboratory (CPAL), a dynamic working unit with the capability, experience and expertise to analyze quantitatively and qualitatively a large number of drugs in a variety of sample matrices, including many core services for the NIAID/NIH International Maternal Pediatric Adolescent AIDS Clinical Trials Network (IMPAACT) pharmacology program.

**FACULTY**

**Victor Nizet**, MD, *Chief*, Professor of Pediatrics and Pharmacy  
**Brookie Best**, PharmD, MAS, Associate Professor of Clinical Pharmacy & Pediatrics  
**Edmund Capparelli**, PharmD, Professor of Clinical Pediatrics  
**Kelly Doran**, PhD, Associate Adjunct Professor of Pediatrics  
**Mary Hensler**, PhD, Assistant Project Scientist  
**Stephen Rossi**, PhD, Project Scientist  
**George Sakoulas**, MD, Assistant Adjunct Professor of Pediatrics  
**Adriana Tremoulet**, MD, Assistant Adjunct Professor of Pediatrics  
**Jennifer Le**, PharmD, Assistant Professor of Clinical Pharmacy

**POSTDOCTORAL FELLOWS**

**Ericka Anderson**, PhD  
**Kathryn Akong**, MD, PhD  
**Federico Beasley**, PhD  
**Yung-Chi Chang**, PhD  
**Jason Cole**, PhD  
**David Gonzalez**, PhD  
**Andrew Hollands**, PhD  
**Cheryl Okumura**, PhD  
**Michael Preziosi**, MD  
**Markus Roupe**, PhD  
**Ismael Secundino-Velasquez**, PhD  
**Nina Van Sorge**, PharmD, PhD  
**Masaya Yamaguchi**, DDS, PhD

**GRADUATE STUDENTS**

**Nina Haste**, SSPPS/UCSD PharmD/PhD Program  
**Tamara Bhandari**, Biomedical Sciences PhD Program  
**Paige Pancoast**, PharmD, Pharmacy Resident  
**Morgan Pence**, Biomedical Sciences PhD Program  
**Julie Bagby**, PharmD, Pharmacy Resident  
**Michael Rouchon-Duck**, MS, UCSD Medical Student  
**Stephanie Natale**, PharmD, Pharmacy Resident  
**Jonathan Faldasz**, PharmD, Pharmacy Resident  
**Angela Berry**, PharmD, Pharmacy Resident  
**Karen Chen**, PharmD, Pharmacy Resident  
**Mary Moss**, Pharmacy Student  
**Jack Yeung**, Pharmacy Student  
**Noble Barshop**, Medical Student  
**Emma Liere**, Master of Science Student  
**Kirsten Kuipers**, Master of Science Student  
**Simon Dohrmann**, Master of Science Student  
**Jennifer Lundergan**, Master of Science Student  
**Yuichiro Sato**, Master of Science Student

**CLINICAL ACTIVITIES**

The Division interacts closely with pediatricians and pediatric subspecialty physicians at Rady Children's Hospital-San Diego (RCHSD) and UCSD through its Clinical Trials Unit, which develops and executes phase I - III trials of new and existing therapeutic agents for pediatric populations. Dr. Victor Nizet serves as the interim medical director of this unit in close collaboration with the other faculty of the division. The consultative expertise of Drs. Edmund Capparelli and Brookie Best are provided on issues of therapeutic drug monitoring and HIV pharmacology locally and across the country. Dr. Adriana Tremoulet attends on the inpatient infectious disease service, as well as the Kawasaki disease service. She also provides follow up for infectious disease and Kawasaki disease patients in the outpatient setting.
Major Goals and Plans

The broad objectives of our Division remain to perform basic, translational and clinical research into pediatric studies to ensure optimal and safe therapies for pediatric patients, and to discover new drugs and drug targets through basic studies of biological processes. Because of research backgrounds and interests of Divisional Faculty, we continue to place a major focus on infectious diseases and immunological therapies. Dr. Nizet is spearheading the launch of the new UCSD Center for Immunity, Infection & Inflammation (Center for II&I), a multi-disciplinary program that has > 140 participants at UCSD and close collaborative interactions with neighboring research centers: La Jolla Institute for Allergy & Immunology, Salk Institute, Sanford-Burnham Medical Research Institute, and the J. Craig Venter Institute. The Center is organized in 12 research themes spanning Immunology (Immune Regulation, Innate Immunity, Tumor Immunology, Allergy & Autoimmunity), Infectious Diseases (Host-Pathogen Interactions, Viral Pathogenesis, Vaccine Innovation, Global Infectious Diseases) and Inflammation (Inflammation & Cancer, Inflammation & Metabolism, Inflammation & Tissue Injury, Neuroinflammation). The campus-wide program will have its administrative base in the Division of Pediatric Pharmacology and Drug Discovery, will forge collaborations with local biotechnology and pharmaceutical interests and international academic partners, and host a variety of academic forums including conferences, seminar series and retreats.

In previous years, the division participated in the national research network of NIH-funded Pediatric Pharmacology Research Units (PPRUs), which where designed to conduct the work of Best Pharmaceuticals for Children Act (BPCA). The PPRU framework has now been reinvented in the form of the new NICHD-sponsored Pediatrics Trials Network (PTN). Our UCSD Pediatric Pharmacology & Drug Discovery Division partnered with Duke University and others in securing this award and serving as the Pharmacometrics Core (Dr. Capparelli, PI). An additional program of Specialized Centers in Research in Pediatric Developmental Pharmacology Program is currently being competed to contribute to a variety of translational proj-

RESEARCH ACTIVITIES

Victor Nizet, MD leads a basic research laboratory focused on microbial pathogenesis and the innate immune system, with a special focus on invasive bacterial infections. Using molecular genetic approaches, the laboratory seeks to discover and characterize microbial virulence determinants involved in cytotoxicity, adherence, invasion, inflammation, molecular mimicry and resistance to immunologic clearance. The group also investigates the contribution of host factors such as antimicrobial peptides, leukocyte surface receptors, signal transduction pathways, and transcription factors in defense against invasive bacterial infection. Novel treatment strategies for infectious diseases are sought from natural product libraries, targeted neutralization of bacterial virulence phenotypes, and pharmacologic augmentation of host phagocyte function.

Brookie Best, PharmD, MAS specializes in the clinical pharmacology of antiretroviral agents, with expertise in antiretroviral therapeutic drug monitoring, treatment of HIV-infected pregnant women and children, and antiretroviral central nervous system penetration. She serves as principal investigator or co-investigator on projects with the International Maternal Pediatric Adolescent AIDS Clinical Trials Group (IMPAACT), the California Collaborative Treatment Group (CCTG) and the UCSD HIV Neurobehavioral Research Center (HNRC).

Edmund Capparelli, PharmD focuses his research on pharmacokinetic and pharmacodynamic modeling while specializing in pediatric clinical pharmacology and population pharmacokinetic modeling. His clinical research expertise is widely recognized, as evidenced by his service to the following groups in this past year: (1) World Health Organization (WHO) Pediatric Antiretroviral
Dosing Working Group; (2) Pediatric Antiretroviral Guidelines Working Group, US Department of Health and Human Services; (3) Study Panel Review for International Pharmaceutical Services NIAID; (4) FDA Clinical Pharmacology Subcommittee (CPSC) of the Advisory Committee on Pharmaceutical Sciences and (5) is on the Organizing Committee for the Annual International Pediatric HIV Workshop.

Kelly Doran, PhD has a joint appointment in the division and is an Assistant Professor of Biology at San Diego State University. Her research focuses on the pathogenesis of neonatal meningitis, with examination of the mechanisms by which certain bacteria can enter the central nervous system and the inflammatory response of the blood-brain barrier to infection. Through these studies, she seeks to inform novel strategies for treatment and prevention of these potentially life-threatening infections.

Mary Hensler, PhD Assistant Project Scientist spearheads a collaborative research project between the division and marine natural product chemists at the Scripps Institution of Oceanography that explores the chemical diversity of actinomycete bacteria harvested from the ocean floor to discover novel antibiotics with activity against drug-resistant pathogens such as MRSA and VRE. Two additional senior recruitments of well established, extensively published, and highly NIH funded investigators at the Professor level are nearing completion - one in the area of malaria genomics and drug discovery and the other in the field of systems biology of metabolic and infectious diseases. These talented investigators with robust research portfolios will solidify the divisional research mission and firmly establish the division a national leader in innovative translational research in pharmacology and drug discovery.

The division’s ultimate goals remains for UCSD and Rady Children’s Hospital-San Diego to have a permanent place in the top echelon of pediatric pharmacology research and training nationwide.
## Research Support

<table>
<thead>
<tr>
<th>Grant/Contract #</th>
<th>Annual Budget</th>
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<tr>
<td>Victor Nizet, MD</td>
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<td>Microbial Glycan Mimicry and Glycosidases in Inflammatory Responses</td>
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<td>2 R01 AI052453-06/NIH (NIAID)</td>
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<td>3 R01 GM084350/NIH (NIGMS)</td>
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<td>Proteolysis and Skin Antimicrobials</td>
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<td>7 R01 AR052728-05/NIAMS</td>
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<td>Mechanisms of the M Protein in Group A Streptococcus Virulence</td>
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<td>1 R01 AI096837-01/NIH (NIAID)</td>
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<td>GAS Switch from Colonizing Bacterium to Invasive Pathogen</td>
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<td>1 R01 AI077780-01A1/NIH (NIAID)</td>
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<td>Sialic Acid O-acetylation in GBS Pathogenesis and Immunity</td>
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<td>1 R01 HD051796-01/NIH (NICHD)</td>
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<td>HIF Control of Inflammatory Responses in Asthma</td>
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<td>08-0251/American Asthma Foundation</td>
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<td>Sub 20111282 (W81XWH-11-2-0096)/Akebia Therapeutics, Inc.</td>
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<td>Evaluation of HIF Boosting Drugs for Treatment of Bacterial Infections</td>
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<td>20100542/Akebia Therapeutics, Inc.</td>
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<td>Proteolysis and Skin Antimicrobials</td>
<td>70,400</td>
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<td>Sub 266922 (AR052728)/Veterans Medical Research Foundation</td>
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## Research Support (continued)

