Our Vision . . .

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,

We are very pleased to share with you the details of the milestones achieved by the Department of Pediatrics at UC San Diego (UCSD) in collaboration with Rady Children's Hospital-San Diego (RCHSD) and the Rady Children's Specialists Medical Foundation (RCSMF). We also celebrate the meaningful contributions of our physicians, physician-scientists and scientists in this 2011-2013 report.

For years, the Department of Pediatrics at UCSD, RCHSD and RCSMF have shared a commitment to the health and well-being of children in San Diego County and beyond. The collaboration between these entities unified patient care, research, education, community service programs, and advocacy in the region. It has opened the door to achieve national recognition for world-class pediatric care and research and the potential to change the course of pediatric medicine. As an example of this achievement, we now care for about 90% of the children in San Diego County and 40-50% of Imperial and Riverside Counties, thus amounting to about 900,000 children seeking medical and surgical advice at RCHSD. Another illustration is the increase in research revenues from about $25 million in 2005-2006 to more than $52 million in each of the past two years. This exciting work is highlighted in the report.

With the opening of an additional pavilion at RCHSD a few years ago, this Hospital has become the largest children's hospital in California and the eighth largest in the country with about 17,000 discharges. In the past consecutive few years, 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 which have built their reputations over many more decades.

Together, the Department of Pediatrics at UCSD, RCHSD and RCSMF are committed to delivering excellence in care through research that is recognized nationally and around the world.

Sincerely,

Gabriel G. Haddad, MD
Distinguished Professor of Pediatrics and Neurosciences
Chairman, Department of Pediatrics,
University of California, San Diego
Physician-In-Chief and Chief Scientific Officer
Rady Children's Hospital-San Diego

Kathleen A. Sellick
President and CEO
Rady Children's Hospital-San Diego

Herbert C. Kimmons, MD
President
Children's Specialists of San Diego
Sr. V.P. & Executive Director,
Rady Children's Specialists of San Diego-A Medication Foundation
UCSD Dean of Children's Clinical Services
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## INTRODUCTION

## DIVISIONAL REPORTS

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Following is a summary of achievements for the past two academic years. This has been a terrific period of growth in terms of recruitments, appointments, and development of plans for the clinical and academic missions of the Department. All ten subspecialties have been ranked in the U.S. News & World Report.

Academic 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, which has become one of the largest in the Department. Additional faculty are being recruited. Research programs are being strengthened in various ways. There is an on-going search committee to recruit a chief for the Adolescent Medicine Program.

Allergy/Immunology and Rheumatology have expanded their clinical programs. Major research accomplishments have been made in the genetics and inflammatory pathways of urticarial and other allergic diseases such as Eosinophilic Esophagitis. A major search to recruit an internationally recognized physician-scientist to lead the Division identified Dr. Harold Hoffman who is now the Division Chief of the combined Division. The nationally recognized Kawasaki Program is housed within this division and Dr. Jane Burns and her colleagues have made important contributions to this field in the past couple years in terms of genotype-phenotype appreciation and the etiology of the seasonal nature of Kawasaki disease.

The Division of Cardiology, under the leadership of Dr. John Moore, has been recognized by U.S. News & World Report to be among the top pediatric cardiovascular programs in the United States in the past few years. Expansion of the clinical programs included the further development of Electrophysiology, Cardiac Transplantation, a Cardiac CVICU and a stronger Outreach Program. 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. The research portfolio of the Division expanded with the recruitment of Dr. David Shellington. Other faculty with major research interest are being additionally considered.
Dermatology, under the leadership of Dr. Lawrence Eichenfield, has continued to be eminent with nationally renowned faculty. The Division’s clinical service continues to grow and has a number of outreach clinics. New faculty with research programs have joined the Division recently. A number of research projects are on-going in Dermatology.

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 in the area of Fetal Alcohol Spectrum Disorders research throughout the world. The Division leads the National Children’s Study site for San Diego County. The Center for the Promotion of Maternal Health and Infant Development 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 new leadership of Dr. Bema Bonsu, the new Division Chief, has put great effort in lowering the percent of children that leave without being seen. This Division continues to grow clinically and is recruiting three additional faculty members to join the Division. The Division is well poised now to grow academically in the next few years.

The Endocrinology Division has seen an important expansion in their clinical and research activities in the past two years under the leadership of Dr. Michael Gottschalk. A number of clinical trials have also started in the past few years. In addition, 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 (PDRC), focusing mostly now on Childhood Diabetes. Major additional recruitments have already started and will continue in the next 1-2 years to further build the PDRC.

Gastroenterology has also expanded their 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. This Division has also been ranked in the U.S. News & World Report.

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

The Division of Genome Information Sciences has been recently established under the leadership of Dr. Kelly Frazer. At present, significant recruitments into this Division of two faculty in Bioinformatics is taking place. In addition, strategic efforts are underway to establish a clinical sequencing program and a Bioinformatics Center aimed at delivering personalized medical care to pediatric patients at RCHSD.

In Hematology-Oncology, we are now into our sixth year of an alliance with St. Jude Children’s Research Hospital which has boosted our clinical trials capacity, assuring cutting-edge care of cancer patients. Four new pediatric hematology/oncology faculty members have joined the Division in the past few years, including Dr. Don Durden, a physician-scientist, who is leading the research endeavors in this Division and also serves as Vice Chair of Research in the Department of Pediatrics. Dr. Andrew Dietz and Janet Yoon have also started recently in the Division. Dr. Courtney Thornburg just joined this past July. A national search is also on-going for the recruitment of a physician-scientist. This Division has also been ranked in the U.S. News & World Report.

The Hospital Medicine Division has also expanded and has assumed responsibilities in outlying hospitals for their inpatient care. They have one of the first fellowship programs in the country in Hospital Medicine. Research programs are expanding. Child abuse and maltreatment activities are also a big 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 with clinical and research activities spanning medical care at RCHSD, molecular biological research, and population and epidemiologic clinical research in the U.S. as well as across the border with Mexico. A national search is also underway to recruit a physician-scientist in this area.

The Division of Neonatology at RCHSD and UCSD, under the leadership of Drs. Gail Knight and Neil Finer, form a large division,
RCHSD Has Developed Formal Affiliations With Virtually Every Other Hospital and Medical Group in the Region

These partnerships include: facility joint ventures, specialty physician coverage, transfer agreements and community health affiliations.
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>90.8%</td>
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<tr>
<td>SAN DIEGO COUNTY</td>
<td>0-14</td>
<td>88.2%</td>
</tr>
<tr>
<td>SOUTH RIVERSIDE COUNTY**†</td>
<td>0-14</td>
<td>51.4%</td>
</tr>
<tr>
<td>IMPERIAL COUNTY**</td>
<td>0-14</td>
<td>37.6%</td>
</tr>
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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

collaborating on clinical and research activities. Dr. Finer just retired and a major national search has been recently concluded. Dr. Lance Prince from Vanderbilt is now the Division Chief of a combined Division with two sites, one at UCSD Medical Center and the other at RCHSD. This combined program will have a tremendous impact on clinical and basic research and training of fellows and residents. This Program has also been ranked 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 within the (Neuro-NICU), 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. Underway is a national search for a new Division Chief of Pediatric Neurology.

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 UCSD, I3 or Immunology, Inflammation and Infection, and will be housed in the new research building next to the School of Pharmacy which is slated to open in January of 2014.

Dr. Andrew Skalsky heads the Division of Rehabilitative Medicine. Due to overwhelming demand for patient services, the Division has added two new faculty recently.

The Division of Respiratory Medicine has been ranked in the U.S. News & World Report ranking of Top Children’s Hospitals in Pulmonology for several years in a row. Dr. Jim Hagood, the Division Chief, launched a new Diffuse/Interstitial Lung Disease Referral Program which began 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 being strengthened in various ways in this Division.
In summary, the Department of Pediatrics, RCHSD and RCSMF continue to collaborate to expand their clinical, teaching and research activities. We are fully committed to making the Department of Pediatrics one of the top ten institutions to improve the care for the children of tomorrow through research and teaching today. RCHSD is one of a dozen hospitals nationwide to be ranked in 10 subspecialties. 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.

With the addition of the Acute Care Pavilion, RCHSD became the largest children’s hospital in California (440 pediatric beds) and the eighth largest hospital in the country. This incredible 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 UCSD have joined forces to open the only child and adolescent medical/psychiatric inpatient unit in San Diego a few years ago. 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 a combination of professionals with medical expertise and with mental health and behavioral experience, including specialized experience with eating disorders. Staff includes nurses, social workers, licensed
psychiatric technicians, dietitians and physicians from the hospital, adolescent medicine and child psychiatry services.

Through its collaboration with UC San Diego, RCHSD continues to strengthen its reputation as an academic medical center. This is a tremendous achievement, as many of the top-ranked children’s hospitals in this survey are more than 100 years old and have built their reputation for treating children, teaching doctors and conducting research over generations.

Through the purchase of the 7910 Frost Street building, home of RCHSD’s and UCSD’s new Clinical and Translational Research Center, RCHSD will usher in a new era of pediatric medicine. The Center will focus on Genomics and Systems Medicine 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 improve patient care quality and innovation.
The Academic General Pediatrics, Child Development & Community Health Division led by Dr. Sheila Gahagan focuses on clinical care, medical education, research, and health promotion in the community. Dr. Sheila Gahagan, a developmental-behavioral pediatrician and epidemiologist who holds the Martin T. Stein, Endowed Chair in Developmental-Behavioral Pediatrics, leads the Division, which has 21 faculty members, 8 adjunct faculty members, and 5 fellows, 4 in developmental-behavioral pediatric fellows, and one in academic general pediatrics and adolescent health. The Division also has 52 research and health promotion staff, over half with advanced degrees. The Division’s clinical mission is three-fold: 1) to provide a medical home from birth through adolescence including those with complex chronic conditions; 2) to provide consultative care to promote breast feeding for premature infants; and 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.

The Division's combined clinical, research, and educational efforts have resulted in ongoing local and global collaborations, including long-term work with San Diego-based community clinics and health agencies, and vibrant academic-research partnerships locally, across the U.S., and in Chile and Mexico.

**Academic General Pediatrics/Adolescent Medicine**

The Academic General 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.

**FACULTY**

- **Bretten D. Pickering, MD**, Section 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
- **Kimberly Houkam-Leek, MD**, Assistant Clinical Professor of Pediatrics
- **Leah Kern, 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; Internal Medicine-Pediatrics Residency Program Director
- **Lindia J. Willies-Jacobo, MD**, Clinical Professor of Pediatrics, Assistant Dean for Diversity and Community Partnerships, School of Medicine
clinical activities
inpatient/outpatient
The Academic General Pediatrics Division is responsible for the primary health care of all children seen at the UCSD Pediatric Clinic. The Pediatric Clinic and the Adolescent Medicine Clinic are located on the Rady Children's Hospital-San Diego (RCHSD) campus. 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.

Pediatric 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 health care team recognizes that adolescence is a special time associated with particular physical and mental health concerns, requiring specially-trained professionals. The faculty in the Adolescent Medicine Program are board certified in adolescent medicine and distinguished by their specialty interest and training. Adolescent Medicine physicians care for children in the Adolescent Medicine Clinic and on the Rady Children's Hospital, In-patient Eating Disorders Unit (EDU). The Adolescent Medicine clinic provides health care maintenance, contraception, illness care, and behavioral health counseling. On the EDU, the Adolescent Medicine physicians collaborate with the UCSD Division of Child and Adolescent Psychiatry. The physicians on the EDU have unique training in the medical management of teenagers and young adults with eating disorders requiring hospitalization. Following hospitalization, these patients can be followed medically in the Adolescent Medicine Clinic.