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<td>Monitoring Bacterial Pathogen Interactions as a Novel Paradigm for Therapeutic Discovery</td>
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<td>Predoctoral Research Training in Maternal and Pediatric Pharmacology</td>
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<td>1T35HD064385/NIH/NICHD</td>
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<td>Urinary Excretion Pharmacokinetics in Pain Medications - Student Pharmacists Research Training Program</td>
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<td>Millenium Research Institute</td>
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<td>P1080: A Pilot Study of Psychiatric and Antiretroviral Medication Concentrations in HIV-Infected and Uninfected Children and Adolescents</td>
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<td>2 P30 MH62512-11/NIH/NIMH</td>
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<td><strong>Edmund Capparelli, PharmD</strong></td>
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<td>2 U10 HD031318-11/NIH (NICHD)</td>
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**Note:** The table lists various research grants and contracts, along with their budgets and durations. The full details, including the grant providers and specific project descriptions, are provided for each entry.
Research Support (continued)

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<td><strong>Pharmacokinetic Study in Young Infants with Suspected or Complicated Intra-abdominal Infections</strong></td>
<td>$64,790</td>
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<td><strong>Exposure-Response Comparison of Lisinopril to Amlodipine in Hypertensive Children</strong></td>
<td>$36,146</td>
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<td>Sub RES504811 (RR022498)/Case Western Reserve University Sept. 2009-May 2011</td>
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<td><strong>Development of a pharmacokinetic algorithm to improve outcomes in Neonates</strong></td>
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<td>Sub 162883 (RR024128)/DUKE UNIVERSITY Sept. 2009-June 2010</td>
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<td><strong>A Multi-Center, Single-Dose, Open-Label Clinical Trial to Determine the Absorption and Metabolism of Oral Codeine in Mechanically Ventilated Term Infants</strong></td>
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<td>Sub 48157 (HD057566)/Research Fdn Of State University OF Sept. 2008-Aug. 2010</td>
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<td><strong>Lorazepam Efficacy and Safety Study</strong></td>
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<td>Sub 7928-04-22 (N01-HD-4-3393/Children’s Hospital National Medical Sept. 2010-Aug. 2011</td>
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<td><strong>Identification of New Mechanistic Biomarkers of Adverse Resonses to Acetaminophen in Children and Adolescents</strong></td>
<td>$6,744</td>
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<td>Sub 034465 (DK081406)/Arkansas Children’s Hospital June 2009-Mar. 2010</td>
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<td><strong>HIV Neurobehavioral Research Center - B: Neuroromedical Core</strong></td>
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### Research Support (continued)

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**Adriana H. Tremoulet, MD**

Pharmacologic Determinants for Optimized Therapy in HIV-Infected Children

$112,750


K23 HD056939-01/NICHD

Biomarker Panels for Diagnosis of Kawasaki Disease and Prediction of Treatment Response

$375,000

Robert Wood Johnson Foundation

Biomarkers for Kawasaki Disease

$300,000

Hartwell Foundation, The

Jan. 2010-Dec. 2013


Research analyses are conducted for the NIAID/NIH International Maternal Pediatric Adolescent AIDS Clinical Trials Network (IMPAACT) pharmacology program and a variety of other investigator-initiated pharmacology studies.

**George Sakoulas, MD**

Assistant Adjunct Professor performs translational and clinical research on the treatment of Gram-positive bacterial infections, including methicillin-resistant Staphylococcus aureus (MRSA). He has been able to translate pharmacodynamic interactions observed with antibiotics in the laboratory into successful treatments for patients with refractory infections. His current efforts examine genotypic and phenotypic markers and host characteristics that can predict clinical outcome and identifying relationships between virulence mechanisms and antibiotic resistance patterns.

**Adriana H. Tremoulet, MD, MAS**

is the Associate Director of the Kawasaki Disease Research Center. Her research has concentrated on developing a scoring method to identify IVIG-resistant Kawasaki Disease patients, identifying the role of IgG glycosylation to determine the anti-inflammatory mechanism of intravenous immunoglobulin, and on the development of a diagnostic test for Kawasaki disease. She is the Center PI of the FDA Orphan Drug Grant funded Phase III clinical trial evaluating the use of infliximab in primary treatment of Kawasaki disease. Dr. Tremoulet is the site PI of a study of the Pediatric Trials Network to study the pharmacokinetics of understudied drugs used in pediatrics, and conducts research on the pharmacokinetics of ampicillin.

### TEACHING ACTIVITIES

**Victor Nizet, MD** is Track Leader for Microbiology and Immunology in the UCSD Biomedical Sciences Graduate Program, Section Leader for the Biomedical Sciences 200 Course (Fall Quarter) Course Director for the Biomedical Sciences course Microbial Pathogenesis & Host Response (BIOM 253), and Director for the Anti-Infective/Anti-Inflammatory Therapy Module Principles and Practice of Pharmacology Course Dr. Nizet...
is Chair of the Medical Scientist Training Program Admissions Committee and Co-Director of the UCSD PharmD/PhD program. Ten students have completed the PhD degree in his laboratory.

**Brookie M. Best, PharmD, MAS** teaches Biopharmaceutics and Clinical Pharmacokinetics and Pharmacodynamics to first-year student pharmacists in the UCSD Skaggs School of Pharmacy and Pharmaceutical Sciences. Dr. Best is also Course Director for the required independent study research project for all PharmD students. Further, Dr. Best is Principal Investigator of an NICHD-supported T35 training grant for Predoctoral Student Research in Pediatric and Maternal Pharmacology, and has developed and directs a Summer Research Program for student pharmacists that awards approximately $200,000 per year in scholarships for student research training.

**Edmund Capparelli, PharmD** teaches pharmacology topics to both pharmacy and medical students in the School of Medicine and the Skaggs School of Pharmacy and Pharmaceutical Sciences. During the past year, Dr. Capparelli led eight pharmacetic workshops, taught Clinical Pharmacology, delivered lectures on clinical pharmacology in 3 courses, and led two pharmacokinetics conferences.

**Adriana H. Tremoulet, MD** lectures about Kawasaki Disease to pediatric pharmacologists and nursing staff at RCHSD. She also lectures about pediatric infectious diseases and gives nurses orientation at RCHSD. Dr. Tremoulet gives inpatient rounds and weekly case conferences on pediatric infectious diseases.
AWARDS, HONORS AND MAJOR PRESENTATIONS

Victor Nizet, MD
Elected to the Association of American Physicians, 2010
Annual Student Selected Speaker, Graduate Program in Immunobiology, University of Arizona, Tucson, AZ, October 2009
Opening Plenary Speaker, 50th European Society for Pediatric Research Congress, Hamburg, Germany, October 2009
Keynote Speaker, 4th Annual Infection and Immunity Research Forum, University of Western Ontario, London, Ontario, November 2009
Invited Lecture, Institute of Biological Chemistry, Academia Sinica, Nankang, Taipei, Taiwan, November 2009
Invited Speaker, Institute of Molecular Medicine, National Taiwan University, Taipei, Taiwan, November 2009
Invited Speaker, International Symposium on Pathogen-Host Interaction, Chinese Academy of Microbiology, Beijing, China, November 2009
Keynote Speaker, Jan Verhoef Farewell Symposium, Eijkman-Winkler Institute of Utrecht University, Zeist, The Netherlands, December 2009
Keynote Speaker, Mark Wilson Conference on Oral Microbiology & Immunology, Cancun, Mexico, February 2010
Keynote Speaker, International Conference on Gram+ Pathogens, Omaha, NB, October 2010
Distinguished Lecture in Life Sciences, Northwestern University, Chicago IL, November 2010
Featured Speaker, 50th Anniversary of the University of California San Diego Celebration, School of Medicine Founder’s Day, November 2010
Grand Rounds Speaker, Department of Pediatrics, Children’s Hospital of Philadelphia, Philadelphia, Pennsylvania, February 2011
Margaret Walsh Visiting Professorship, Children’s Hospital Boston and Harvard University, June 2011
Invited Seminar, Centre D’Immunologie de Marseille-Luminy, Marseille, France, June 2011
Invited Seminar, Department of Microbial Pathogenesis, Institut Pasteur, Paris, France, June 2011

Brookie M. Best, PharmD, MAS
Faculty of 1000 Medicine selected article, AIDS, 23:83-87, 2009
Research Article nominated (1 of 13) for 2009 JMCP Award of Excellence, Journal of Managed Care Pharmacy, 15:32-41, 2009
Professor of the Year Award, Associated Students, UCSD Skaggs School of Pharmacy and Pharmaceutical Sciences, 2010
Genentech Custom Biotech Demystified Program, Genentech, Inc., Vacaville, CA, May 2009
Invited Speaker, California Society for Health-Systems Pharmacists Seminar Meeting, San Diego, CA, October 2009
Biotech Demystified Executive Education Program, Rady School of Management, La Jolla, CA, June 2009
Reach MD XM 160 Radio Talk Show, Diabetes Discourse- Diabetes Radio Program. “Emerging Drug Delivery Technologies in Diabetes”

Edmund Capparelli, PharmD
Invited Speaker, NIAID/NICHD IMPAACT Meeting, Washington, DC, June 2010
Invited Lecture, TRIUMPH (NIAID/NICHD/NIMH) Conference on Tuberculosis, Bethesda, MD, July 2010
Invited Speaker, Symposium on Pediatric Clinical Pharmacology, ICAAC, Boston MA, September 2010
Invited Lecture, Paediatric European Network for Treatment of AIDS (PENTA) Annual Meeting, Venice Italy, May 2011

Adriana Tremoulet, MD
Harold Amos Award, Robert Wood Johnson Foundation, 2009
Hartwell Foundation Award, 2011
PUBLICATIONS


Iamdar SR, Best BM. Otitis media and sinusitis. In:


Maamary P, Sanderson-Smith M, Aziz R, Hollands A,


Sendi P, Johansson L, Dahesh S, Van-Sorge NM,


This is an exciting era in Child and Adolescent Psychiatry and related disciplines at Rady Children’s Hospital-San Diego (RCHSD) and UC San Diego (UCSD). The Department and the Division of Child and Adolescent Psychiatry at UCSD has greatly increased the size and scope of its training programs, clinical services and research programs. The amalgamation between RCHSD and UCSD has facilitated a series of notable changes, including the recruitment of new faculty, establishing innovative clinical programs, embarking on major research, and adding new seminars, conferences, training and weekly Grand Rounds. The Division has accomplished these changes in a relatively short time.

The Department offers a comprehensive range of ambulatory, consultation-liaison, inpatient and school-based programs, and is by far the largest mental health provider for children and adolescents in San Diego County. The Department works closely with numerous other hospital and community programs, including: The Chadwick Center (child abuse); Developmental Evaluation Center and Autism Discovery Institute (Autism and PDD); Neurology; Behavioral Pediatrics; Juvenile Hall, Adolescent Medicine, and Child and Adolescent Research Services Center. Our important
Latino Services program won the Mental Health Program of the Year Award from San Diego County and the Rieger Service Program Award for Excellence from the American Academy of Child and Adolescent Psychiatry. The Division of Child and Adolescent Psychiatry at UCSD also runs Child and Adolescent Psychiatry Services (CAPS), a major inpatient hospital for children and adolescents. The division pursues comprehensive and cutting-edge clinical services, teaching and research in all of our locations (four outpatient clinics in Kearny Mesa, Escondido, Oceanside, as well as the walk-in clinic, with a mobile assessment team and telepsychiatry).