Joyce A. Adams, MD
- Medical attending for RCHSD inpatient eating disorder unit
- Provides medical evaluations for children for suspected sexual or physical abuse at Chadwick Center
- Participates in monthly abuse-related peer review sessions at Chadwick Center and Palomar Hospital

Karen S. Loper, MD
- Medical Director UCSD Adolescent Medicine Clinic
- Medical attending for RCHSD inpatient eating disorder unit
- Pediatric consultant for Child & Adolescent Inpatient Psychiatry Service, UCSD

Bretten D. Pickering, MD
- Section Chief, Academic General Pediatrics/Adolescent Medicine
- Medical Director and Attending/UCSD General Academic Pediatrics Clinic
- Medical Director, Special Needs Clinic at RCHSD
- Attending at Helen Bernardy Center for Medically Fragile Children

Lori Wän, MD
- Director, UCSD Internal Medicine-Pediatrics Residency Program
- Attends in the General Academic Pediatrics Clinic

Lindia Willies-Jacobo, MD
- Attends in the UCSD General Academic Pediatrics Clinic
- Assistant Dean for Diversity and Community Partnerships, UCSD School of Medicine

RESEARCH ACTIVITIES
Joyce A. Adams, MD is a world expert on the clinical findings in child sexual abuse. She has established normal anatomic variation in genital and anal examinations with longitudinal examinations. She has also established the importance of certain pathological findings. Some of her recent research was partially funded by National Technological University of Norway. She also has a research interest in adolescent eating disorders. 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.

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
To provide a Medical Home to a diverse panel of patients including those with chronic medical or behavioral health problems

To provide a Medical Home for medically fragile pediatric patients

To provide comprehensive care including onsite mental health counseling

To expand our comprehensive health care services to be able to care for young adults with chronic conditions who have difficulty transitioning to providers who traditionally take care of adult patients

To provide outstanding educational experiences for medical students, residents and fellows

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.

Major Goals & Plans

Academic General Pediatrics/Adolescent Medicine

Clinic (PINC) provides nutritional, medical, and lactation follow-up for breastfed premature infants and their mothers. Her current research focuses on knowledge, skill and attitudes of physicians for supporting provision of breast milk to former premature infants after hospital discharge.

Leah Kern, MD focuses her scholarly work on HIV in Africa. She is currently working on a project to increase disclosure of HIV positive status to spouses. Her work in conjunction with the UCSD Internal Medicine Infectious Disease Program, has been supported by a PEPFAR grant to Ethiopia.

TEACHING ACTIVITIES

Joyce A. Adams, MD
• Teaches residents, medical students, Teen Mobile Van, and Journal Club
• Teaches Introduction to Adolescent Medicine
• Uses simulated patient encounters in her Introduction to Clinical Medicine for MS-2 students
• Teaches medical students and residents at RCHSD
• Lectures locally, nationally, and internationally on adolescent medicine and child abuse

Eyla Boies, MD
• Clinical teaching with pediatric residents, medical students
• Continuity clinic preceptor
• Teaches lactation physiology and breastfeeding support
• Course Coordinator, Medical Student-4 Pediatric Ambulatory Sub-internship, Peds 431
• Small group leader, Medical Student-4 course Principles to Practice
• Pediatric resident Clinical Pathology Case lecture supervisor

Janet Crow, MD
• Teaches medical students and residents in patient care, journal club and small discussion groups
• Continuity clinic preceptor
• Regular Lecturer, UCSD/San Ysidro Family Medicine Residency
• Continuity Clinic Co-Director and Director of Curriculum Development
Nancy Graff, MD
• Teaches medical evaluation the abused child
• Teaches medical students, residents and continuity clinic residents
• Participates in the Medical Student-2 course Introduction to Clinical Medicine
• Small group leader for Medical Student-4 course Principles to Practice

Leah Kern, MD
• Medical Student-3 coordinator for UCSD General Academic Pediatrics Clinic
• Teaches medical students, residents and continuity clinic residents

Karen S. Loper, MD
• Board Certified Adolescent Medicine
• Coordinates a popular Adolescent Medicine MS-4 elective
• Provides the introductory lecture in Adolescent Health for Pediatrics, the core rotation for MS3s
• Medical student Independent Study Project Chair and trainee advisor
• UCSD School of Medicine Faculty for Problem-Based Learning
• Pediatric resident Clinical Pathology Case lecture supervisor

Bretten D. Pickering, MD
• Teaches pediatric primary care of medically fragile children to students and residents
• Participates in the Medical Student-2 Introduction to Clinical Medicine course
• Faculty supervisor, UCSD School of Medicine MSTP Objective Structured Clinical Examination
• UCSD Physician Assessment and Clinical Education Program, Pediatric Coordinator
• Pediatric resident Clinical Pathology Case lecture supervisor

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

Lindia J. 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
• UCSD Program in Medical Education-Health Equity 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, Medical Student-4 course Principles to Practice

Howard Taras, MD
• Provides medical consultation to San Diego City schools, and the Preuss School, including evaluating students health care needs, establishing school health care plans, and supervising select school nursing services

Eyla Boies, MD
• UCSD Academy of Clinician Scholars
• Board Certified Child Abuse Pediatrics
• Board Certified Adolescent Medicine
• UCSD Program in Medical Education-Health Equity 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, Medical Student-4 course Principles to Practice

AWARDS, HONORS AND MAJOR PRESENTATIONS

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

Eyla Boies, MD
UCSD Academy of Clinician Scholars
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

Lindia Willies-Jacobo, MD
Lifetime Achievement Award-UCSD Pediatric Residency, 2009

PUBLICATIONS

Joyce A. Adams, MD
Adams JA Signs of recent or healed injury to the genitalia in pre-pubertal girls describing penile-vaginal contact are uncommon. Medical Science Law 53(2) 117-8, 2013.

Nancy Graff, MD
In 2011, Developmental-Behavioral Pediatrics (DBP) moved its consultation services to a beautiful clinic at 7920 Frost Street, and increased its patient volume 5-fold. In addition, DBP provides care for children at the Rady Children’s Hospital-San Diego (RCHSD) Autism Discovery Institute and the San Diego Regional Center. We have also expanded our multidisciplinary clinical services by providing care for patients at the Fetal Alcohol Spectrum Disorders Clinic and the Down Syndrome Clinic. Developmental-Behavioral Pediatrics provides education for pediatric and internal medicine/pediatric residents during their RRC-required DBP one-month block rotation. In addition, medical students rotate through DBP during their core pediatric clerkship and may take a clinical elective in DBP during their fourth year. We provide didactic teaching during the core curriculums for medical students and residents. The three-year DBP fellowship was approved by the ACGME and began July 1, 2011. There are currently 4 fellows in the program consisting of one intensive clinical year and two years focusing primarily on research and scholarly preparation for an academic career. Our fellowship program was recently awarded the highly competitive 5-year HRSA, Maternal Child Health Bureau grant for “Leadership in Education in Developmental-Behavioral Pediatrics”. With this award, we will be able to focus on DBP in health disparity populations with specific emphasis on the border population and military families and training the next generation of leaders in our field.

FACULTY
Sheila Gahagan, MD, MPH, Chief, Professor of Clinical Pediatrics
Yi Hui Liu, MD, MPH, Section Chief, Assistant Clinical Professor of Pediatrics
Martin T. Stein, MD, Professor Emeritus

POSTDOCTORAL FELLOWS
Lauren Gist, MD, MPH
July 2013-present
Kristopher Kazlauskas, MD
July 2012-present
Chadley Huebner, MD
July 2011-present
Scott Brown, MD
July 2011-present

Bretten D. Pickering, MD

Lindia J. Willies-Jacob, MD
Bailey JA, Willies-Jacob L.J. Are disadvantaged and underrepresented minority applicants more likely to apply to the program in medical education-health equity? Academic Medicine, 87(11) 1535-39, 2012.
CLINICAL ACTIVITIES
Sheila Gahagan, MD, MPH
• Provides developmental-behavioral pediatric services in Developmental-Behavioral pediatric consultation clinic, Fetal Alcohol Syndrome Clinic, Down Syndrome Clinic, Autism Discovery Institute
• Consults nationally and internationally on developmental-behavioral pediatrics

Yi Hui Liu, MD, MPH
• Administers Developmental-Behavioral Pediatric clinical services
• Provides developmental-behavioral pediatric services in Developmental-Behavioral pediatric consultation clinic
• Provides care and consultation for children with developmental disabilities through San Diego Regional Center
• Oversees education for medical students, residents and Developmental-Behavioral Pediatric and Child Psychiatry fellows

Martin T. Stein, MD
• Provides developmental-behavioral pediatric services in Developmental and Behavioral pediatric consultation clinic
• Consults nationally and internationally on developmental-behavioral pediatrics
• Prominent national leader and teacher in developmental-behavioral pediatrics

RESEARCH ACTIVITIES
Yi Hui Liu, MD, MPH
• Co-Investigator on Child Development/Community Health-funded multi-disciplinary research focused on identifying provider determinants of disparities in psychoactive medication use for children with disruptive behavior problems.

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

TEACHING
Sheila Gahagan, MD, MPH
• Program Director of ACGME-approved Fellowship in Developmental-Behavioral Pediatrics
• Precepts residents and medical students on Developmental-Behavioral Pediatric rotation
• Dissertation advisor Joint Doctoral Program SDSU/UCSD (Epidemiology, Health Behavior, Global Health)

Yi Hui Liu, MD, MPH
• Developmental-Behavioral Pediatrics RRC-required block rotation director
• Mentor for DBP Fellows
• Mentor for Pediatric Resident (Ruey-Shuiuan Tsang, MD)
• Independent Study Project Committee Member (Kavya Rao)
• Associate Program Director of ACGME-approved Fellowship in Developmental-Behavioral Pediatrics
• Precepts medical students, residents, and fellows in Developmental-Behavioral clinics

Martin T. Stein, MD
• Precepts medical students, residents, and fellows in Developmental-Behavioral clinics
• 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
• Pediatric Professor’s Rounds

AWARDS, HONORS AND MAJOR PRESENTATIONS
Yi Hui Liu, MD, MPH

Failure to Thrive. We Can't Wait II – Caring for Complex Children 0-5, San Diego, CA, 2011

Anxiety Disorders. Pediatric Grand Rounds at Scripps Mercy Hospital, San Diego, CA, 2012


Focus on ADHD. Practical Pointers for Pediatric Practice, San Diego, CA, 2012

Attention-Deficit/Hyperactivity Disorder: An Update. Pediatric CME Conference, Grossmont Hospital, San Diego, CA, 2013

ADHD Update. Pediatric Grand Rounds at Scripps Mercy Hospital, San Diego, CA, 2013


Martin T. Stein, MD
Skogland Award for Teaching Excellence in Continuing Medical Education, 2011
Robert M. Heavenrich Lecture in Pediatrics, Michigan State University, 2012

PUBLICATIONS
Yi Hui Liu, MD, MPH


Major Goals & Plans

Child Development Behavioral Pediatrics

1. To Increase the reach of Developmental-Behavioral Pediatrics through:
   • Increasing clinical volume and multidisciplinary collaborations
   • Training of developmental-behavioral pediatric fellows
   • Partnering with local programs providing developmental and behavioral assessment and intervention

2. 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.

Martin T. Stein, MD
The focus of The Center for Community Health is on prevalent health disparities in children and youth, their families and the communities in which they live. 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 San Diego County Health and Human Services Agency, the Network for a Healthy California Foundation and other foundations, totaling $18,898,613 over the last two years (including total awards for grants in which we are the PIs). 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, respectively. Our international work broadens our focus but improves our ability to understand health disparities at home.
FACULTY
Sheila Gahagan, MD, MPH, Division Chief, Professor of Clinical Pediatrics
Shelia 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

Kyung (Kay) Rhee, MD, MA, MSc, Assistant Adjunct Professor of Pediatrics
Howard Taras, MD, Clinical Professor of Pediatrics
Michelle Zive, MS, RD, Section Chief, Academic Coordinator
Maria Luisa Zúñiga, PhD, Associate Adjunct Professor of Pediatrics (Joint appointment-Medicine)

ADJUNCT FACULTY
Cecilia Algarin, MD, Neurophysiology, University of Chile
Bronwen Anders, MD, Professor Emeritus
Raquel Burrows, MD, Endocrinology, University of Chile
Marcela Castillo, PhD, Psychology, University of Chile
Fátima Muñoz, MD, MPH, Internal Medicine, UCSD
Philip Nader, MD, Professor Emeritus, Dept of Pediatrics, UCSD
Patricio Peirano MD, PhD, Neurophysiology, University of Chile
Marcela Reyes MD, PhD, Preventive Medicine, University of Chile

HEALTH PROMOTION ACTIVITIES
Sheila 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

Kyung (Kay) Rhee, MD, MA, MSc
- Wellness Committee at the McGill School for Success - Promoting health issues for the preschool and grade school children

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, daily physical activity, increasing food security, and prevention of chronic diseases.
- Obesity prevention through empowering community members throughout San Diego and Imperial County to advocate for environmental, policy and systems changes in their neighborhoods.
- Developing and fostering partnerships with a variety of stakeholders, such as community members, government agencies, the private sector, and community based organizations/non-governmental organizations to improve the health of community members with the largest health disparities.

Maria Luisa Zúñiga, PhD, MPH
- Behavioral health and health promotion among persons of Mexican origin
- Medication adherence among individuals living with HIV
- Prevention of HIV-transmitting risk behavior among high-risk youth

RESEARCH ACTIVITIES
Sheila 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 date collection personnel, field data metrics, and community outreach and engagement activities and related metrics

Sandra Daley, MD
- P1-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 longitudinal 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 project on brain and behavior outcomes in adulthood related to iron deficiency anemia in infancy
- 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 research funded by the UCSD Faculty Senate to test feasibility of a promotora-led intervention, augmented by use of a social media site, 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.
- Co-I on NIH funded grant to develop new obesity treatment for children who are highly responsive to food cues using learning theory and cue exposure therapy

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

Maria Luisa Zúñiga, PhD
- NIH-related research (PI) includes study to improve health care access and utilization in the US-Mexico border region with particular emphasis on Latinos living with HIV and Latino immigrant populations
- Research on primary and secondary HIV- prevention includes HIV/STI prevention among youth, promoting medication adherence, reducing HIV-related stigma, and use of complementary and alternative medicine among Latinos
- Zuniga is the Principal Investigator of a UC Office of the President-sponsored binational mental health and substance use study of migrant families from Yucatán, México who settle in southern California
- Dr. Zúñiga has considerable expertise in Community-Based Participatory Research, Latino migrant health, and U.S.-Mexico border health

TEACHING ACTIVITIES
Sheila Broyles, PhD, MPH
- 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

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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

Howard Taras, MD
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Patricia East, PhD
- Directs monthly Post-doctoral fellows Faculty Development Seminar attended by six post-doctoral fellows in psychology, health behavior, anthropology, developmental-behavioral pediatrics

Sheila Gahagan, MD, MPH
- 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, 2010-2013; Kristi Robusto, PhD candidate, 2010-2013)
- Mentor for post-doctoral fellow Suzanna Martinez, PhD, MS (Health Behavior) September 1, 2009 – September 1, 2012
- Mentor, Pediatric Hematology-Oncology Fellow, Paula Aristizibal

Nancy Graff, MD
- Rotation director for Community Pediatrics Rotation-Resident training in community pediatrics, advocacy, and child protection, including developing and implementing quarterly Cultural Immersion Days and three film nights and one theater night per year; Leads two noon conferences in Community Pediatrics
- Medical Student-4 course Principles to Practice: small group facilitator for general pediatrics cases; Directs the adolescent medicine case session and was small group facilitator
- Teaches continuity clinic residents in General Pediatrics

Kyung (Kay) Rhee, MD, MA, MSc
- Teaches topics in core hospitalist medicine curriculum to pediatric hospitalist fellows
- Leads monthly research working group meetings for the fellows 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
- Co-lead Fellows Conference at Rady Children’s Hospital
- Faculty advisor for the Community Pediatrics Rotation – Attending physician for 2 blocks per year
- Faculty small group leader in SOM EBMI (Epidemiology/Biostatistics/Medical Informatics) course
- Supervises 1-2 medical students in Independent Study Projects (ISP) per year as the primary advisor, and secondary advisor for another 1-2 students per year.
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

Michelle M. Zive, MS, RD
- Internships and evaluation/volunteer opportunities in the funded community health projects for community college students and undergraduate and graduate students from UC San Diego, SDSU, USD, Cal State San Marcos, and National University
- Mentor for UC San Diego and SDSU WIC dietetic interns in the community and public health rotation

Maria Luisa Zúñiga, PhD
- Course Instructor, UCSD clinical research enhancement through supplemental training (CREST)
- Faculty Mentor, Joint Doctoral Program Public Health UCSD
- Faculty Instructor, Culture and Ethics, UCSD Biomedical Ethics Series
- Advisor, medical student ISP studies

AWARDS, HONORS AND MAJOR PRESENTATIONS

Sheila Gahagan, MD, MPH
UCSD National Center of Leadership in Academic Medicine Mentor Award
Academic Senate Research & Travel Award, University of California, San Diego, UCSD 2010, 2011, 2012, 2013
Women who Mean Business Award, San Diego Business Journal, 2012
Biological and Psychosocial Risk for Adolescent Obesity – A Chilean Cohort Study. UCSD Department of Family and Preventive Medicine T32 Cardiovascular Disease Lecture Series, April 6, 2012
Findings from a Chilean Cohort Study on Adolescent Obesity and Cardiovascular Risk. UCSD Pediatric Center for Community Health Research Seminar, April 10, 2012
Développement de l’attention (Development of Attention). 14th Annual APECADE Conference (The Association for Early Intervention for Development in at Risk Infants), Paris, France (presented in French), April 6, 2013
Autorégulation et contrôle de soi (Development of Self-regulation and Self-control In the First Years of Life). 14th Annual APECADE Conference (The Association for Early Intervention for Development in at Risk Infants), Paris, France (presented in French), April 6, 2013

Sandra Daley, MD
Salvation Army Women of Distinction Award
The California Wellness Foundation Champions of Health Professions Diversity Award

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

Nancy Graff, MD
Coordinator, California Collaborative Resident Legislative Advocacy Program, Sacramento, CA, 2009-2011

Yi Hui Liu, MD, MPH
Failure to thrive. We can’t wait II – Caring for complex children 0-5, San Diego, CA, 2011
Anxiety disorders. Pediatric Grand Rounds at Scripps Mercy Hospital, San Diego, CA, 2012
Focus on ADHD. Practical pointers for pediatric practice. San Diego, CA, 2012
Attention-deficit/hyperactivity disorder: An update. Pediatric CME Conference, Grossmont Hospital, San Diego, CA, 2013
ADHD Update. Pediatric Grand Rounds at Scripps Mercy Hospital, San Diego, CA, 2013
Psychiatrists more likely than primary care physicians to prescribe medication for child with ODD. (poster) Pediatric Academic Societies Annual Meeting, Washington, DC, 2013
Selected for AAMC Early Career Women Faculty Professional Development Seminar, 2013

POST-DOCTORAL FELLOWS

Obesity, cardiovascular risk.

Augmenting community capacity.

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. 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.

3. 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
Kyung (Kay) Rhee, MD, MA, MSc
National Center for Leadership in Academic Medicine, 2012
Early Career Reviewer Program, Center for Scientific Review, NIH, 2012-2013

Martin T. Stein, MD
C. Anderson Aldrich Award for Contributions in Child Development: American Academy of Pediatrics

Howard Taras, MD
School Health Alert. 10 issues/yr. National publication targeting school nurses. (Note: Half of each issue’s abstracts [those with “-HT” at the end of the article] were authored by Howard Taras), Sept 2010 through June 2011
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Michelle Zive, MS, RD
Million Dollar Award, Department of Pediatrics, UCSD, 2010, 2011, 2012

Maria Luisa Zúñiga, PhD
HIV Treatment update and border health issues. Recognition from the Health Initiative of the Americas, School of Public Health, University of California, Berkeley, 2011
HIV Research and access to care in the San Diego-Tijuana border region: Implications for serving binational families. UCSD Department of Pediatrics, Grand Rounds 2011-2012, December 2011


Zúñiga ML. Understanding and reducing health disparities workshop. 29th annual Latino Medical Student Association Regional Conference, UC San Diego School of Medicine, March 2012

PUBLICATIONS

Sheila L. Broyles, PhD

Sandra P. Dale, MD

Sheila Gahagan, MD, MPH


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


Rhee KE, Phan TL, Barnes RF, Benun J, Wing RR. A delayed-control trial examining the impact of body mass index recognition on obesity-related counseling. *Clinical Pediatrics*, Epub 2013 June 10 (in press).


Rhee KE and Braden AL. What is motivational interviewing and how can I use it to help motivate my patients to lose weight? *Curbside Consultation in Pediatric Obesity* (in press).


Braden AL and Rhee KE. What are the major social factors that contribute to childhood obesity, and how can clinicians and caregivers alter their impact? *Curbside Consultation in Pediatric Obesity* (in press).

**Howard Taras, MD**


Taras H, Haste NM, Berry AT, Tran J, Singh RF. Medications at school: Disposing of pharmaceuticals. *Journal of School Health* [accepted for publication].

**Michelle Zive, MS, RD**


## Research Support

### Grant/Contract #

<table>
<thead>
<tr>
<th>Name</th>
<th>Grant Description</th>
<th>Total Direct Dollars/Duration of Grant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sheila Broyles, PhD, MPH</td>
<td>San Diego Clinical and Translational Research Institute (Firestein, PI) UL1 RR031980/NCRR/NIH</td>
<td>$6,818,318 July 2010-Mar. 2015</td>
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<tr>
<td></td>
<td>National Children’s Study (Swanson, PI) HHSN267200700021C/ NICHD/NIH</td>
<td>$13,896,742 Sept. 2007-Apr. 2012</td>
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<td>Sandra Daley, MD</td>
<td>Calif Wellness Foundation, Evaluation of Pipeline Programs 2010-068</td>
<td>$180,000 July 2010-June 2013</td>
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<td>Hispanic Center of Excellence D34HP18954 /PHS (HRSA)</td>
<td>$1,120,347 July 2010-June 2012</td>
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<td>NIH (NCMHD), San Diego EXPORT Comprehensive 5 P60 MD000220-02/NCMHD Research Center</td>
<td>$11,027,550 Sept. 2002-Apr. 2012</td>
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<td>HRSA American Recover and Reinvestment Act Equipment to Enhance Training for Health Professionals</td>
<td>$199,990 Sept. 2010-Sept. 2011</td>
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<td></td>
<td>Health Opportunities Career Program</td>
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<td></td>
<td>HRSA American Recover and Reinvestment Act Equipment to Enhance Training for Health Professionals</td>
<td>$228,291 Sept. 2010-Sept. 2011</td>
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<tr>
<td>Sheila Gahagan, MD, MPH</td>
<td>University of California Global Health Institute (UCGHI), GloCal Health Fellowship (CO-I)</td>
<td>$4 million total award Sept. 2012-Aug. 2017</td>
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<td>National Institutes of Health Fogarty International Center (FIC)</td>
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<td></td>
<td>To provide global health research training opportunities for 9-12 fellows annually for the next five years. Steering Committee Member</td>
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<td>UCSD Clinical and Translational Research Institute</td>
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<td></td>
<td>Academic–Community Pilot Funding Program</td>
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<td></td>
<td>Premature Infant Nutrition Post-discharge Collaborative Project (Co-I)</td>
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<td></td>
<td>1 R01 HL088530-01A2/HHS, NIHLB (PI)</td>
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<td>1 R01 HL088530-01A2 (PI)/HHS, NIHLB</td>
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<td>Neuromaturational Delays in Iron Deficient Anemic Infants</td>
<td>$2,422,037 July 2012-July 2017</td>
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<td>2R01HD033487-15/NIH (MPI)</td>
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<tr>
<td>The Gift of Health (El Regalo de Salud): Promoting optimal weight gain in first-time pregnant mothers and their babies. CDCH 2011 1952 003/UCSD (PI)</td>
<td>$40,000 Apr 2011-Dec 2012</td>
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<tr>
<td>Kyung Rhee, MD, MA, MSc</td>
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<tr>
<td>Learning theory to improve obesity treatments 1R01DK094475/NIDDK</td>
<td>$3,054,790 June 2012-May 2017</td>
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<tr>
<td>NIH (NICH) Role of parenting skills, style, and family functioning in pediatric weight loss 7 K23 HD057299-01A2</td>
<td>$802,255 Aug. 2010-May 2014</td>
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<td>Howard Taras, MD</td>
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<tr>
<td>NIH Natl Ctr Research Resources, San Diego Clinical and Translational Research Institute 1UL1 RR031980-01</td>
<td>$36,586,707 July 2010-Mar. 2015</td>
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<td>Collaboration to Establish the Prevalence of FASD in San Diego, CA 1 U01 AA019879-01/NIH (NIAAA)</td>
<td>$10,545,402 Sept. 2010-Aug. 2015</td>
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</tr>
<tr>
<td>County of San Diego, CDC Communities Putting Prevention to Work Sub 532635</td>
<td>$3,457,675 June 2010-Mar. 2012</td>
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<td><strong>Maria Luisa Zúñiga, PhD, MPH</strong></td>
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<td>Programa de Investigación de Migración y salud Health Initiative of the Americas-University of California, Research Program on Migration and Health</td>
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<td>Consejo Nacional de Ciencia y Tecnología (CONACYT), México N°168996</td>
<td>$70,000 Apr. 2012-Mar. 2014</td>
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<td>HIV Care Among Recently Released HIV+ Jail Inmates ID09-SD-016/CA HIV/AIDS Research Program (CHRP)</td>
<td>$200,000 Apr. 2010-Apr. 2012</td>
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<tr>
<td>Mobile Phone-Based Video Directly Observed Therapy for Tuberculosis R21 AI088326/NIH/NIAID</td>
<td>$156,176 Apr. 2010-Apr. 2012</td>
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</tbody>
</table>
Maria Luisa Zuniga, PhD, MPH