The Child and Adolescent Services Research Center (CASRC), sponsored by the National Institute of Mental Health (NIMH), is the only children's mental health services research center in the country. In addition, department faculty have received National Mental Health RO1 and K Awards (Career Scientist Development) from the NIMH and numerous other grants and have contributed to professional and academic literature.

RCHSD and UCSD are formally affiliated, which consolidates the clinical, teaching, research and public service psychiatry programs of RCHSD with UCSD School of Medicine's Department of Psychiatry.

The faculty in the Division of Child and Adolescent Psychiatry at UCSD consists of psychiatrists and psychologists, all graduates of major training programs and universities. Many are renowned specialists in their fields. The department is also affiliated with many academic institutions of higher learning, providing training to child psychiatry fellows, psychology interns, MSW interns, and MFT trainees.

**FACULTY**

*Saul Levine, MD, Chief, Professor of Clinical Psychiatry*

*Gregory A. Aarons, PhD, Associate Professor of Psychiatry*

*Natacha Akshoomoff, PhD, Associate Professor of Psychiatry*

*Lauren Brookman-Frazee, PhD, Assistant Professor of Psychiatry*

*Sandra J. Brown, PhD, Clinical Professor of Psychiatry*

*Gabrielle Cerda, MD, Associate Clinical Professor of Psychiatry*

*Ann F. Garland, PhD, Professor of Psychiatry*

*Ellen Heyneman, MD, Clinical Professor of Psychiatry*

*Jeanne Hong, MD, Assistant Clinical Professor*

*Brett Johnson, MD, Assistant Clinical Professor of Psychiatry*

*Peter Kim, MD, Staff Psychiatrist*

*Jeffrey E. Max, MD, Professor of Psychiatry*

*Kristen M. McCabe, PhD, Associate Professor*

*Clarence Perry, MD, Assistant Clinical Professor of Psychiatry*

*Christopher Rich, MD, Assistant Clinical Professor*

*Susan Tapert, PhD, Associate Professor of Psychiatry Research*

*Michael Tramell, MD, Assistant Clinical Professor*

*Katherine Williams, PhD, Assistant Clinical Professor*

*Tony T. Yang, MD, PhD, Assistant Professor of Psychiatry*

*May Yeh, PhD, Associate Professor of Psychology*

*Edward Lau, MD, Staff Psychiatrist*

*Willard Connor, MD, Staff Psychiatrist*

**FELLOWS IN CHILD AND ADOLESCENT PSYCHIATRY**

*Anju Hurria, MD*

*Benjamin Maxwell, MD*

*Maria Carolina Court, MD*

*Nadia Nassar Kuhn, MD*

**CLINICAL ACTIVITIES INPATIENT/OUTPATIENT**

The Division of Psychiatry provides mental health services to children, adolescents, and families in four regionally-based clinics and school-based programs.
via outreach to more than 40 schools in 12 school districts. The Division delivers more than 50,000 outpatient visits per year, provided by 64 master's level and PhD clinical staff, nine psychiatrists, and 30 fellows and interns. We are proud to report the opening of the new walk-in clinic and mobile assessment team in North San Diego County which has facilitated more logistical efficiency and rapid interventions for children, youth, and families. Additional services include an inpatient consultation/liaison program that provides psychiatric consultation, treatment, and recommendations to patients hospitalized in RCHSD inpatient units, as well as in the emergency department.

Willard Connor, MD
Dr. Connor is the Staff Psychiatrist for the North Inland Outpatient Psychiatry Clinic and the Poway School District ED Intensive Outpatient Program.

Ann Garland, PhD
Dr. Garland is a Co-Investigator of the Implementation Methods Research Group (IMRG) funded by an Advanced Center award from NIMH to the Child and Adolescent Research Services Center (CASRC). She is also the PI of CASRC’s contract to provide research services to the County Department of Health and Human Services, and is a Co-Investigator for several additional projects. She conducts research on community-based mental health care for children and families.

Ellen K. Heyneman, MD
Dr. Heyneman is the Director, Consultation-Liaison, at RCHSD and is the Residency Training Director at the Division of Child and Adolescent Psychiatry at UCSD.

Jeanne Hong, MD
Dr. Hong is a Staff Psychiatrist at Child and Adolescent Psychiatry Services (CAPS), where she assesses and cares for child and adolescent inpatients with a wide variety of diagnoses.

Brett Johnson, MD
Dr. Johnson is the Staff Psychiatrist for the Behavioral Crisis Center in Oceanside.

Edward Lau, MD
Dr. Lau is the Staff Psychiatrist for the North Coastal Outpatient Psychiatry Clinic.

Saul Levine, MD
Dr. Levine is Professor of Clinical Psychiatry and Director of the Division of Child and Adolescent Psychiatry at UCSD and is also Head of the Department of Psychiatry at RCHSD.

Peter Kim, MD
Dr. Kim is a Staff Psychiatrist for the North Coastal Outpatient Psychiatry Clinic where he sees patients.
Major Goals and Plans

Notwithstanding the significant growth in quality and volume in our clinical and academic programs, the department intends to maintain its trajectory of excellence and is embarking on new planned new ventures and achievements:

• Research and Clinicians working with Developmental Evaluation Clinic (DEC) and Child and Adolescent Services Research Center (CASRC) in the exciting new Autism Development Institute (ADI)
• Expanding the new Medical-Psychiatric Unit at RCHSD
• Beginning a Community Psychiatry Fellowship in Child & Adolescent Psychiatry
• Pursuing the UC San Diego Child and Adolescent Psychiatry Services (CAPS) contract and relocating the entire program to Rady Children's Hospital.
• Developing a mechanism for private pay and HMO patients to be seen in Outpatient Psychiatry.
• Initiating a Research Fellowship in Child & Adolescent Psychiatry
• Recruiting more full-time academic faculty with demonstrated track records in areas of research in child and adolescent psychiatry
• Instituting more evidenced-based interventions
• Continuing our extensive school programs (EPSDT: Early and Periodic Screening, Diagnosis and Treatment) to enhance prevention and early interventions with at-risk populations, and providing training for our fellows.
• Expanding our telepsychiatry program to facilitate better triage and timely interventions in rural, isolated or underserved areas, and far-flung emergency departments
• Increasing the department's close collaboration with the Child and Adolescent Services Research Center (CASRC), scientists who are faculty members (Drs. Aarons, Akshoomoff, Baker, Brookman-Frazee, Garland, McCabe, Yeh, and Corsello)
• Developing additional services for Latino patients and families, especially in the area of multi-generational services (Dr. Gabrielle Cerda)
• Establishing specialty clinics for children and adolescents
• New ROI submissions
• Reinitiating the search for a new Department and Division head in Child & Adolescent Psychiatry

Jeffrey E. Max, MD
Dr. Max is Professor, Department of Psychiatry, UCSD and Director, Neuropsychiatric Research, RCHSD. He conducts research on psychiatric and neuropsychological aspects of pediatric traumatic brain injury and pediatric stroke.

Clarence Perry, MD
Dr. Perry is the Medical Director of Riley School’s Mental Health Program, where he sees patients and supervises fellows. He is also Consulting Psychiatrist to the EPSDT Treatment Team at RCHSD Outpatient Psychiatry.

Christopher Rich, MD
Dr. Rich is the Medical Director at Child and Adolescent Psychiatry Services, (CAPS), where he supervises medical students, residents and fellows and assesses and cares for child and adolescent inpatients with a wide variety of diagnoses.

Susan Tapert, PhD
Dr. Tapert is the Program Director of the Substance Abuse Mental Illness Program at the VA San Diego Healthcare System.
Michael Tramell, MD
Dr. Tramell is a Staff Psychiatrist for the North Coastal Outpatient Psychiatry Clinic where he sees patients.

Katherine Williams, PhD
Dr. Williams provides supervision to psychology interns, coordination of psychological testing, and clinical practice with children and adolescents.

Tony Tung-I Yang, MD, PhD
Dr. Yang is the Physician Treatment Team Leader for two outpatient treatment teams at RCHSD at Children’s Plaza and is an outpatient physician at RCHSD’s Child and Adolescent Psychiatry Clinic at Children’s Plaza.

May Yeh, PhD
Dr. Yeh conducts research on issues of cultural competence in outpatient mental health services for adolescents.

TEACHING ACTIVITIES

Natacha Akshoomoff, PhD
- Instructs clinical psychology graduate students, interns, and postdoctoral fellows and child psychiatry fellows
- Serves on dissertation committees
- Faculty, SDSU-UCSD Joint Doctoral Program in Clinical Psychology Group
- Supervises undergraduate research at UCSD
- Faculty, UCSD Human Development Program

Lauren Brookman-Frazee, PhD
- Provides clinical supervision to doctoral practicum students
- Lectures on topics including autism, parent training, and behavior management to child psychiatry fellows and pre-doctoral psychology interns
- Provides research mentoring to doctoral students and postdoctoral fellows
Sandra J. Brown, PhD
- Training director of the Psychology Internship Training Program in the Department of Psychiatry at UCSD
- Supervising psychologist at Child and Adolescent Psychiatry Services (CAPS) for pre-doctoral psychology interns and joint doctoral students at UCSD and SDSU
- Active in teaching and training residents and fellows

Gabrielle Cerda, MD
- Active in all aspects of the Fellowship Training Program: recruitment/training/supervision
- Organizes/teaches Quality Assurance Monitoring, Cultural Psychiatry, Therapeutic Interventions and Advanced Psychopharmacology Courses for psychiatry fellows
- Supervises all psychiatry fellows during outpatient rotation
- Consults in difficult clinical cases
- Supervises licensed clinical social workers, marriage and family therapists and psychologists, as well as trainees and unlicensed staff from these disciplines
- Member of the Residency Education Committee

Ann Garland, PhD
- Research mentorship for four early career investigators (all which are NIMH K awardees), two post-doctoral fellows, one psychiatry resident, and two pre-doctoral candidates
- Clinical Teaching/Supervision for one post-doctoral fellow, two psychology interns and two psychology practicum students