Pinedo, M, Kang Sim, E, Espinoza, RA, Zúñiga, ML. Internal migration and correlates of substance use in a community of indigenous Maya from Yucatán, Mexico. Field ACTions Science Reports, accepted February 2013.


The Division of Allergy, Immunology, and Rheumatology 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 Allergy Immunology Program was founded by Dr. Robert Hamburger, emeritus professor in the 1970s and was led by Dr. John Bastian for more than 20 years. Currently, the Division has 6 physicians, 2 nurse practitioners, and a nurse specialist. The Division has subspecialty clinics in immunodeficiency, recurrent fever, eosinophilic esophagitis, and food allergy.
The Pediatric Rheumatology Program began in 1994 by Dr. Ilona Szer 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.

The Kawasaki Disease (KD) Research Program was formed in 1991 by Dr. Jane Burns and is devoted to the study and treatment of patients with KD. It is a one-of-a-kind Center providing 24/7 clinical coverage for KD patients and cutting edge clinical and translational research. In addition to Dr. Burns, Dr. Chisato Shimizu and Dr. Alessandra Franco lead research groups within the Center.

LEFT TO RIGHT:

FACULTY
Seema S. Aceves, MD, PhD, Associate Professor of Pediatrics
Jane C. Burns, MD, Professor of Pediatrics in Residence
John F. Bastian, MD, Clinical Professor of Pediatrics
Johanna Chang, MD, Assistant Clinical Professor
Alessandra I. Franco, MD, PhD, Associate Adjunct Professor of Pediatrics
Hal M. Hoffman, MD, Division Chief, Professor of Pediatrics and Medicine
Anthony A. Horner, MD, Adjunct Professor of Medicine and Pediatrics
Stephanie Leonard, MD, Assistant Clinical Professor
**Major Goals & 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
- 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

**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

**John F. Bastian, MD**
- Retiring in the coming year
- Establish policies and protocols to provide quality and efficient clinical care

**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

**Johanna Chang, MD**
- Establish clinical and research protocols and procedures for pediatric joint ultrasound
- Assume additional leadership roles following the retirement of Dr. Szer
- 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 joint, liver, kidney, skin, hematologic, infectious, and respiratory diseases 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 auto-inflammatory 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
- Continue collaborative studies with Genalyte to develop a new generation assay for the characterization and quantification of peanut specific IgE from allergic patients
- Seek new sources of funding for our research

**Karin Peterson, MD, PhD**
- Establish protocols for quality and safety in clinics

**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**
- Retiring in October 2013
- 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 Section Chief of Rheumatology and Sr. Scientist
Karin Peterson, MD, 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

**CLINICAL ACTIVITIES**

**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 immunology clinic allergy clinics in Murrieta and Rady Children’s Hospital-San Diego (RCHSD)

John F. Bastian, MD
- Conducts clinics, (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 1,500 children who have recovered from Kawasaki disease

Johanna Chang, MD
- Conducts pediatric rheumatology clinics 3 times per week in the RCHSD campus

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

Anthony A. Horner, MD
- Conducts pediatric allergy and immunology clinics in Encinitas, Oceanside, Murrieta, and at RCHSD (over 700 patients per year)

**RESEARCH ACTIVITIES**

Seema S. Aceves, MD, PhD
- NIH funded study (R01) on the mechanisms of tissue remodeling in eosinophilic esophagitis (EoE) (theroelof 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
- Executive Council member, The International Gastrointestinal Eosinophil Research Network
- Editorial Board of Journal of Allergy and Clinical Immunology
- New Grant: AAAAI/APFED HOPE Pilot Project in Eosinophilic Diseases

Jane C. Burns, MD
- Difficult asthma
- Immunodeficiency disorders

John F. Bastian, 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

Johanna Chang, MD
- Pediatric Joint Ultrasound
- Coinvestigator on several CARRA clinical trials

Alessandra M. Franco, MD, PhD
- T-cell repertoire in Kawasaki disease
- Biological function of IVIG therapy
- Immune-regulation in infants and young children
- Cytotoxic T cell biology
- Carbohydrate T cell recognition
- Designer glycopeptides containing tumor-associated carbohydrate antigens as vaccines for prevention/treatment of epithelial cancer

Hal M. Hoffman, MD
- Role of innate immunity and IL-1 therapy in autoinflammatory disorders
- Characterization of cryopyrin inflammasome function using a number of experimental models, including in vitro cell lines, ex vivo monocytes and genetically modified mice
- Genetic basis of rare inherited disorders including congenital diarrheas, rare urticarial, and immunodeficiency, 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
- Development of a new generation multiplex assay to detect IgE to peanut allergens and to measure their binding affinities (Collaboration with Genalyte)
### Research Support

<table>
<thead>
<tr>
<th>Grant/Contract #</th>
<th>Total Direct Dollars/ Duration of Grant</th>
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</thead>
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<tr>
<td><strong>Seema S. Aceves MD, PhD</strong>&lt;br&gt;Registry of Eosinophilic Gastrointestinal Diseases (REGID)&lt;br&gt;20110124/Children's Hospital Medical Center</td>
<td>$27,500 July 2010-July 2011</td>
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<td>Mechanisms of Chronic Tissue Damage in Allergic Eosinophilic Esophagitis&lt;br&gt;1 R01 AI092135-01/NIH (NIAID) Natl Inst Of Allergy</td>
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<td>The Role of miRNAs in Pediatric Eosinophilic Esophagitis&lt;br&gt;University of California, Department of Pediatrics</td>
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<td>A Novel Molecular Diagnostic Platform for Eosinophilic Esophagitis&lt;br&gt;Tigers</td>
<td>$140,000 2010-current</td>
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<td>Pilot Project in Eosinophilic Diseases&lt;br&gt;AAAII/APFED HOPE</td>
<td>$140,000 2013-2014</td>
</tr>
</tbody>
</table>

| **Jane C. Burns, MD**<br>iDASH: Integrating Data for Analysis, Anonymization, and Sharing<br>1 U54 HL108460-01/NHLBI Natl Heart, Lung & Blood | $18,654,233 Sept. 2010-June 2015 |
| Impact of TNFa Blockade on Immune Function in Acute Kawasaki Disease<br>1 R01 HL103536-01/NHLBI Natl Heart, Lung & Blood | $1,549,271 April 2010-Feb. 2014 |
| Phase III Infliximab for Primary Therapy of Kawasaki Disease<br>1 R01 FD003514-01/PHS (FDA) Food And Drug Administrat | $1,440,944 Sept. 2008-July 2013 |
| The Adult KD Collaborative<br>20100199/Gordon And Marilyn Macklin Foundation | $600,000 Sept. 2009-Aug. 2012 |
| Kawasaki Disease: Disentangling the Role of Climate in the Outbreaks<br>20105253/Institut Catala De Ciencies Del CLI | $24,735 June 2010-Mar. 2012 |

| **Alessandra Franco, MD, PhD**<br>Impact of TNFa Blockade On Immune Function In Acute Kawasaki Disease<br>R01 HL103536-01 | $1,549,271 June 2010-May 2014 |
**Stephanie Leonard, MD**
- Principle Investigator of Clinical trial at RCHSD site, for novel treatments of peanut allergy

**Karin Peterson, MD, PhD**
- Immunodeficiency disorders

**Robert M. Sheets, MD**
- Clinical trials of new treatments for pediatric rheumatologic diseases including 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

**Johanna Chang, MD**
- Presents a monthly noon conference for UCSD pediatric residents
- Supervises and teaches medical students and residents in the pediatric rheumatology clinics

**Alessandra Franco, MD, PhD**
- Supervises undergraduate students in the laboratory in projects related to the immunologic basis of Kawasaki disease

**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

**Stephanie Leonard, 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

**Karin Peterson, MD, PhD**
- Teaches UCSD and US Navy residents in allergy and immunology clinics
- Teaches allergy fellows from UCSD and Scripps Clinic

**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 rheumatology course for UCSD pediatric residents
- Teaches an annual CME meeting 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 rheumatology course 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
- Mentor to Johanna Chang
## Research Support

<table>
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<th>Grant/Contract #</th>
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<td><strong>Anthony Horner, MD</strong>&lt;br&gt;Effect Of Daily Airway House Dust Extract Exposures On Innate&lt;br&gt;And Adaptive Immunity In Primates&lt;br&gt;California National Primate Research Center&lt;br&gt;House Dust Bioactivities As Predictors Of Atopic, Immune, And Respiratory Status&lt;br&gt;R37 AI71922 NIH/NIAID (Supplement)</td>
<td>$50,000 Oct. 2011-Sept. 2012&lt;br&gt;$400,000 June 2012-May 2014</td>
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### AWARDS, HONORS AND MAJOR PRESENTATIONS

**Seema S. Aceves MD, PhD**<br>Reviewer, NIH Study Section ZRG1D-KUSD80, ZRG1 DKUS-A, 2011<br>Invited speaker, World Allergy Organization, 2011<br>Invited speaker, Massachusetts General Hospital, Harvard Medical School, Medical Grand Rounds, 2011<br>Steering Committee, REGID, 2011<br>Invited Speaker, American Academy of Allergy and Immunology, 2009-2011<br>Invited Speaker, International Eosinophil Society, 2011<br>Invited Speaker, American Gastroenterology Association Digestive Diseases Week, 2011<br>Scientific Chair, The International Gastrointestinal Eosinophil Researchers (TIGERS), 2012<br>NIH Study Section CIMG, Permanent Member, 2012<br>Invited Speaker, Difficult Cases, Eosinophilic Gastrointestinal Disorders. Annual Meeting, American Academy of Allergy, Asthma, Immunology, Orlando, 2012<br>Elected to the American Society of Clinical Investigation, 2013<br>Voted among "Best Doctors" by SDCMA 2013, 2014

**Jane C. Burns, MD**<br>Member, AHA Committee on Rheumatic Fever, Endocarditis and Kawasaki Disease<br>Invited Speaker, Dept. of Dermatology, University of Dijon, Dijon, France, 2011<br>Invited Speaker, French Dermatology Society, Paris, France, 2011<br>Invited Speaker, Medicine Grand Rounds, Emory University, Atlanta, GA, 2011<br>Invited Speaker, Pediatric Grand Rounds, Emory University, Atlanta, GA, 2011<br>Invited Speaker, Illumina Corp, San Diego, CA, 2011

Invited Speaker, Bioengineering Conference, Stanford University, Palo Alto, CA, 2012
Invited Speaker, Pediatric Grand Rounds, Miami Children’s Hospital, Miami, FL, 2012
Invited Speaker, University of Cairo, Dept of Cardiology, Cairo, Egypt, 2012
Invited Speaker, Ntl. Center for Atmospheric Research, Boulder, CO, 2012
Invited Speaker, The Brian Britt Show, UT Radio, San Diego, CA, 2012
Invited Speaker, Cardiovascular Symposium, Maui, Hawaii, 2012
Hideko Ogawa Memorial lectureship, 10th International KD Symposium, Kyoto, Japan, 2012
Invited Speaker, RCHSD Foundation meeting of Financial Planners, San Diego, CA, 2012

Hal M. Hoffman, MD
Member, American Society of Clinical Investigation
Member, Society of Pediatric Research
Speaker at International meetings in Mexico, Ireland, Sweden, Switzerland
Speaker at National society meetings for Allergy and Immunology, Dermatology, Rheumatology, Pathology
Speaker at several National Immunology research meetings
Speaker at National Pediatric Grand Rounds in Indianapolis and Pittsburgh

Anthony A. Horner, MD
Member, Editorial Board, ISRN Allergy, 2010-present
Speaker, UCSD Pathology Pathology Research Lecture Series, San Diego, CA, April 2013
Invited Speaker, American Academy of Asthma, Allergy, and Immunology International Meeting, San Antonio, TX, February 2013
Invited Speaker, American Academy of Asthma, Allergy, and Immunology International Meeting, San Diego, CA, February 2014

Stephanie Leonard, MD
Update on Food Allergy, Practical Pediatrics, Rady Children’s Specialists of San Diego, San Diego, CA, 2013
Allergy Testing And Food Allergies. 26th Annual Advances in the Practice of Pediatrics: San Diego, CA, 2012

Local Television Segments
“Peanut Allergy Relief” CW, San Diego, CA, 2013
“A Patch to Rid Children of Peanut Allergies?” NBC, San Diego, CA, 2013
“Food Allergies and Bullying” KUSI, San Diego, CA, 2013
“Food Allergies and Children” CW, San Diego, CA, 2012
“Food Allergies and Children” KUSI, San Diego, CA, 2012

Ilona S. Szer, MD
Member, Childhood Arthritis and Rheumatology and Research Alliance, Finance and Pain Committees
Chair, DSMB, Teens Taking Charge–Multicenter Observational Study Using The Latest Hand Held Technology

PUBLICATIONS


The Chadwick Center for Children & Families

The Chadwick Center for Children and Families is the response of Rady Children's Hospital-San Diego (RCHSD) to child abuse and neglect, domestic violence, and post-traumatic stress in children. The staff is comprised of a variety of professionals in disciplines ranging from medicine and nursing to child development, social work, and psychology. The Chadwick Center (http://www.ChadwickCenter.org) is located on the main hospital campus and provides services at satellites from Oceanside to Chula Vista. Chadwick services are also delivered at the Polinsky Center and at a wide variety of community agencies.

The Center works with overwhelmed families to prevent abuse and neglect, supports law enforcement and child protection services when abuse is suspected to accurately and sensitively gather the facts in ways that minimize secondary trauma, and then helps victimized children and their families heal through one of the largest specialized trauma mental health programs in the nation.

The Chadwick Center’s expertise in treating abuse-related trauma has led to collaborations with the National Child Traumatic Stress Network and the expansion of treatment to work with child and adolescent victims of other forms of violence (such as school shootings), natural disasters (wild fire victims), auto accidents and children undergoing painful medical procedures.
FACULTY/STAFF
The staff is directed by Charles Wilson, MSSW, Senior Director, Tom Jung, BS, Administrative Director and Dr. Cynthia Kuelbs, Medical Director. Clinical faculty includes:

Charles Wilson, MSSW, Senior Director
Laine Alexandra, LCSW
Julie Alley, PhD
Esperanza Applestein, MFT
Lorena Avitea, MSW
Belyn Barragan, IMF
Susanna Beaudieu, MSW, MA
Virginia Bial, LCSW
Gloria Chavez, ASW
Pilar Clark, ASW, MSW
Lisa Conradi, PsyD
Judi Cox, LCSW
Brent Crandal, Ph.D.
Mauricio CruzyCelis, MFT

Jennifer Davis, MD
Joan Diccianni, MHA
Jackie Dietz, LCSW
Roquette Dungan, LCSW
Fabiola Figueroa, MFT
Laurie Fortin, LCSW
Guillermo Gonzalez, MFT
Margaret Gonzalez, LCSW
Susan Gordon, LCSW
Tanya Grame, PhD
Lynne Guzman, ASW
Alison Hendricks, LCSW
Jesus Herrera, PsyD
Jennifer H ossler, MSW
Thomas Jung, BS,
   Director of Operations
Iby Kantor, PhD
Marisa Kaprow, LCSW
Marilyn Kaufhold, MD,
   Clinical Instructor of Pediatrics
Margo Kerk, MSW
Daniel Keyser, ASW

Al Killen-Harvey, LCSW
Cynthia Kuelbs, MD,
   Clinical Professor of Pediatrics
Megan Loera, ASW
Rachel Lopes, LCSW
Blanca Lugo, MFT
Lisa McCulloch, LCSW
Megan McKellogg, PsyD
Clorinda Merino, Med
Wendy Muro, LCSW
Marisol Olguin, MS

LEFT TO RIGHT: Lisa McCulloch, Sheri Rouse, Karen Pacifico, Laurie Fortin, Joanne Kaufman, Alicia Ramirez, Marisol Olguin
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.
Chadwick Center v5.indd   43
Chadwick Center for Children & Families 43

PEDIATRIC FELLOWS
The child abuse fellowship remains in partnership with emergency medicine as one of the emergency medicine fellows is concentrating her research and scholarly projects in child abuse medicine and working clinically with child abuse pediatricians with the goal of meeting the child abuse sub-board requirements.

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

CLINICAL ACTIVITIES
INPATIENT/OUTPATIENT
The Chadwick Center serves over 21,860 children and families over the last two years through three interrelated programs from four sites countywide.

Forensic and Medical Services: Over 1,925 children received expert medical assessment or a forensic interview for abuse or are evaluated and treated for impaired growth and developmental concerns through the Failure to Thrive Clinic. Nearly 1000 children are evaluated and treated medically at the Polinsky Children’s Center. The Chadwick Center facilitates the weekly San Diego County Child Protection Team meeting to discuss complex child abuse cases. In 2011, the team celebrated its 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: 2,154 individual children and parents involved in child abuse, domestic violence and other forms of trauma attended more than 25,858 therapy sessions. The Chadwick Center continues to be among the leaders in the use of research supported therapies such as Trauma Focused–Cognitive Behavioral Therapy (TF-CBT), Parent-Child Interaction Therapy (PCIT) and Child Parent Psychotherapy (CPP) for very young trauma victims. An additional 471 children and caretakers were emotionally prepared to testify in court through the Kids & Teens in Court program, helping reduce their fear and anxiety of testifying in front of the person who hurt them. San Diego County selected RCHSD to design and manage the KidSTART system for San Diego focusing on very young children with severe emotional and developmental challenges, often associated with extreme trauma exposure. This is a joint project of the Chadwick Center, Developmental Services and Psychiatry with Chadwick leading the young child mental health treatment component. In KidSTART, 603 individual children were seen and 11,061 therapy sessions.

RESEARCH ACTIVITIES
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.

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, and Charles Wilson, MSSW, are conducting an assessment of the service systems in Brevard County, Florida to improve evidence-based practice utilization in the county.

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 40 Topic Areas with over 300 programs and 23 screening and assessment tools reviewed, rated and posted. The CEBC has been visited by over 200,000 individuals from over 190 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. The Center provides professional education to more than 16,571 professionals from throughout the United States and 30 countries worldwide. The Chadwick Center’s Clinical Training Program provides training in the assessment and treatment of child abuse to professionals nationally and at the Center. The California Mandated Reporter Training web site (www.MandatedReporterCA.com) is composed of 7 modules and designed to train mandated child abuse reporters so they may carry out their responsibilities properly. To date, 47,469 tests have been taken and the web site has been visited by over 100,000 individuals.

For more than two decades, the Chadwick Center at Rady Children’s has led the world in developing strategies and programs to prevent child abuse through the San Diego International Conference on Child Maltreatment, hosted by the Chadwick Center. This past January, the Chadwick Center held its 27th Annual Conference, drawing more than 2,000 attendees from the United States and around the world.

Each year, this conference seeks to provide research evidence-based best
practices to professionals working in the fields of medicine, mental health, criminal justice, child welfare, public policy and research. The conference includes more than 165 workshops and world-renowned speakers. And because each year in the United States, approximately five million children experience some form of traumatic experience, the Center’s impact is more important than ever.

The Chadwick Center also continues to be a national and state leader in the identification and spread of research-based clinical practices. This work includes a heavy demand for Chadwick Center speakers around the nation.

Rady Children’s Hospital, Chadwick Center expanded its California Evidence Based Clearinghouse for Child Welfare which is charged with helping reform the state’s child welfare services using research-supported practice models. This web based resource, which now includes 40 topic areas with reviews on over 300 separate program models and 23 screening and assessment tools (www.cebc4cw.org), has been visited by over 200,000 individuals from 190 countries/territories.

In addition to these professional education programs, the Chadwick Center provides education to pediatric residents and emergency department fellows through core rotations during the training years.

AWARDS, HONORS AND MAJOR PRESENTATIONS

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<th>Grant/Contract #</th>
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<td>Support Evidence Based Home Visitation Programs to Prevent Child Maltreatment 90CA1768-01</td>
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<td>Substance Abuse and Mental Health Administration Treatment and Services Adaptation Center /SM54289-04</td>
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<td>The California Screening Assessment and Treatment (CASAT) Initiative Project 90C01101/01</td>
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Marilyn Kaufhold was recognized by The Ray E. Helfer Society for Outstanding Teaching. From the official announcement released by the society: “Marilyn Kaufhold, MD, a child abuse pediatrician at the Chadwick Center of the Rady Children’s Hospital in San Diego is the first recipient of the Ray E. Helfer Teaching Award. The Helfer Society is an honorary association of child abuse physicians from across America and around the world who are leaders in the field of child maltreatment. The award was inaugurated this year to recognize the importance of teaching in the promotion of the scientific and humanitarian aspects of child abuse medicine. Dr. Kaufhold was selected as the first to be honored with this award because of her 30 years of superb teaching at the local, national and international level. Her students include thousands of physicians, nurses, social workers, community advocates, law enforcement officers, attorneys and members of other disciplines who strive to prevent child maltreatment and reduce its impact on affected children and families. Her teaching is thoroughly grounded in the medical literature, her calm, quiet demeanor engages every audience, and her ability to energize her students to continue and expand their efforts to make the world a better place make her a teacher of the highest caliber.”