Ellen K. Heyneman, MD
- Director of Training for the Child and Adolescent Fellowship
- Oversees the fellowship educational experience
- Chairs the Residency Education Committee in the Division of Child and Adolescent Psychiatry
- Active in all aspects of teaching, including clinical, case conferences, didactics, lectures, and seminars
- Director of the Consult Liaison Service at RCHSD

Saul Levine, MD
- Head, Department of Psychiatry at RCHSD
- Program Director of the Division of Child and Adolescent Psychiatry at UCSD
- Director of the Child and Adolescent Psychiatry Service (CAPS) at UCSD
- Sits on the Residency Education Committee
- Chairs the Psychiatry Grand Rounds Series

Jeffrey E. Max, MD
- Provides individual supervision for residents
- Leads the Child and Adolescent Neuropsychiatry course

Kristen McCabe, PhD
- Teaches three undergraduate courses per year at UCSD
- Supervises approximately eight students per year on independent research projects
- Supervised two Honors Theses

Clarence Perry, MD
- Supervises all the child psychiatry fellows in the school-based mental health rotation, as well as individual fellows on their outpatient therapy cases
- Lectures to third-year medical students for their psychiatry clerkship
- Lectures to second-year fellows in the School Consultation Seminar

Christopher Rich, MD
- Member of Residency Education Committee, Division of Child and Adolescent Psychiatry
- Supervise all child psychiatry fellows during inpatient rotation at CAPS as Medical Director
- UCSD General Psychiatry Graduate Education Committee
- UCSD General Psychiatry Residency Training Selection Committee
- UCSD Psychiatry PGY-2 Residency Didactics, Child Psychiatry Module, Coordinator
- UCSD School of Medicine, Course Director, PSYCH 429, Child Psychiatry

Tony T. Yang, MD, PhD
- Supervises and teaches Child and Adolescent fellows, psychology interns and social worker interns at Rady Children’s Plaza
- Teaches second-year general adult psychiatry residents and third-year medical students at UCSD
- Teaches and supervises first- and second-year medical students working on research projects, and fourth-year medical students working on their ISP projects
May Yeh, PhD
• Teaches the Cultural Psychology course in the SDSU/UCSD Joint Doctoral Program in clinical psychology
• Supervised trainees (doctoral level, undergraduate level, postdoctoral level)
• Served on dissertation committees and guidance committees
• SDSU/UCSD JDP in Clinical Psychology EP Track Co-Chair
• SDSU/UCSD JDP in Clinical Psychology Curriculum Committee Member

Ann Garland, PhD
2010 Excellence in Teaching Award from the Department of Psychiatry, UCSD (voted on by trainees)
Associate Editor, Administration and Policy in Mental Health and Mental Health Services Research
Member of Ad Hoc NIH Review Committees
Member, Research Network on Youth Mental Health, John D. and Catherine T. Macarthur Foundation

Ellen K. Heyneman, MD
AADPRT Regional Representative- California, 2011
AACAP News Features Editor, 2011
San Diego Top Doctors and Dentists Award, 2011
Doctors in America, 2011 - 2012
Best Doctors in America, 2009 - 2010
America’s Top Psychiatrists, 2010
ABPN Examination CAP Video and Vignette Committee, 2009-2012
USMLE/NBME Step 1 Test Material Development Committee for Behavioral Sciences, 2006 - 2010
Remediation of Clinical Skills Examination. AADPRT Annual Meeting, San Juan, Puerto Rico, March 2010
Invited lecturer, Infant and toddler development. Social and Behavioral Science, Human Growth and Development Course, UCSD School of Medicine, March 2010
Successful transition to practice. AACAP Annual Meeting, New York, NY, October 2010
Successful transition to practice. AACAP Annual Meeting, Toronto, Canada, October 2011

May Yeh, PhD
SDSU Outstanding Faculty Member in Psychology, 2010
# Research Support

<table>
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<tr>
<th>Grant/Contract #</th>
<th>Annual Budget</th>
<th>Total Direct Dollars/Duration of Grant</th>
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<tr>
<td><strong>Natacha Akshoomoff, PhD</strong>&lt;br&gt; Evaluation of Diagnostic and Services Practice in Autism&lt;br&gt; K23-MH71796 (Akshoomoff, PI)/NIH</td>
<td>$764,977</td>
<td>July 2004-June 2010</td>
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<tr>
<td><strong>Lauren Brookman-Frazee, PhD</strong>&lt;br&gt; Translating Autism Interventions for Mental Health Services via Knowledge Exchange&lt;br&gt; NIH/K23-MH077584 (Brookman-Frazee, PI)</td>
<td>$780,384</td>
<td>May 2007-March 2010</td>
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<td><strong>Tony T. Yang, MD, PhD</strong>&lt;br&gt; Functional MRI to understand how the underlying neural circuitry is affected in adolescent suffering from depression&lt;br&gt; K23 - 5K23MH07091-03/NIMH</td>
<td>$771,769</td>
<td>Feb. 2005-Present</td>
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<td><strong>Gregory A. Aarons, PhD</strong>&lt;br&gt; Cascading Diffusion of an Evidence-Based Child Maltreatment Intervention&lt;br&gt; R18-CE001334 (Aarons, PI)/CDC</td>
<td>$621,289</td>
<td>Sept. 2007-Sept. 2010</td>
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<td><strong>ACISIR for Older People with Schizophrenia and Other Psychoses</strong>&lt;br&gt; P30-MH066248 (Aarons, PI)/NIH</td>
<td>$123,027</td>
<td>Sept. 2007-Aug. 2012</td>
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<td>Dynamic Adaptation to Implement an Evidence-Based Child Maltreatment Intervention&lt;br&gt; R01-CE001556 (Aarons, PI)/CDC</td>
<td>$1,107,033</td>
<td>Sept. 2009-Aug. 2012</td>
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<td>Evaluation of Pregnant and Parenting Women Program&lt;br&gt; T1018361 (Aarons, PI)/SAMHSA</td>
<td>$232,893</td>
<td>July 2007-June 2010</td>
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<td>Leadership Development for Evidence Based Practice Implementation&lt;br&gt; R21-MH082731 (Aarons, PI)/NIH</td>
<td>$312,390</td>
<td>Jan. 2009-Nov. 2010</td>
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<td>Mixed Methods Study of a Statewide EBP Implementation&lt;br&gt; R01-072961 (Aarons, PI)/NIH MH</td>
<td>$1,677,439</td>
<td>Sept. 2005-June 2010</td>
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<td><strong>May Yeh, PhD</strong>&lt;br&gt; Cognitive Consensus in Cross-Cultural Competence&lt;br&gt; R01 MH071483/NIH</td>
<td>$2,100,000</td>
<td>Dec. 2005-May 2010</td>
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<td>Race/Ethnicity, Parental Involvement, and Youth Mental Health Service Outcomes (sponsor)&lt;br&gt; F31 MH079741/National Institute of Mental Health</td>
<td>$146,885</td>
<td>Nov. 2006-Nov. 2011</td>
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Research Support (continued)

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<td>F31/National Institute of Mental Health</td>
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<td>Ann Garland, PhD</td>
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<td>County of San Diego, Department of Health Services (Garland, PI)</td>
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<tr>
<td>Building Collaborations to Address Disparities in Psychoactive Medication Use</td>
<td>$10,000</td>
<td>Jan. 2011-Dec. 2011</td>
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<tr>
<td>UCSD Division of Child Development and Community Health Planning Grant</td>
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</tbody>
</table>

PUBLICATIONS


Aarons GA, Sommerfeld DH, Walrath-Greene C. Evidence-based practice implementation: The impact of private ver-


Trask E, Garland A. Are children improving? Results from outcome measurement in a large mental health system. Administration and Policy in Mental Health and Mental Health Services Research (in press).


The goal of the Pediatric Residency Program at the UC San Diego (UCSD) is to train pediatricians to be well versed in all aspects of caring for sick and well children by integrating the art and science of pediatric medicine. Located in the seventh largest city in the U.S. and on the border with Mexico, the program offers unique experiences in border health, the intercity/homeless population, the rural community, the military community and the Native American population. The entire first, second and third year residents are involved in longitudinal projects in partnership with either community-based organizations or faculty on campus. Over two-thirds of the 2010-2011 graduating seniors will pursue fellowship training, and the remaining graduates will pursue careers in primary care. This year’s intern recruitment was extremely successful, attracting medical students from major medical schools across the country.

FACULTY

Sherry C. Huang, MD, Program Director
Erin Stucky-Fisher, MD, Associate Program Director
ADMINISTRATION

Allison Reinhardt, Residency Program Administrator
Joanne Albrecht, Residency Program Assistant

CHIEF RESIDENTS

2010-2011
Grant Keeney, MD
Waheeda Samady, MD
Loren Sacks, MD

2011-2012
Megan Browning, MD
Monique Mayo, MD
Tina Udaka, MD

2010 Graduates - Post Graduates
Micah Bhatti, MD, PhD, ID Fellowship, University of Chicago
Lori Broderick, MD, PhD, Allergy Immunology Fellowship, UCSD
Christina Chan, MD, Neonatal Fellowship, UCSD
Jessica Dayan, MD, Emergency Medicine Fellowship, UCSD
Jeff Gold, MD, PhD, Neurology Fellowship, UCSD
Nicole Hibbs, MD, Private practice, San Diego
Grant Keeney, MD, Emergency Medicine Fellowship, Medical College of Wisconsin
Shannon Metzger, MD, Private Practice, San Diego
Sonaly Rao, MD, Hospitalist, DC Children’s
Loren Sacks, MD, Critical Care Fellowship, Stanford University
Waheeda Samady, MD, Hospitalist Fellowship, UCSD
Annemarie Selaya, MD, Community Clinic, San Diego
Katherine Stumpf, MD, Neonatal Fellowship, UT Dallas
Payam Vali, MD, Neonatal Fellowship, Toronto Sick Kids

2010 Med-Peds Graduates - Post Graduates
Ben Frischhertz, MD, Congenital Cardiac Combined Fellowship, Texas Children’s
Brian Frugoni, MD, Pediatric Critical Care, UCSD
Shawna Klinesteker, MD, Private Practice, Santa Cruz, CA
Erin Papenfuss, MD, Private Practice, Orange County, CA

2011 Graduates - Post Graduates
Jaime Barea, MD, Genetics Fellowship, UCSD
Aaron Boes, MD, PhD, Neurology Fellowship, MGH
Megan Browning, MD, Critical Care Fellowship, Univ. of Pittsburgh
David Del Bello, MD, ID Fellowship, Mount Sinai
Jessica Gordon, MD, Hospitalist, Orlando Children’s
Nidhi Goyal, MD, Gastroenterology Fellowship, UCSD
Setareh Jones, MD, Private Practice, San Diego
Samantha Lewis, MD, Community Clinic, San Diego
Monique Mayo, MD, Urgent Care, Seattle Children’s
Steven Reeves, MD, PhD, Pulmonary Fellowship, Univ. of Washington
Jenny Shepherd, MD, Neonatal Fellowship, UCSD
Tina Udaka, MD, Hematology Oncology Fellowship, UCSD
Gabe Vaughn, MD, Cardiomyology Fellowship, UCSD
Matthew Williams, MD, Cardiology Fellowship, UCSD
Jennifer Yu, MD, Hematology Oncology Fellowship, UCSD

2011 Med Peds Graduates - Post Graduates
Tracy Exley, MD, Adolescent Fellowship, Stanford University
Chuck Gabbert, MD, Gastroenterology Fellowship, Univ. of Pittsburgh
Patrick Lew, MD, Hospitalist, Portland, Oregon
Lauren Worth, MD, Private Practice, San Diego
CLASS OF 2012

Amira Baker, MD
Jacob Gregerson, MD
Lauren Hackett, MD
Megan Klenow, MD
Mindy Li, MD
Kevin O’Leary, MD
Daphne Say, MD
Kimberly Sprague, MD
Erin O’Leary, MD
Bruce Tran, MD
Elizabeth Waters, MD
Irene Wong, MD
Nicole Yamada, MD

MED PEDS CLASS OF 2012

Ben Dillon, MD
Ben Johnson, MD
Ricardo Indacochea, MD
Hannah Walford, MD

MED PEDS CLASS OF 2013 RESIDENTS

Eric Chow, MD
Katie O’Sullivan, MD
Scott Francioni, MD
Brian Williams, MD

CLASS OF 2013

Jeanne Carroll, MD
Catherine Lacey, MD
Whitney Law, MD
Sarah Lindback, MD
Kimberly Montez, MD
Melissa Morelos, MD
Eric Reed, MD
Callie Rzasa, MD
Mary Kate Scott, MD
Angell Shieh, MD, PhD
Richard Silva, MD
Dan Sisti, MD
Amanda Terry, MD
Jillian Wall, MD

MED PEDS CLASS OF 2014

Denise Carranza, MD
Marilynn Chan, MD
Sri Cherukumilli, MD
Nicole Coufal, MD, PhD
Lauge Farnaes, MD, PhD
Andrei Fodoreanu, MD
Yousuke Horikawa, MD, PhD
Jefferson Jones, MD
Curtis Leong, MD
Erin Murphy, MD
Don Nguyen, MD
Andrew Renuart, MD
Kathleen Romero, MD
Erica Sanford, MD

CLASS OF 2014

Lawrence Ma, MD
Diana Moke, MD
Perrie Pardee, MD
Vanessa Raabe, MD

MED PEDS CLASS OF 2015 RESIDENTS

Lawrence Ma, MD
Diana Moke, MD
Perrie Pardee, MD
Vanessa Raabe, MD
RESIDENCY PROGRAM
AT RADY CHILDREN’S
HOSPITAL-SAN DIEGO

The goal of the UCSD Pediatric Residency Program is to train residents in the practice of general and subspecialty medicine. Our mission is to develop today's residents to become tomorrow's physicians as leaders in the field of Pediatrics as clinicians, scientists, advocates, and teachers. We approach training with emphasis on excellence in patient care, encouraging the residents to think critically, to make sound medical decisions, maintain advanced technical skills, and to work in a professional environment that promotes life-long learning.

Our program is unique in its exposure to a diverse pediatric population with breadth in general and subspecialty medicine, placing special emphasis on community pediatrics, behavioral pediatrics, academic/research pediatrics, and border health. During the three years of consecutive training, the resident will evolve progressively with increasing knowledge and responsibility to all aspects of general pediatric medicine.

Our UCSD resident participates in a variety of programs for continued intellectual growth. Multiple didactic opportunities are incorporated into the curriculum to enhance resident development and training. Our program recognizes the importance of close supervision and mentorship with a goal to develop a close mentored relationship between the house staff and faculty. Continued opportunities in career development is fostered with exposure to academic and community resources, allowing the resident to gain the tools to understand the steps involved in advancing their careers. Additionally, exciting new growth has occurred in the department to expand resident exposure to Global Health, advocacy training and quality improvement.

We are pleased to offer this program for applicants interested in becoming leaders in pediatrics, and we look forward to working closely with our residents to train them to become the future of clinical care, research, and education.
Major Goals and Plans

- This coming year, the program will continue to offer annual competitive research grants for resident research projects.
- We will continue to enhance our Career Development Block for our interns to have exposure to career paths in academic, research, and clinical medicine.
- We have developed a pediatric physician-scientist development series to enhance resident education in basic science. This is in anticipation of the creation of a special training tract in physician scientist we plan to develop in the next year.

CURRICULUM

The PL-1 is expected to take full initiative in the workup and management of patients under the guidance of a supervising resident and attending staff physician. Intensive exposure is provided to ill children and to children of normal birth, growth and development. During the first year, inpatient pediatrics is taught at RCHSD. The pediatric house officer cares for children with a large variety of pediatric problems, ranging from uncomplicated illnesses to complex diseases with multiple organ involvement.

In the PL-1 year, residents also participate in the stabilization and care of the sick neonate. The Neonatal Intensive Care Unit (NICU) at UCSD has a busy delivery service and is a Level III nursery that receives transports of critically ill babies from around San Diego County. The first year resident also spends one month in the Newborn Nursery at UCSD learning to care for normal newborns and common problems appropriate for a general pediatrician.

The outpatient experience is varied during the first year to expose residents to many facets of ambulatory care including adolescent medicine, general pediatrics and developmental and community pediatrics.

To expose pediatric residents to acute care in ambulatory pediatrics, they will spend a month in the RCHSD Emergency Department. This experience is designed to provide residents with a strong knowledge base in ambulatory medicine.

The Community Pediatrics rotation exposes the resident to the important role pediatricians now play in the community. This includes interacting with local schools and child care centers (both as a consultant and on behalf of patients), advocating for child health issues and collaborating with professionals from other disciplines that also care for children.

The PL-2 year builds on the experiences of the first year with emphasis on patient management and triage of the ill child. The PL-2 resident rotates through the inpatient ward at RCHSD and experiences increased independence and decision-making. The PL-2 resident will also serve as a senior resident during their inpatient rotation at Rady’s during part of the rotation. Additionally, the second year resident rotates one month in the Pediatric Intensive Care Unit at RCHSD gaining experience evaluating and managing critically-ill children. The resident continues to have emergency room experience evaluating acutely ill children during the PL-2 year. One month of the second year is dedicated to the care of patients in developmental pediatrics. Three to four months of elective time is available in the PL-2 year to enhance exposure to subspecialty medicine, and to allow resident independent time to pursue scholarly works in research or global projects.

The PL-3 year provides each resident the opportunity to enhance skills and knowledge in a wide variety of pediatric areas. The senior residents serve as supervisors and teachers to first year residents and medical students. On the inpatient wards at RCHSD, they supervise all admissions to the teaching service and train interns and medical students. Morning Report serves as a forum for in-depth
discussion about patient management with subspecialists, general pediatricians and community physicians. The role of teacher extends to the outpatient clinic and emergency room, as well. The PL-3, in close consultation with attending physicians, oversees the care of clinic patients and provides guidance and expertise in general pediatrics.

The Emergency Room at RCHSD enhances the senior resident's proficiency in managing acutely ill children. Additional expertise in the care and stabilization of critically ill children is provided through another rotation in the PICU in the third year and by working on the transport team. During the NICU rotation the PL-3 resident serves as a supervising resident to the resident service. The year is rounded out with several elective months to augment each resident's education.

There is one call free rotation each year. During the second and third year residents often use this time to participate in international rotations in Central and South America, Southeast Asia or Africa.

Under the new ACGME guidelines, the inpatient and NICU rotations at UCSD are organized in a shift paradigm. Residents work with a dedicated consistent team during the month spending three weeks on a day team, and one week as a night team. Day time and night time curriculum are provided for ongoing real time teaching and learning. There is one month of vacation in each year throughout training at UCSD.

There are two to three PL-4 chief residents who serve as instructors in the Department of Pediatrics and as representatives of the Chairman of the department. They also act as general pediatric consultants to the residents and to other services.

The chief residents organize teaching conferences at UCSD and RCHSD. They also are attending physicians in the inpatient wards. This year is designed to continue to augment general pediatric knowledge through consultation, research, teaching and patient care.

<table>
<thead>
<tr>
<th>Grant/Contract #</th>
<th>Annual Budget</th>
<th>Total Direct Dollars/Duration of Grant</th>
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<tr>
<td>Tina Chan</td>
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<td>$3,000</td>
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<tr>
<td>(Intramural grant funded)</td>
<td>Composition of expressed Breast Milk in preterm infants, PI: Dr. Lisa Stellwagen</td>
<td>July 2008-June 2010</td>
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<tr>
<td>Samantha Lewis</td>
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<td>(Intramural grant funded)</td>
<td>Pediatric Process Group: Evaluation of process group analysis as a coping mechanism for residency training, PI: Dr. Saul Levine</td>
<td>July 2010-June 2011</td>
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<tr>
<td>Matthew Williams</td>
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<td>$3,000</td>
</tr>
<tr>
<td>(Intramural grant funded)</td>
<td>Murine model for evaluating effects of pulmonary hypertension, PI: Dr. Paul Grossfeld</td>
<td>July 2008-June 2010</td>
</tr>
</tbody>
</table>
PUBLICATIONS


The Division of Respiratory Medicine is dedicated to improving all aspects of respiratory health affecting infants, children, and young adults. The division has maintained national ranking for the past 3 years (ranked in the top 30 Pulmonology programs in the U.S. News and World Report survey of 160 children's hospitals, 2009-2011); and many of the senior faculty are internationally recognized. The clinical programs provide expert consultation, clinical management expertise, and patient and family education to children and youth with respiratory disorders in San Diego and surrounding counties. The divisional research programs range from fundamental basic investigations regarding lung remodeling and fibrosis, to the effects of hypoxia and hypercapnia on cell function and cell fate in brain, heart and lung, to cutting-edge basic and clinical research in cystic fibrosis. Divisional scholars provide research training and mentorship to future investigators from the undergraduate to junior faculty levels. The Division of Respiratory Medicine is critical to the educational mission of the Department of Pediatrics, with a recently-accredited Pulmonology Fellowship program, and programs specific to students, housestaff, fellows and the San Diego practice community.