Charles Wilson, MSSW, Senior Director, received the 2012 Commissioners Award from Administration on Children Youth and Families and Child Welfare league of America, National Blueprint for Excellence in Child Welfare-National Advisory Committee. In 2011, he received the Annual Stars Award from the San Diego Commission on Children Youth and Families. In 2011, he was invited to present at Rosalynn Carter Symposium on Mental Health Policy. Atlanta, GA.
PUBLICATIONS
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. 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. Andy Zimmerman, 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: Anthony Stanzi, George Ulma, Karen Vanderwall, Eddie Canada, Sandra Saw, Scott Gillin, Andy Zimmerma, Chien Chow, Krista Backstahler, Dave Frankville, Alvin Fauerman, Alex Rodarte, Kathy Kaya, Dan Ness, Gloria Huang, Vinit Wellis
**FACULTY**

Bradley Peterson, MD, FAAP, FCCM, Chief, Critical Care Section, Associate Clinical Professor of Pediatrics and Anesthesiology

Andrew Zimmerman, 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, Assistant Clinical Professor of Anesthesiology/Critical Care

Daniel Lee, MD, Assistant Clinical Professor of Anesthesiology

Sidney Merritt, MD, Associate Professor of Anesthesiology

Daniel Ness, MD, Assistant Clinical Professor of Anesthesiology

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

David Shellington, MD Assistant Professor, Division of Respiratory Medicine and Pediatric Critical Care

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 Wells, MD, Assistant Clinical Professor of Anesthesiology

Michael Worthen, MD, Assistant Clinical Professor of Anesthesiology

Scott Gillin, MD, Clinical Instructor of Anesthesiology

Krista Bockstahler, MD, Clinical Instructor of Anesthesiology

Karim Rafaat, MD, Clinical Instructor of Anesthesiology

Alyssa Brzenski, MD, Clinical Instructor of Anesthesiology

Gloria Hwang, MD, Clinical Instructor of Anesthesiology
Major Goals & 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

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
DIVISION OF PEDIATRIC CRITICAL CARE POST-DOCTORAL FELLOWS

Kingshuk Dasgupta, MD
Emilio Miranda, MD
Gina Bui, MD
Andrew Kim, MD
Chad Scheller, MD
Bruce Tran, MD
Andrea Guardenier, MD
Whitney Law, MD
Erin Ricker, MD

CLINICAL ACTIVITIES INPATIENT/OUTPATIENT

The Anesthesia Division provides anesthesia care to patients in the 16-room Acute Care Pavilion Operating Room Suites, 4 procedure rooms in the Outpatient Procedure Center, the Sharp and Children’s Hospital-San Diego MRI Center, the Cardiac Catheterization lab, 2 CT scanners, 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, 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.

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

Brock Fisher, MD research interests include investigating the role of serum D-dimer to predict the absence of significant brain injury after head trauma in children. Additionally, Dr. Fisher has been researching the role of acupuncture for post-operative tonsillectomy pain.

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 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 can be discharged from the emergency room safely after a period of observation. Additional research has included the evaluation of an age-based formula and physical exam for placement of endotracheal tubes in children.

Bradley Peterson, MD, FAAP, FCCM has been researching complications associated with prolonged hypertonic saline therapy in children with elevated intracranial pressure. He has also been investigating near-infrared spectroscopy (NIRS) monitoring to predict post-operative renal insufficiency following repair of congenital heart disease. He has been a contributing investigator on a retrospective review evaluating the rates of endotracheal tube exchange in pediatric patients transferring from non-pediatric facilities and an investigator on a prospective study researching the use of thromboelastography to diagnose coagulopathy after traumatic brain injury.

David Shellington, MD is the Director of Research for the Division of Critical Care. His responsibilities include assisting the Critical Care Fellows in the creation, design, implementation and publication of their mandated research activities. Divisional research meetings are held bimonthly to discuss logistics and progress of research activities. In addition to mentoring fellows and clinical responsibilities, Dr. Shellington is actively focused on traumatic brain injury research with ongoing studies both in the laboratory and in the Pediatric Intensive Care Unit. He is the primary investigator on a current clinical project evaluating the use of thromboelastography to diagnose coagulopathy after traumatic brain injury.

Michael Worthen, MD research interests include a recent review examining the use of 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 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
- 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

David Shellington, MD
- Serves as Director of Research for the Critical Care Division
- Responsible for organizing and running the bimonthly Critical Care Research Meetings and Journal Club meetings

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

RESEARCH ARTICLES


Fellowship Support

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**BOOK CHAPTERS**


**ORAL PRESENTATIONS**


**DIVISION AWARDS**

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 with a national and international reputation for clinical, research and educational excellence. The 2011-2013 academic years were very successful for the Division, with significant contributions to the fields of dermatology and pediatrics in research and advocacy, and expansion of the clinical services.

The Division exceeded 20,000 patient visits and over 1,500 surgical, laser and phototherapy procedures per year, and expanded service in satellite clinics throughout San Diego County, including Oceanside, Murrieta, Encinitas and Escondido. The research program broadened its work in inflammatory skin disease (including eczema, psoriasis and acne), hemangiomas, and procedural dermatology. Division members have held significant senior national leadership positions, including Dr. Sheila Friedlander as President of the Society for Pediatric Dermatology and a Board of Director member of the American Academy of Dermatology, Dr. Lawrence Eichenfield as President of the American Acne and Rosacea Society, and Co-Chair of the Pediatric Dermatology Research Alliance (PeDRA), Dr. Magdalene DohilasaChairoftheInternationalHarmonizationofOutcomes in Eczema (HOME) research meeting, and Dr. Wynnis Tom as Head of the PeDRA Inflammatory Skin Disease Research Group. Drs. Victoria Barrio and Magdalene Dohil co-Chaired the national Society for Pediatric Dermatology meeting held in conjunction with the annual American Academy of Dermatology meeting.

The program has added Dr. Andrew Krakowski to the faculty. Dr. Krakowski has initiated the Scar Treatment and Revision (STAR) Program, utilizing cutting edge research with new laser technologies for the treatment of pediatric scars, including traumatic, post-surgical, birthmark-associated and burn scars. This is the first program of its type in the country, and the Division is working with physicians from the Navy’s “Wounded Warrior” program to translate the knowledge gained from their experiences to benefit children.
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 Eczema and Inflammatory Skin Disease Center, the first program of its type in the nation, continues to evolve in clinical care, education, and research in atopic dermatitis, psoriasis, acne and other inflammatory diseases of childhood and adolescence. The Division will be launching an updated Eczema and Inflammatory Skin Disease website (www.eczemacenter.org). The Division will be studying novel “in-room” education modules for atopic dermatitis education, and is assessing the safety and effectiveness of systemic medications for treatment of atopic dermatitis. 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. In addition, the Division is pleased to welcome Lauren Bennett, PA-C, and Melinda Ly, CPNP to the practice.
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 is 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.
FACULTY
Lawrence F. Eichenfield, MD, Division Chief, 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
Andrew C. Krakowski, MD, Assistant Clinical Professor of Pediatrics and Medicine
Richard L. Gallo, MD, PhD, Professor of Medicine and Pediatrics

POSTDOCTORAL FELLOWS
Cyndee DeKlotz, MD (Clinical)
Reagan Hunt, MD (Clinical)
Kathy Langevin, MD (Clinical)
Catalina Matiz, MD (Clinical)
Smita Awasthi, MD (Clinical)
Lucia Diaz, MD (Clinical)
Shehla Admani, MD (Research Year 2)

PRACTITIONERS
Lauren Bennett, PA-C
Melinda Ly, CPNP

CLINICAL ACTIVITIES
The Division had over 20,000 ambulatory visits each year, with services provided at five locations: Rady Children's Hospital and satellite clinics at Encinitas, Escondido, Oceanside, and Murrieta. There were over 1,500 surgical, laser and phototherapy procedures performed annually. The Division has been named a “Center of Excellence” by the Sturge-Weber Foundation. The Vascular Lesion and Birthmark Center has expanded multidisciplinary activities including laser, interventional radiology, and birthmark surgery services. The Division continues to investigate optimal methods for management of atopic dermatitis, including studying the best intensive education techniques to minimize the impact of the disease on affected individuals and their families. Dr. Wynnis Tom runs a specialty clinic for children with severe atopic dermatitis requiring systemic therapy.

RESEARCH/SCIENTIFIC HIGHLIGHTS
The Division continues to be a leader in inflammatory skin disease research. The first Guidelines for Pediatric Acne, published in Pediatrics, were created by the American Acne and Rosacea Society (AARS) and endorsed by the American Academy of Pediatrics. The Guidelines were created through the leadership of Dr. Lawrence F. Eichenfield, along with Drs. Sheila Fallon Friedlander and Andrew C. Krakowski, members of a national expert panel. Multiple studies of new therapeutic agents, as well as therapies for pre-adolescent acne, have been led by Dr. Eichenfield. Dr. Eichenfield also serves as a Co-Chair of the American Academy of Dermatology Atopic Dermatitis Guidelines Task Force. Dr. Wynnis Tom continues her NIH K23 award to study the genetic influences of pediatric psoriasis. She has established the first pediatric psoriasis DNA bank to study disease pathogenesis and test potential biomarkers for course and therapeutic response. Dr. Tom has also served as an investigator of a multi-center study assessing body mass index and obesity in children with psoriasis, and has been the principal investigator for multiple trials studying topical and systemic agents for atopic dermatitis and psoriasis. Dr. Tom is a member of the American Academy of Dermatology’s Atopic Dermatitis Guidelines task force.
Sheila Fallon Friedlander, MD, is a Principal Investigator of the study of oral propranolol for infant hemangiomas, a therapy that is revolutionizing care of patients with these common vascular tumors. Dr. Magdalene Dohil, Co-Director of the Eczema Center, along with Dr. Eichenfield, hosted an international meeting of the Harmonization of Outcome Measures for Eczema (HOME), a consortium studying the best methods for assessing the utility of interventional research on atopic dermatitis. Dr. Eichenfield is Co-Chair of the Pediatric Dermatology Research Alliance (PeDRA), and Dr. Tom is a member of the PeDRA Scientific Agenda Committee. This consortium is dedicated to developing collaborative research in pediatric dermatology, and has received NIH and other funding to establish this collaborative research network. Dr. Andrew Krakowski has published several papers defining the utility of fractionated CO2 laser for the treatment of scars, as well as the usefulness of pulsed dye laser, in addition to propranolol, for the treatment of hemangiomas. Over 100 papers and textbook chapters have been published by the Division over the past years.

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
The Division continues its diverse national and international education 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 45 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.

Dr. Sheila Fallon Friedlander co-chairs the national CME Skin Disease Education Seminar “Women’s and Pediatric Dermatology” meeting, and won the coveted Speaker of the Day prize at the national Fall Clinical Dermatology meeting. Drs. Krakowski and Friedlander co-chaired the Pediatric Dermatology for the Practitioner CME meeting, with over 220 attendees.