Left to right: Xiang Gu, Sung Park, Hang Yao, Paul Quinton, Dan Zhou, Xiaolu Sun, Mark Pian, Jin Xue, Gabriel Haddad, Meerana Lim, Robert Douglas, Julie Ryu
FACULTY/STAFF

James S. Hagood, MD, Professor of Pediatrics and Chief, University of California, San Diego (UCSD) Division of Respiratory Medicine

Priti Azad, PhD, Assistant Project Scientist

Robert M. Douglas, PhD, Assistant Adjunct Professor of Pediatrics

Xiang Gu, PhD, Assistant Adjunct Professor of Pediatrics

Gabriel G. Haddad, MD, Chair, Department of Pediatrics; Professor, Departments of Pediatrics and Neurosciences; Physician-in-Chief, RCHSD

He Huang, PhD, Assistant Adjunct Professor of Pediatrics

Daniel J. Lesser, MD, Assistant Clinical Professor of Pediatrics

Meerana Lim, MD, Assistant Clinical Professor of Pediatrics

Xiaoqiu “Wendy” Liu, MD, PhD, Assistant Project Scientist

Malla Reddy Madireddi, PhD, Adjunct Professor of Pediatrics

Sung Min Park, MD, Clinical Professor of Pediatrics

Mark S. Pian, MD, Clinical Professor of Pediatrics; Director of Pediatric Pulmonary Training Program; Director, UCSD Cystic Fibrosis Center

Paul M. Quinton, PhD, Professor of Pediatrics; Nancy Olmsted Chair, Pediatric Pulmonary Research

Julie Ryu, MD, Assistant Adjunct Professor of Pediatrics

A. K. M. ("AK") Shamsuddin, PhD, Assistant Project Scientist

Xiaolu Sun, PhD, Assistant Adjunct Professor of Pediatrics

Simon Wong, MD, Associate Project Scientist

Jin Xue, MD, PhD, Assistant Adjunct Professor of Pediatrics

Hang Yao, PhD, Assistant Adjunct Professor of Pediatrics

Dan Zhou, PhD, Assistant Adjunct Professor of Pediatrics

Left to right: He Huang, Xiaoqiu Liu, James Hagood, Daniel Lesser, A.K. Shamsuddin, M.M. Reddy


Main Goals and Plans

The Division of Respiratory Medicine continues to pursue its mission and vision, building on existing strengths, and identifying and mobilizing resources necessary to promote excellence in clinical care, research, teaching and advocacy.

Vision Statement
Recognizing the centrality of healthy breathing to overall health, and the high prevalence of respiratory disorders in pediatric medicine, the Pediatric Respiratory Medicine Division at UCSD will provide outstanding, family-centered, state-of-the-art care with compassion and efficiency, educating the next generation of leaders in Respiratory Medicine, generating new knowledge about childhood respiratory health and disease, disseminating that knowledge broadly, and advocating on behalf of our patients.

Strategic Growth Plan
Achieving the vision will require increasing the current size of the clinical faculty, in addition to recruiting and retaining PhD and other doctoral researchers, striving for a balance of physician scientists (basic and clinical) and clinician educators. The following will be benchmarks of successful growth:

• Each faculty member’s contribution will be of a quality meriting regional or national recognition.
• Investigators will be funded with a balanced portfolio of funding sources.
• Established investigators will be competitive for NIH funding and participate in multi-investigator projects.
• UCSD will be a “must-consider” site for those seeking training in Pediatric Pulmonology.
• Faculty and Staff will balance optimal productivity and career satisfaction as well as thriving personal and family lives.

Priority Areas for Growth/Recruitment

Clinical:
• Pediatric Sleep Medicine/Respiratory Consequences of Neuromuscular Disorders
• Asthma (Translational Science)
• Cystic Fibrosis (Translational Science and Quality of Care)
• Childhood Interstitial Lung Diseases
• Genomics/Epigenomics of Childhood Respiratory Disease
• Infant Pulmonary Function Testing

Research:
• Interstitial Lung Diseases/Lung Remodeling
• Genetic/Molecular Basis of Diffuse Lung Disease
• Airway Epithelial Biology and Ion/Fluid Transport
• Pulmonary Vascular Remodeling and Hypertension
• Infection, Environment, Innate Immunity, Inflammation and Lung Disease
• CF Clinical Research and Quality Improvement

Additional Goals (to be prioritized/refined during the strategic planning process):
• Grants management support including searching and distributing relevant FOAs, assisting with regulatory requirements such as IRB, animal use, and conflict of interest paperwork, assisting with grant preparation and submission, monitoring grant
awards and providing financial reports to investigators. Initially this could be performed by departmental staff but may require a divisional grants specialist as the research portfolio expands.

• The needs for non-physician staff (advanced practice nurse, PNP, social work, nutrition, respiratory therapy) will be defined and addressed in partnership with RCHSD administration.
• Capability for pediatric sleep medicine will need to be expanded and will likely require the foundation of a pediatric sleep disorders center within or closely associated with RCHSD. Because of a complex market in the San Diego area with numerous providers with widely varying capacity to serve children’s needs, we will explore an external consultation/assessment of our existing approach and the feasibility/fiscal impact of expansion.
• Establishment of a family advisory committee with the assistance of the staff. This group would advise in creation of a family-centered environment for clinical care and research.
• Maintaining/improving our national ranking
• Creating a comprehensive sleep medicine program to promote translational research in coordination with existing and future basic science and clinical programs
• Continuing and expanding formal quality improvement activities in cystic fibrosis (CF) to optimize outcomes, and expand processes to include other division clinical activities
• Promoting integration of the division’s research and QI activities with clinical training programs for students, residents and fellows
• Creating joint post-doctoral training programs with Internal Medicine/Pulmonary and Pediatric Intensive Care Sections
• Expanding collaboration with other divisions to foster interdisciplinary care for complex diseases
• Developing other diagnosis-focused interdisciplinary outpatient clinics, including possibly: Chronic Assisted Ventilation, Aerodigestive and Upper Airway Disorders (with Otolaryngology), and Impaired Host Defense (Ciliary Dyskinesia/Recurrent Pneumonia/Bronchiectasis; with Immunology).
• Developing an inpatient Respiratory Institute for specialized care of all children with need for airway and breathing support

POSTDOCTORAL FELLOWS
Kathryn Akong, MD, PhD
Hady Felfly, PhD
Kornelia Kis, PhD
Ruth Muchekehu, PhD
Matthew Pamenter, PhD
Mindy Ross, MD, MBA
Jessie Ning Yang, MD, PhD
Huiwen Zhao, PhD

CLINICAL ACTIVITIES
INPATIENT/OUTPATIENT
The division specializes in evaluation, consultation and care for all respiratory disorders of infants, children and teenagers, continuing through the transition into adulthood for patients with cystic fibrosis and other chronic disorders. Common referrals to our services are for asthma, bronchiectasis, bronchopulmonary dysplasia, chronic cough, congenital anomalies of the respiratory tract, cystic fibrosis, infant apnea, pulmonary tuberculosis, recurrent pneumonia, obstructive sleep apnea, stridor, wheezing, diffuse lung disease and others.

Services include:
• Medical & nursing services
• Pneumocardiogram services
• Pulmonary function tests
• Exercise testing
• Nutritional support
• Polysomnography
• Inpatient and home care
• Artificial airway care
• Bronchoscopic bronchoscopy
• Bronchopulmonary hygiene
• Mechanical ventilator support (invasive and non-invasive)
• Specialized respiratory home care

Diagnostic tests and outpatient consultation are provided Monday through Friday from 8 a.m. to 4 p.m., and inpatient care is available on a 24-hour basis, seven days a week. Specialized staff directing their expertise towards care of patients with respiratory disease include a dietitian/nutritionist, a medical social worker, respiratory therapists, a genetic counselor, pharmacists, a nurse coordinator, pediatric nurse practitioners, a research nurse, and a clinical coordinator.

Drs. Hagood, Lesser, Lim, Park, Pian and Ryu care for outpatients referred by community or hospital-based physicians during nine outpatient pulmonary clinics and two cystic fibrosis half-day clinics per week at RCHSD. Satellite clinics in Murrieta, Encinitas, and Escondido are conducted on an additional six half days per month. The section conducts approximately 4,000 outpatient visits per year. The inpatient Pulmonary Service is among the busiest at RCHSD, with a daily census ranging from 10 to 20 patients per day. Inpatient consultation is also provided to neonatal intensive care nurseries at UCSD/Hillcrest Medical Center and Sharp Mary Birch Hospital.

RESEARCH ACTIVITIES

James S. Hagood, MD, who joined the faculty as Division Chief in September, 2009, studies the molecular regulation of fibroblast phenotypes in pulmonary fibrotic disease and lung alveolarization. He also studies the roles and regulation of Thy-1, a critical modulator of cellular phenotype.

Gabriel G. Haddad, MD, studies the role of ion channels in nerve cells in a low O2 environment. He is also interested in the genetics of susceptibility or tolerance to low or high O2 and the role of gene expression in excitable tissues. He also studies obstructive sleep apnea and the role of hypoxia and hypercapnia on growth and development.

Paul M. Quinton, PhD, investigates the effects of the genetic defects that cause cystic fibrosis. His focus is primarily on fluid and electrolyte transport on pathophysiology in the airways, intestine, and sweat glands in cystic fibrosis and related pulmonary diseases, with a specific focus on HCO3- transport and mucus formation.

Priti Azad, PhD, studies mechanisms by which intermittent (e.g., obstructive sleep apnea and sickle cell anemia) and constant hypoxia (e.g., asthma) lead to cell injury and morbidity or adaptation and survival using Drosophila as the model system.

Robert Douglas, PhD, analyzes the role of reactive oxygen species (ROS) and the immune system in hypoxia- and hypercapnia-induced neuronal and cardiovascular injury and their developmental sequelae.

Xiang Gu, PhD, studies the effect of chronic elevated CO2 on excitability of mouse neurons and the effect of hypoxia on gating properties of BK channels of inner membrane of mitochondria and the effect of chronic hypoxia and hypercapnia on glucose stimulated insulin secretion.

He Huang, PhD, systematically screens for genes that are critical or necessary for recovery from oxygen deprivation in genetic models.

Daniel J. Lesser, MD, is investigating the use of home monitoring for detecting obstructive sleep apnea syndrome in pediatric patients.

Xiaoqiu “Wendy” Liu, MD, PhD, investigates lipid-raft-associated signaling and the role of Thy-1 in modulating fibroblast differentiation and survival in lung fibrosis.

Mark S. Pian, MD, conducts translational and clinical research in cystic fibrosis. He is also the Co-Principal Investigator of the UCSD Cystic Fibrosis Foundation Therapeutic Development Center.

M. M. Reddy, PhD, studies the electrophysiological mechanisms by which CFTR (the anion channel affected in cystic fibrosis) is regulated in normal and CF-affected tissues, mainly the isolated microperfused sweat gland and the airway epithelium. He collaborates in the Nasal Potential Difference studies as part of the drug discovery program at UCSD Medical School. He is presently serving as a PI to one NIH funded research project and also as a consultant/collaborator to another NIH funded research project to Dr. T.C. Hwang at the University of Missouri Medical School.
Julie Ryu, MD, studies the effect of hypercapnia on lung function and development.

A.K.M. Shamsuddin, PhD, studies ion transport in small airways, compares ion transport properties in trachea and small airways, and is developing assays of beta-adrenergic stimulation of sweat glands and bicarbonate transport in native small airway epithelia.

Xiaolu Sun, PhD, studies how fatty acids and lysophospholipids affect ion channels function in nerve cells during O2 deprivation; and mechanisms of selective vulnerability of neurons to oxygen-glucose deprivation and therapeutic strategies for neuroprotection after ischemia.

Simon Wong, MD, studies the development of drug- and toxicant-induced lung injury and fibrosis in experimental animal models, and tests novel therapeutic interventions.

Jin Xue, MD, PhD, studies roles of transporters and ion channels, especially sodium-hydrogen exchanger isoform 1, in hypoxic adaptation/injury.

Hang Yao, PhD, studies the cellular and molecular mechanisms of penumbral cell death in focal cerebral ischemia.

Dan Zhou, PhD, studies the genetic and molecular mechanisms underlying hypoxia and hyperoxia adaptation and tolerance.

Matthew Pameente, PhD
Postdoctoral Research Project: Understanding the role of innate immunity in ischemic neurodegeneration in the penumbral region.

Mindy Ross, MD, MBA
Postdoctoral Research Project: Phenotype discovery in NHLBI genomic studies. Creation of automated annotation of phenotypes in genomic study databases.

Jessie Ning Yang, MD, PhD
Postdoctoral Research Project: The effect of 5-HT on gastrointestinal disorders; Abnormal mucus and Cystic Fibrosis.

Huiwen Zhao, PhD

TEACHING AND TRAINING ACTIVITIES

Robert Douglas, PhD
• Mentors trainees
• Presenter at local Research in Progress and Journal Club meetings
• Mentors undergraduate students

James S. Hagood, MD
• Clinical education of pediatric fellows, residents and students
• Mentors/advises postdoctoral fellows
• Mentor, advisor, thesis committee member for graduate students
• Mentors undergraduate students through Faculty Mentor Program
• Facilitates/teaches weekly Research-in-Progress seminars in the laboratory
• Facilitates/teaches monthly Journal Club
• Weekly hospital rounds and bi-weekly pulmonary rounds
• Develops patient and family education materials for diffuse lung diseases
# Research Support

<table>
<thead>
<tr>
<th>Grant/Contract #</th>
<th>Annual Budget</th>
<th>Total Direct Dollars/Duration of Grant</th>
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<tr>
<td><strong>Gabriel G. Haddad, MD</strong></td>
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<td>Molecular Mechanisms of Hypoxia Tolerance and Susceptibility</td>
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<td>1 P01 HL098053-01A1/NIH (NHLBI)</td>
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<td>2 P01 HD032573-11A1/NIH (NICHD)</td>
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<td>Molecular Basis of Cell Tolerance to O2 Deprivation</td>
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<td>Alliance Agreement with St. Jude's Research Hospital</td>
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<td>20080177/St. Jude Children's Research Hospital</td>
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<td>Innate Immunity and Reactive Oxygen Species Contribute to Neurogenesis</td>
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<td>20092768/Resmed Foundation</td>
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<td><strong>James Hagood, MD</strong></td>
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<td>Regulation of Fibroblast Phenotype in Lung Fibrosis</td>
<td>$255,024</td>
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<td><strong>Malla Reddy Madireddi, PhD</strong></td>
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<td>Molecular Pathophysiology of Cystic Fibrosis</td>
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<td>$92,250 Sept. 2008-Aug. 2011</td>
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<td><strong>Mark S. Pian, MD</strong></td>
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<td>Therapeutics Development Center Network</td>
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## Research Support (continued)

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<td>Obstructive Sleep Apnea in Children</td>
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<td>Paul M. Quinton, PhD</td>
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<td>Electrolyte Transport in Small Airways</td>
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<td>Factors in Mucociliary Clearance of Small Airways</td>
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<td>Sweat Tests to Assay for Efficacy of Drug Therapy</td>
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<td>Can Bicarbonate Help Mucus Release in Cystic Fibrosis</td>
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<td>A Role of Bicarbonate in Mucus Release &amp; Implications for Cystic Fibrosis</td>
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<td>Calcium-Activated Chloride Conductance in the intact Murine Lower Airways</td>
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<td>SHAW09D0/Cystic Fibrosis Foundation</td>
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<td>Cystic Fibrosis Foundation Development Award</td>
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<td>A. K. M. Shamsuddin, PhD</td>
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<tr>
<td>Comparison of Ion Transport Properties of Trachea and Small Airways</td>
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## Research Support (continued)

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</table>

**Simon Wong, MD**

- Molecular Effects of DEP on Respiratory Neprylisin $141,376 4728-RFPA04-5/5-1/HEI/US EPA Aug. 2001-July 2010

**Jin Xue, MD, PhD**

- Role of Secreted Phosphoprotein 1 in Cardiac Hypertrophy and Fibrosis $75,000 20111210/Emerald Foundation Inc. Dec. 2010-Dec. 2011

**Ning Yang, MD, PhD**


**Dan Zhou, PhD**

- Notch Mechanisms Underlying Hypoxia Tolerance $70,000 $308,000 0835188N/American Heart Assn July 2008-June 2012

---

**Gabriel G. Haddad, MD**

- Participates in Professor’s Rounds with pediatric residents and students
- Mentors/advises four postdoctoral fellows
- Advisor for two graduate students
- Teaches yearly Medical Students/Pharmacy Students Course
- Organized Students Interested in Pediatrics, first year medical students
- Participates in monthly Fellow Research Conferences
- Teaches weekly Research-in-Progress seminars in the laboratory
- Organizes a bi-weekly seminar involving a group of investigators and their labs at UCSD (Extreme O2 group, EOG)
- Participates in monthly Faculty Research Conferences
- Teaches bi-weekly Journal Club
- Weekly pulmonary rounds

**Xiang Gu, PhD**

- Presenter at local Research in Progress and Journal Club meetings
- Mentored and mentors four undergraduate students in their independent research courses of UCSD
• Mentored a visiting graduate student and a visiting postdoctoral fellow
• Mentor of a medical student’s summer project

He Huang, PhD
• Presenter at local Research in Progress and Journal Club meetings
• Mentors one undergraduate student

Daniel J. Lesser, MD
• Assistant Director, Pediatric Pulmonary Training Program
• Initiated Western States Pediatric Pulmonary Case Conference, a monthly web-based case conference involving pediatric pulmonary programs in the Western U.S. and Canada
• UCSD Health Profession Mentor Program, 2009-present
• Participates in Professor’s Rounds with pediatric residents and students
• Mentors/advises postdoctoral fellows and pediatric housestaff
• Presenter at monthly Pediatric Pulmonary Case Conferences for residents and students

Meerana Lim, MD
• Supervises pediatric residents during inpatient and outpatient clinical activities
• Participates in case conferences and the morning report with medical students and interns
• Presenter at monthly Pediatric Pulmonary Case Conferences for residents and students

Sung Min Park, MD
• Supervises pediatric residents during inpatient and outpatient clinical activities
• Presenter at monthly Pediatric Pulmonary Case Conferences for residents and students
• Participates in Clinical Leadership. Administrative/Management, Program Development and Education
• Started Chairman’s bi-weekly pulmonary rounds

Julie Ryu, MD
• Supervises pediatric residents during inpatient and outpatient clinical activities
• Mentors research projects for an undergraduate student, a graduate and a post-doctoral student fourth year medical student.
• Presenter, bimonthly case conferences with medical students and interns

Mark S. Pian, MD
• Director, Pediatric Pulmonary Training Program
• Course director, Pediatric Sub-internship
• Faculty, Principles to Practice, School of Medicine Core Course
• Coordinates senior medical student training in pediatrics and pediatric subspecialties
• Supervises pediatric residents during inpatient and outpatient clinical activities
• Participates in case conferences, The Morning Report and Professor’s Rounds with medical students and interns
• Presenter at monthly Pediatric Pulmonary Case Conferences for residents and students
• Coordinates Bioethics training for UCSD Pediatric Fellowship Programs
• Member, School of Medicine Core Curriculum Comm. Working Group, Pre-clinical Curricular Reform

Paul M. Quinton, PhD
• Teaches human physiology of respiration and renal function to first-year medical students at UC Riverside
• Instructs group sessions in problem based learning on renal function at UCSD
• Instructs students and scholars in his UCSD laboratory
• Co-Directs Pediatric Faculty Research Conference

M. M. Reddy, PhD
• Teaches gastrointestinal physiology and biomedical engineering at UCSD
• Assists in instructing scholars, students, and visitors in the lab of Dr. Quinton
• Consultant to University of Missouri NIH Funded Cystic Fibrosis Research Grant
• Presenter at monthly Pediatric Pulmonary Case Conferences for residents and students
• Presenter at local Research in Progress and Journal Club meetings

A. K. M. Shamsuddin, PhD
• Technical and methodological assistant to the new lab members in Dr. Paul Quinton’s lab

Xiaolu Sun, PhD
• Presenter at local Research in Progress and Journal Club meetings
• Mentors students and post-docs

Jin Xue, MD, PhD
• Presenter at local Research in Progress and Journal Club meetings, as well as in national and international conferences
• Mentor of five undergraduate students and scientific consultation for post-doctoral fellows
• Presider, 2010 UCSD Summer Research Conference

Hang Yao, PhD
• Mentors/advises five undergraduate students and a graduate student with research projects
• Presenter at Seminar of Division of Physiology, School of Medicine
• Presenter at Pediatric Faculty Research Seminar
• Presenter at local Research in Progress and Journal Club meetings

Dan Zhou, PhD
• Mentor trainees
• Thesis advisor and committee member of two graduate students
• Mentors an undergraduate student (course code: BISP 199)
  * Presenter at 9th international pathways, networks and systems medicine
  * Presenter at Seminar of Department of Bioengineering, Jacobs School of Engineering, UCSD
• Presenter at local Research in Progress and Journal Club meetings

POSTDOCTORAL FELLOWS—TEACHING ACTIVITIES

Kathryn Akong, MD PhD
• Currently mentoring undergraduate student Samantha Wong, who is planning on doing Master’s thesis in Nizet lab, and eventually intends to attend medical school.