The entire faculty has participated as invited speakers in American Academy of Dermatology (AAD) national meetings, and multiple visiting professorships were carried out by senior faculty throughout the world. Both Drs. Wynnis Tom and Victoria Barrio have 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, Pediatric Dermatology Jeopardy, American Academy of Dermatology Annual Meeting, New York, NY, August, 2011
Meeting Co-Chair, Society for Pediatric Dermatology, Pre-AAD Meeting, San Diego, CA, March, 2012
Speaker, Neonatal Dermatology, American Academy of Dermatology 70th Annual Meeting, San Diego, CA, March, 2012
Speaker, How I Treat Hemangiomas. Mastering Advances in Dermatology, Greensboro, NC, March, 2012
Speaker, Neonatal Dermatology. Pediatric Dermatology for the Practitioner, Philadelphia, PA, April, 2012
Speaker, To ER is Human. Pediatric Dermatology for the Practitioner, Philadelphia, PA, April, 2012
Speaker, Pediatric Dermatology Jeopardy. American Academy of Dermatology Summer Meeting, Boston, MA, August, 2012
Speaker, Growing Up Is Hard To Do. Pediatric Dermatology for the Practitioner, San Diego, CA, April 2013
Speaker, Dermatoses of Infancy, Kansas City Dermatologic Society Meeting, Kansas City, KS, June 2013
Magdalene A. Dohil, MD
Co-Chair, Society for Pediatric Dermatology National Meeting, Spring 2012
Speaker, Dermatology Seminar. San Francisco, CA, September 23-25, 2011
Speaker, Active Naturals in Dermatology for the Treatment of Inflammatory Skin Disease. Orlando Dermatology Aesthetic & Clinical Conference, Orlando, FL, January 18-21, 2013
Speaker, Atopic Dermatitis Current Concepts in Pathogenesis and Implications for Patient Care. Practical Pediatrics, Rady Children's Hospital-San Diego, March 9, 2013
Speaker, Lumps and Bumps in Little Ones. Pediatric Dermatology for the Practitioner. Hilton La Jolla Torrey Pines, La Jolla, CA, April 5-6, 2013
Lawrence F. Eichenfield, MD
Editor-in-Chief, Pediatric Dermatology
Best Doctors in America, Castle Connolly Medical Ltd., 2004-2013
San Diego Top Doctors of Excellence, Dermatology and Pediatric Dermatology, 2004-2013
Chair, American Academy of Dermatology Atopic Dermatitis Guidelines Task Force, 2010-2014
President-Elect and President, Acne and Rosacea Society, 2012-2015
Chair, Pediatric Acne Guidelines Study Group; American Acne and Rosacea Society, 2011-present
Visiting Professor Pro Tem and Dr. Raul Fleischmajer Memorial Lecturer.
Mount Sinai School of Medicine, Department of Dermatology, New York, NY, May 2012
Visiting Professor and Lecturer, Massachusetts General Hospital, Harvard Medical School, Boston, MA, November 2012
Visiting Professor, Dowling Club/Grand Round Dermatology Seminar Series; Atopic Dermatitis: Evolving Perspectives on Pathogenesis and Therapy; University of California-Irvine. Irvine, CA, April, 2013
Speaker, Inflammatory Issues in Little Ones, and Pediatric Dermatology Jeopardy. Advances in Cosmetic and Medical Dermatology, Maui, HI, February 5-6, 2012
Speaker, Atopic Dermatitis: Current Concepts in Pathogenesis and Implications for Patient Management. New Zealand Dermatological Society Meeting, Queenstown, New Zealand, August 8-11, 2011
Speaker, Hemangiomas and Vascular Malformations. New Zealand Dermatological Society Meeting, Queenstown, New Zealand, August 8-11, 2011
Speaker, Pediatric Dermatology Case Studies. New Zealand Dermatological Society Meeting, Queenstown, New Zealand, August 8-11, 2011
Speaker, Skin Tumors in Children: When to Worry — And When Not. New Zealand Dermatological Society Meeting, Queenstown, New Zealand, August 8-11, 2012
Speaker, The Skin and Gut Connection. New Zealand Dermatological Society Meeting, Queenstown, New Zealand, August 8-11, 2012
Speaker, Active Naturals in Dermatology for the Treatment of Inflammatory Skin Disease. Orlando Dermatology Aesthetic & Clinical Conference, Orlando, FL, January 18-21, 2013
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<tr>
<td>A Randomized, Double-Blind, Placebo-Controlled, Parallel-Group, Dose-Ranging</td>
<td></td>
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<tr>
<td>Study Investigating the Efficacy, Safety, Pharmacokinetic and Biomarker Profiles of REGN668 Administered to Adult Patients with Moderate-to-Severe Atopic Dermatitis R668-AD-1021/Regeneron Pharmaceuticals, Inc.</td>
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<tr>
<td>A Multicenter, Randomized, Double-Blind, Vehicle-Controlled, Parallel Group</td>
<td>$52,675 Mar. 2013-present</td>
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<tr>
<td>Evaluation of Twice Daily PDI-192 0.1% in Comparison to PDI-192 0.15% in the Treatment of Mild to Moderate Atopic Dermatitis in Subjects 3 Months to Less Than 18 Years of Age Protocol 172-0151-202/Precision Dermatology Inc</td>
<td></td>
</tr>
<tr>
<td>Pharmacokinetics and pharmacodynamics of calcitriol 3 mcg/g ointment applied twice daily for 14 days under conditions of maximal use in pediatric subjects (2 to 12 years of age) with plaque psoriasis RD.06.SPR.18104/Galderma</td>
<td>$123,520 Feb. 2013-present</td>
</tr>
<tr>
<td>A Pharmacokinetic study of CD5789 following dermal application of CD5789 50 µg/g or 100 µg/g Cream under maximal use conditions in subjects 9 to 17 years of age with Acne Vulgaris RD.06.SPR.18237/Galderma</td>
<td>$215,387 Nov. 2012-present</td>
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<tr>
<td>A Multicenter, Prospective, Randomized, Open-label, Intra-subject Controlled Study of the Efficacy and Safety of ABH001 for the Treatment of Stalled Chronic Cutaneous Wounds Associated with Generalized Epidermolysis Bullosa Protocol EB01-ABH001/Shire Regenerative Medicine</td>
<td>$275,575 Sept. 2012-present</td>
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<tr>
<td>A randomized, multi-center, Investigator-blind, vehicle- and active-controlled, phase 2 study to assess the efficacy and safety of different concentrations of CD5789 cream applied once daily in subjects with moderate to severe acne vulgaris RD.06.SPR.18223 /Galderma</td>
<td>$81,423 June 2012-present</td>
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<tr>
<td>A Phase 1, Open-Label, Multicenter Study to Evaluate the Safety, Tolerability, Pharmacodynamics, and Pharmacokinetics of Calcipotriene Foam, 0.005%, Applied Under Maximal-Use Conditions in Adolescent Subjects (Ages 12 to 16 Years) with Plaque Psoriasis Clinical Study Protocol: STF 115750/Stiefel – GlaxoSmithKline</td>
<td>$32,625 Feb. 2012-present</td>
</tr>
<tr>
<td>Grant/Contract #</td>
<td>Total Direct Dollars/Duration of Grant</td>
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<tr>
<td>An Open-Label Extension Study to Evaluate the Safety of Etanercept Pediatric Subjects with Plaque Psoriasis 20050111/Amgen</td>
<td>$240,785 Jan. 2006-Present</td>
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<tr>
<td>A Multi-Center, Double-Blinded, Vehicle Controlled, Phase 2 Study of JNJ 10229570-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 MBL 0801/Leo Pharmaceutical Products Ltd.</td>
<td>$125,858 May 2010-Jan. 2013</td>
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<tr>
<td>A Phase 2, Single-Arm Study to Evaluate the Safety and Pharmacokinetics of Alefacept in Adolescent Subjects with Moderate to Severe Psoriasis 0485-CL-0004/Astellas Pharma Inc.</td>
<td>$129,019 Feb. 2009-Present</td>
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<tr>
<td>A Randomized, Double-Blind, Placebo-Controlled, Dose Response Study for the Safety and Efficacy of Thymosin Beta 4 in the Treatment of Patients with Epidermolysis Bullosa SSEB/Regenerx Biopharmaceuticals, Inc.</td>
<td>$90,065 Dec. 2007-Sep. 2011</td>
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<tr>
<td>Double-Blind, Prospective, Randomized, Vehicle Controlled Multi-Center Study of photodynamic Therapy with Visionac Cream in Patients with Acne Vulgaris PC TA 206/11/Photocure ASA (Norway)</td>
<td>$54,841 Apr. 2011-Jun 2012</td>
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<tr>
<td>A Multi-Center Randomized Vehicle Controlled Double-Blind Study to Evaluate the Safety and Efficacy of Epiduo Gel 0.1% /2.5% Administered Once Daily 18155/Galderma Laboratory, Inc.</td>
<td>$53,244 July 2010- Oct. 2011</td>
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<tr>
<td>Safety and efficacy of TACLONEX ointment (“Study Drug”) in adolescent patients (aged 12 to 17 years) with psoriasis vulgaris MCB 0501 INT/Leo Pharmaceutical Products Ltd.</td>
<td>$51,510 May 2009- May 2012</td>
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## Research Support

<table>
<thead>
<tr>
<th>Grant/Contract #</th>
<th>Total Direct Dollars/Duration of Grant</th>
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</thead>
<tbody>
<tr>
<td><strong>Sheila Fallon Friedlander, MD</strong></td>
<td></td>
</tr>
<tr>
<td>Topical timolol for the treatment of infantile hemangiomas&lt;br&gt;Valeant Pharmaceuticals</td>
<td>$105,750&lt;br&gt;Mar. 2012-present</td>
</tr>
<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&lt;br&gt;V0400 SB/Pierre Fabre Dermatologie</td>
<td>$200,995&lt;br&gt;Jan. 2010-present</td>
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<td>Autologous Retinal Pigmented Epithelial Cells Derived from Induced Pluripotent Stem Cells for the Treatment of Atrophic Age Related Macular Degeneration&lt;br&gt;SUB 5-22236 CIRM/Scripps Research Institute</td>
<td>$50,000&lt;br&gt;Oct. 2010-Sept. 2012</td>
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<td><strong>Wynnis L. Tom, MD</strong></td>
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<td>An Open-Label, Maximal Use, Systemic Exposure Study to Assess the Safety and Pharmacokinetic Profile of AN2728 Topical Ointment, 2% in Children and Adolescents with Atopic Dermatitis [Protocol AN2728-AD-102/Anacor Pharmaceuticals]</td>
<td>$85,320&lt;br&gt;June 2013-present</td>
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<td>A Phase 3 Study to Evaluate the Efficacy, Safety, and Effect of Withdrawal and Retreatment With Brodalumab in Subjects With Moderate to Severe Plaque Psoriasis: AMAGINE-1&lt;br&gt;Protocol 20120102/Amgen</td>
<td>$55,415&lt;br&gt;May 2012-present</td>
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<td>An Open-Label Study to Determine the Safety, Tolerability, and Pharmacokinetic Profile of AN2728 Ointment in Adolescents with Atopic Dermatitis [AN2728-AD-203] /Anacor Pharmaceuticals</td>
<td>$76,710&lt;br&gt;May 2012-Feb. 2013</td>
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<td>Genetic Influence in Pediatric Psoriasis&lt;br&gt;1 K23 AR060274-01A1/NIH (NIAMS)</td>
<td>$396,900&lt;br&gt;July 2011-June 2016</td>
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<td><strong>Andrew Krakowski, MD</strong></td>
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<td>Collection of skin biopsy samples from subjects with Recessive Dystrophic Epidermolysis Bullosa for the evaluation of a new genetically modified fibroblast cell therapy product candidate&lt;br&gt;Fibrocell Sciences, Inc</td>
<td>$13,080&lt;br&gt;Mar. 2013-present</td>
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</table>
Sheila Fallon Friedlander, MD
President, Society for Pediatric Dermatology
Member, American Academy of Dermatology Board of Directors.
Best Doctors in America, Castle Connelly Medical Ltd, 2004–2013
San Diego Top Doctors of Excellence, 2004–2013
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 Academy of Clinician Scholars, 2010–Present
America’s Top Doctors/Best Doctors in America, Castle Connelly Medical Ltd, 2011
Medical Curriculum Committee, Dermatology Foundation, 2008–present
Speaker, Vitamin D: The Ongoing Controversy in Kids. Women’s and Pediatric Dermatology Seminar, San Francisco, CA, September 24-26, 2011
Speaker, Cutaneous Abnormalities in Atopic Dermatitis. 30th Anniversary Fall Clinical Dermatology Conference, Caesar’s Palace, Las Vegas, NV, October 27-30, 2011
Speaker, The Challenge of Eczematous Rashes in Little Ones Then…..and Now. 30th Anniversary Fall Clinical Dermatology Conference, Caesar’s Palace, Las Vegas, NV, October 27-30, 2011
Speaker, Lumps and Bumps in the Pediatric Population—When to Watch, When to Worry, When to Act! Advances and Approaches for the Dermatologic Practitioner, Grand Wailea Resort, Maui, HI, February 1-3, 2012
Speaker, The Challenge of Eczematous Rashes in Little Ones. Advances and