Priti Azad, PhD
• Mentored undergraduate internship student Daya Raman for two quarters (Winter and Spring 2011)

Ruth Muchekehu, PhD
• Mentored an undergraduate summer student Anna Srouji (July-September 2009)

Mindy Ross, MD, MBA
• Participates in case conferences, The Morning Report and Professor’s Rounds with medical students and interns
• Presenter, Pediatric Pulmonary Case Conferences for residents and students
• Presenter, Fellows Conference Journal Club
• Co-creator of “Comfort Code” education modules about end-of-life/palliative care for residents

Jessie Ning Yang, MD, PhD
• Mentored undergraduate students Shaun OOI (2010-2011) and Maxwell S Harter (2011).
• Presider of the 2010 UCSD Summer Research Conference.

AWARDS, HONORS, AND MAJOR PRESENTATIONS

James S. Hagood, MD
Best Doctors in America, 2010-2011
Children's Interstitial Lung Disease (ChILD) Consortium, part of NIH/NHLBI Rare Lung Diseases Consortium, 2005-Present
Scientific Advisory Committee, Children’s Interstitial Lung Disease (chILD) Foundation, November 2007-Present
Ad hoc member, Lung Injury Repair and Remodeling Study Section, NIH/Center for Scientific Review
Co-Chairman, LIRR and RIBT Member Conflicts Study Section, NIH, December 2008 – 2011
Invited speaker, Society for Pediatric Research and American Thoracic Society International Conferences, 2011
Who’s Who in Medicine and Healthcare, 2011

Gabriel G. Haddad, MD
Best Doctors in America, 2010 and 2011
Rady Children’s Hospital Research Award of the Year, 2010
Invited keynote speaker, ISOTT, Flying high with flies: Insights from a genetic model system, Cleveland, OH, July 6-8, 2009
Invited speaker, PRISM (Progress in the Science of Medicine) Lecture Series, UCSD, La Jolla, CA, October 9, 2009
Invited speaker, Department of Physiology, Yale University, New Haven, CT, March 2010
Invited speaker, Grand Rounds and Keynote Speaker at Fellows Conference, Univ. of Washington, Seattle, WA, April 2010
Invited speaker, American Thoracic Society, Obstructive sleep apnea intermittent hypoxia and oxidative stress in tissue and end-organ damage, New Orleans, LA, May 2010
Invited speaker, Tulane University, Department of Pediatrics, May 2010
Invited speaker, Alfred Dorfman Visiting Professor Lecture, Univ of Chicago, Chicago, IL, June 2010
Invited speaker, Disease and Animal Models Research Conference, Fudan University, Shanghai China, July 2010
Invited speaker, 8th Pathways, Networks, Systems Conference, Rhodes Greece, July 2010
Invited speaker, Cherniack Symposium, Cleveland, OH, October, 2010
Invited speaker, International Federation of Placenta Associations (IFPA), Santiago, Chile, October, 2010
Invited speaker, Section of Physiology Research Seminar, UCSD, San Diego, CA, March 2011
Invited speaker, American Thoracic Society, Symposium on Intermittent Hypoxia, Denver, CO, May 2011
Invited speaker, Tulane University, Department of Pediatrics, May 2011
Invited speaker, 9th Pathways, Networks, Systems Conference, Crete, Greece, June 2011

Daniel J. Lesser, MD
Children’s Hospital Los Angeles Division of Pediatric Pulmonology Chun I. Wang Research Award, 2009
Children’s Hospital Los Angeles Division of Pediatric Pulmonology Deputy Jimmie Richard Henry Award. Fellow of the Year, 2009
National Center of Leadership in Academic Medicine, UCSD Course Participant, 2010.
Invited speaker, Advances in the Practice of Pediatrics, San Diego, CA, 2010

Malla Reddy Madireddi, PhD
Epithelial electrolyte transport in health and disease: Lessons learned from the sweat gland. Oamania University, Hyderabad, India, 2009
Distinct cell types regulate absorption and secretion of Airway Surface Liquid (ASL) in the small airways. CF interest group online. UCSD. March 17, 2010
Associate Editor of the Scientific Journal The Frontiers of Membrane Physiology and Biophysics, 2011

Mark S. Pian, MD
Designated National Quality Coach, Learning and leadership collaborative in CF quality improvement, Cystic Fibrosis Foundation
America’s Best Doctors, 2009 -2010
Award for Excellence in Teaching, UCSD Department of Pediatrics, 2009
Session Moderator and Invited Speaker, Emerging bioethical topics in CF research and clinical care, Member, Steering Committee, CF Foundation Therapeutic Development Network
Member, Protocol Review Committee, CF Foundation Therapeutic Development Network
Featured speaker, Rady Children's Hospital Tracheostomy Day, Pediatric Tracheostomy Placement; Ethical Considerations, San Diego, CA, 2009
Breath of Life Hero, Cystic Fibrosis Foundation, San Diego Chapter, 2010
Invited speaker, Seeking a Community Standard for Withdrawing Life Sustaining Treatments: Considerations for Children's Hospitals. American Society for Bioethics & Humanities, San Diego, CA, 2010
Physician Excellence Award For Excellence in Teaching, Rady Children's Hospital San Diego, 2011
Nominee, Kaiser Excellence in Teaching Award, UCSD School of Medicine Class of 2011

Paul M. Quinton, PhD
Heroes of Hope, Genetec, Inc. November, 2009
Hans Ussing Award Lecture, Role of HCO3-Secretion in epithelial mucin release
Experimental Biology, Epithelial Transport Group, Anaheim, April 27, 2010
Rady Children's Hospital Research Award, Feb 3, 2011
Invited lecturer, Pathology Lecture Series, HCO3-Leaven for Mucin. University of Southern California, Keck School of Medicine, Los Angeles, CA, March 10, 2011
Invited lecturer, Unraveling mucins with HCO3-secretion. Frontiers in epithelial transport, Yonsei University, Seoul, Korea, April 14, 2011
Invited lecturer, Understanding the basic defect (in CF). Gastroenterology Conference honoring Peter Durie, University of Toronto, Toronto, Canada, May 13, 2011
Invited lecturer, Bicarbonate transport and mucus secretion—What's the role of CFTR? 34th European Cystic Fibrosis Conference, Hamburg, Germany, June 10, 2011
Invited lecturer, Cystic Fibrosis: Connecting defective HCO3-transport to hostile mucus. UCI School of Medicine, June 23, 2011


A.K.M. Shamsuddin, PhD
Recipient of American Lung Association Senior Research Training Fellowship grant as a P.I. for the project: Comparison of ion transport properties of trachea and small airways, 2009
Recipient of Cystic Fibrosis Foundation Pilot & Feasibility Grant Awards as a P.I. for the project HCO3- transport in native small airway epithelia, 2011-2013

Jin Xue, MD, PhD
Invited speaker, Secreted phosphoprotein 1 and peroxisome proliferator-activated receptor gamma signalings are important in Na+/H+ exchanger 1-mediated cardiac injury. 9th International Conference on Pathways, Networks, and Systems Medicine, Chania, Crete, Greece

Huiwen Zhao, PhD
Oral presentations at Gases in Drosophila Physiology and Development Workshop at the 50th and 51th Annual Drosophila Research Conference, 2009 and 2010

Dan Zhou, PhD
Invited speaker, Metabolic adaptation to chronic hypoxia. Beijing Genomics Institute, Chinese Academy of Sciences, November 2010
Invited speaker, Metabolic adaptation to chronic hypoxia: Lessons from a drosophila model. 9th international Conference on Pathways, Networks and Systems Biology, June 2011
POSTDOCTORAL FELLOWS—AWARDS, HONORS, AND MAJOR PRESENTATIONS

Pritzi Azad, PhD
Poster presentation at Hypoxia and Consequences: The New York Academy of Sciences, NY, 2010
Platform presentation at the session Drosophila model for Human Diseases. 51th Annual Drosophila Research Conference, Washington DC, USA, 2010
Poster presentation, 52th Annual Drosophila Research Conference, CA, 2011

Hady Felfly, PhD
Chair, UCSD Postdoctoral Association (PDA), 2009

Matthew Pamenter, PhD
Cameron Award Plenary Lecture, Mechanisms of channel arrest and spike arrest underlying metabolic depression, and the remarkable anoxia tolerance of the freshwater painted turtle Chrysemys picta bellii. Canadian Society of Zoologists (CSZ). University of Toronto at Scarborough, Toronto, ON, 2009
Council of Graduate Schools Distinguished Dissertation Award Nominee, 2009
Governor General’s Gold Medal Nominee, 2009

Mindy Ross, MD, MBA
ATS Fellows Travel Scholarship

Jessie Ning Yang, MD, PhD
Elizabeth Nash Memorial Fellowship Presentation, Can bicarbonate help mucus release in Cystic Fibrosis? 2009-2011
Can bicarbonate help mucus release in CF? National Cystic Fibrosis Family Education Conference, Redwood City, CA, July 2009-2010

Oral presentations, Defective cAMP-dependent HCO3-secretion leads to abnormal mucus in CF mouse small intestine. Experimental Biology 2010 Anaheim, CA, April 2010
Can bicarbonate help mucus release in CF. Elizabeth Nash Memorial Fellowship Colloquia, Oakland, CA, February 2010 and 2011

OTHER IMPORTANT ACCOMPLISHMENTS

Development of a monthly Southwestern or Western states teleconference case discussion series to improve education and networking for subspecialty residents and junior faculty in Respiratory Medicine throughout the region (Drs. Lesser and Hagood).

PUBLICATIONS


Douglas RM, Kanaan A, Rivero M, Dugan LL, Haddad GG, Ali SS. Neuronal death during combined intermittent hypoxia/hypercapnia is due to mitochondrial


Pamenter ME, Hogg DW, Ormond J, Shin DS, Woodin MA, Buck LT. Endogenous GABAA and GABAB receptor-mediated electrical suppression is critical to neuronal anoxia tolerance. *Proc Natl Acad Sci USA*, June 20, 2011.


Shamsuddin AKM, Reddy MM, Lytle C, Quinton PM. Distinct secretory and absorptive system control luminal surface fluids in small airways. ATS meeting, 2009.


Wong SS, Sun NN, Miller HB, Witten ML, and Burgess JL. Acute changes in sputum collected from exposed human subjects in mining conditions. *Inhalation Toxicology*, 22(6):479-485, 2010