Academy of Dermatology Meeting, San Diego, CA, March 16-20, 2012
Speaker, What’s New in Pediatric Inflammatory Skin Disease? American Academy of Dermatology SAM (Summer Academy Meeting), Boston, MA, August 17, 2012
Speaker, Rashes in Kids. Coastal Dermatology Symposium, Napa, CA, September 28, 2012
Grand Rounds Speaker, Atopic Dermatitis: Insights into Pathogenesis and Therapy, Dell Children’s Medical Center Dermatology Grand Rounds, Austin, TX, October 12, 2012
Speaker, Pediatric Dermatology Seminar and Acne & Rosacea Challenging Cases, Maui Derm 2013 – Advances in Cosmetic & Medical Dermatology, Maui, HI, January 19-23, 2013
Speaker, Hot Topics in Pediatric Dermatology. Winter Clinical Dermatology Conference, Hawaii, Koloa, HI, January 18-23, 2013
Speaker, What’s Erupting: Pediatric Acne Update and What’s Boiling Over: Atopic Dermatitis Update. SDEF Hawaii Dermatology Seminar, Maui, HI, February 13, 2013
Director, Forum F098 – Atopic Dermatitis and Speaker, Psoriasis in Pediatric Patients, Treating Acne in Younger Children: An Overview of New Pediatric Acne Management Guidelines, Atopic Dermatitis Update and New Guidelines, Translating Evidence into Practice: Atopic Dermatitis and Guidelines for the Diagnosis and Management of Food Allergy, and Hemangiomas and Vascular Lesions. 71st Annual American Academy of Dermatology Meeting, Miami, FL, March 1-4, 2013
Grand Rounds Speaker, Vascular Lesion Laser Update, Department of Dermatology, UC San Diego, San Diego, CA, March 28, 2013
Speaker, Breaking Out All Over, Look-Alikes: Mimickers You Need to Recognize, and Rheum with a View. Pediatric Dermatology for the Practitioner, San Diego, CA, April 5-6, 2013

Pediatric & Adolescent Dermatology 61
Approaches for the Dermatologic Practitioner, Grand Wailea Resort, Maui, HI, February 1-3, 2012
Speaker, Pearls Perfectly Polished: New and Emerging Pedi Derm Diseases. 36th Hawaii Dermatology Seminar, Maui, HI, February 4-8, 2012
Speaker, Lumps, Bumps and Procedural Pearls for the Tiny Tyke. 36th Hawaii Dermatology Seminar, Maui, HI, February 4-8, 2012
Speaker, Panel Discussion: The Challenging Pediatric Patient. 36th Hawaii Dermatology Seminar, Maui, HI, February 4-8, 2012
Speaker, Infectious Pearls, Pediatric Slant: What is This? School Health Leadership Conference, Del Mar, CA, November 3, 2012
Speaker, Infectious Disease Update: What You Need to Know in the War on Bacteria, Viruses, Fungi, Parasites and Insects. ACMD NP and PA, Advances and Approaches for the Dermatological Practitioner. Grand Wailea Resort, Maui, HI, January 16-18, 2013

Speaker, “Lunch with the Faculty”, Outside the Box…Acne and Rosacea: Challenging Cases That Put Our Faculty to the Test. ACMD NP and PA, Advances and Approaches for the Dermatological Practitioner. Grand Wailea Resort, Maui, HI, January 16-18, 2013
Speaker, Common Pediatric Skin Infections. 71st Annual American Academy of Dermatology Meeting. San Diego, CA, April 5-6, 2013
Speaker, Session Moderator. Pediatric Dermatology for the Practitioner, San Diego, CA, April 5-6, 2013
Speaker Advanced Workshop: Dermpath to the Rescue…Insight Into Challenging Cases. Pediatric Dermatology for the Practitioner, San Diego, CA, April 5-6, 2013
Speaker, Vascular Lesions in Kids: Breakthrough in Diagnosis & Management. Pediatric Dermatology for the Practitioner, San Diego, CA, April 5-6, 2013

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

62 Pediatric & Adolescent Dermatology
Atopic Dermatitis Delphi Consensus Conference 2010-2011, Editorial Director
Appointed, American Academy of Dermatology, Atopic Dermatology Guidelines Task Force
Appointed, Junior Faculty Committee for the Society for Pediatric Dermatology
Speaker, The Skin and Its Clues to Inherited and Other Syndromes. Grand Rounds, Department of Pediatrics, Scripps Mercy Hospital. San Diego, CA, July 7, 2011
Speaker, Infantile Hemangiomas (When to Worry and What to Do). Clinical Conference, Division of Pediatric Otolaryngology, UCSD/RCHSD, San Diego, CA, November 18, 2011
Speaker, Is it Growing or Gruesome? Non-Vascular Birthmarks and Other Lesions. Skin Disease Education Foundation 36th Hawaii Dermatology Seminar. Big Island, HI, February 2012
Speaker, Atopic Dermatitis Update. Skin Disease Education Foundation 36th Hawaii Dermatology Seminar. Big Island, HI, February 2012
Speaker, Treatment of Atopic Dermatitis: How Do We Better Help the Red and Itch? Grand Rounds, Department of Pediatrics, UC San Diego. San Diego, CA, April 6, 2012
Speaker, The Heartbreak of Psoriasis… Literally. Pediatric Dermatology for the Practitioner Meeting, San Diego, CA, April 2013
Speaker, When Creams Are Not Enough: Systemic Therapies for Severe Eczema. Pediatric Dermatology for the Practitioner Meeting, San Diego, CA, April 2013
Andrew C. Krakowski, MD
Pediatric Acne Guidelines Study Group; American Acne and Rosacea Society 2011-present
Leadership Forum, American Academy of Dermatology 2012-2013
CableFAX Best of the Web Awards; Honorable Mention for Original Content; boomDOCS Show, 2011
Co-Director, 22nd Annual Pediatric Dermatology for the Practitioner CME Meeting. Rady Children’s Hospital, San Diego, 2013
Academic Dermatology Leadership Program (ADLP), American Academy of Dermatology 2012-present
Speaker, RASAI (RAS p21 Protein Activator 1) Mutation in a 13-Year-Old Male. San Diego Dermatology Society, San Diego, CA, November 2011
Speaker, Lasers and Photomedicine. University of California, San Diego, Division of Dermatology, San Diego, CA, December 14, 2011
Speaker, Rashies in the Athlete. Pediatric and Adolescent Sports Medicine Program, San Diego, CA, March 1, 2012
Speaker, Pediatric Laser Scar Revision: A Proposed New Model of Excellence. Rancho Bernardo Unit of the Auxiliary. RCHSD, San Diego, CA, April 18, 2012
Moderator, Grand Rounds. UC San Diego, Division of Dermatology, San Diego, CA, May 3, 2012
Speaker, Pediatric Laser Scar Revision: A Proposed New Model of Excellence. Del Cerro Unit of the Auxiliary. Rady Children’s Hospital, San Diego, CA, June 4, 2012
Speaker, What You Really Need to Know for the Boards. Real World Dermatology for Residents…What You Really Need to Know. Las Vegas, NV, June 10, 2012
Speaker, Update on Warts and Molluscum. CPCMg Educational Meeting. San Diego, CA, June 12, 2012
Speaker, Update on Procedural Pediatric Dermatology: Pediatric Scar Revision, Annual Summer Meeting of the American Academy of Dermatology (AAD), Boston, MA, August 17, 2012
Speaker, Fall Fantasy: Introduction to the Scar Treatment and Revision (S.T.A.R.) Program. Del Cerro Unit of the Auxiliary. Rady Children’s Hospital, San Diego, San Diego, CA, September 29, 2012
Speaker, Pemphigus Vulgaris: 7-Year-Old Male with Mouth Sores, Fissured Tongue, and Pain and Redness of His Gums. San Diego Dermatology Society, San Diego, CA, November 2012
Speaker, Basal Cell Nevus Syndrome: 6-Year-Old Male With Cleft Lip/Palate, Macrocephaly, Polysyndactyly and Palmar/Plantar Pits. San Diego Dermatology Society, San Diego, CA, November 2012
Speaker, Suspected DOCK8 Deficiency: 20-Month-Old Male with Severe Eczema, Antibody Deficiency, Recurrent Pneumonias, and Verruca Vulgaris. San Diego Dermatology Society, San Diego, CA, November 2012
Speaker, Wilderness & Travel Dermatology: A Good Vacation Spoiled. 37th Hawaii Dermatology Seminar, February 2013
Speaker, Pediatric Procedural Dermatology: Doc, Will There Be A Scar? 37th Hawaii Dermatology Seminar, Maui, HI, February 2013
Speaker, Hands-On Workshop: Pediatric Procedures In The Office. 22nd Annual Pediatric Dermatology for the Practitioner, San Diego, CA, April 4, 2013
Speaker, Pediatric Scar Revision. 22nd Annual Pediatric Dermatology for the Practitioner, San Diego, CA, April 4, 2013
Speaker, Is This Gonna Be On The Test? Pediatric Board Review. 22nd Annual Pediatric Dermatology for the Practitioner, San Diego, CA, April 4, 2013
Speaker, Acne Diagnosis and Treatment: A Fresh Perspective. Pri-Med West 2013, Anaheim, CA, May 4, 2013
Speaker, Use of Laser Treatment For Scarring and Contractures. 2013 San Diego Hand Therapy Special Interest Group, San Diego, CA, May 14, 2013

PUBLICATIONS
Eichenfield LF, Krakowski AC. Moderate to severe acne in adolescents with skin of color: benefits of a fixed combination clindamycin phosphate 1.2% and benzoyl peroxide 2.5% aqueous gel. Journal of Drugs in Dermatology, 11(7):818-24, 2012.
Dohil M. Atopic dermatitis and other inflammatory skin disease – natural ingredients for skin care and treatment. J of Drugs in Dermatology, 10(9):s6-s9 (Supplement), 2011.


Dohil M. Atopic Dermatitis and Other Inflammatory Skin Disease – Natural Ingredients for Skin Care and Treatment. *J of Drugs in Dermatology*, 10(9):s6-s9 (Supplement), 2011.

The Division of Dysmorphology/Teratology is involved in five major areas encompassed under the umbrella of the Center for the Promotion of Maternal Health and Infant Development under the leadership of Dr. Ken L. Jones and Dr. Christina Chambers. This center brings together the multiple interrelated research activities with the common theme of identification, prevention, and treatment of environmental causes of adverse perinatal outcomes. 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, Stanford, University of Washington, University of New Mexico, Emory University and Indiana University as well as in Australia, South Africa, Ukraine, South Korea, Poland and Mexico. They are also involved with local and state criminal justice agencies to educate professionals on the effects of prenatal alcohol exposure. 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, dysmorphology, teratology, genetics, epidemiology, and behavioral health as well as in the School of Pharmacy. They provide collaborative support to UC San Diego (UCSD) faculty where interests overlap and/or they can provide mentorship for research and clinical opportunities.

Those five major areas: (1) A very active clinical service in San Diego County and the Tijuana region of Mexico, with a goal of establishing a Southern California regional based program; (2) A highly productive and well-funded local, national and international research program focused on better understanding the etiology and developmental pathogenesis of birth defects and other child health issues; (3) A teaching program that includes undergraduate students, graduate students, medical students, postdoctoral students, associate faculty and fellows in pediatrics, epidemiology, health behavior, global health, pharmacy, and other specialties; (4) a program that oversees clinical research at Rady Children’s Hospital–San Diego (RCHSD) and collaboration with the Clinical and Translational Research Institute (CTRI) at UCSD; and (5) the Institute for Fetal Alcohol Spectrum Disorders Discovery (IFASDD) with the over-arching goal to provide comprehensive diagnostic services for children who are affected with the disorder.
FACULTY
Kenneth Lyons Jones, MD, Chief, Division of Dysmorphology/Teratology, Distinguished Professor of Pediatrics, Dysmorphologist/Clinical Teratologist
Christina D. Chambers, PhD, MPH, Program Director, Professor of Pediatrics, Director of Clinical Research Rady Children's Hospital, Associate Director Clinical and Translational Research Institute, 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 cities of San Diego and Tijuana, Mexico, and in newborn intensive care units throughout San Diego County. Inpatient consults are conducted at UCSD Medical Center (in the neonatal intensive care unit, newborn nursery and autopsy service) and Scripps Mercy Hospital. Outpatient consults and follow-up take place at RCHSD, 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 (Mother To Baby CA). 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.

The new IFASDD program has begun its efforts to facilitate access to appropriate treatment and intervention services for children who are affected with FASDs, to train clinicians and other health care specialists on diagnosis and treatment, to educate and assist families with an FASD affected child, to work with government, educational, and criminal justice agencies to facilitate improved recognition and access to services, and to provide a platform for conducting innovative research projects that can lead to improved care and treatment.

LEFT TO RIGHT:
Ken Lyons Jones and Christina Chambers
RESEARCH/SCIENTIFIC HIGHLIGHTS

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 though 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.

Major Goals & 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
• 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.
• Complete the Co-FASD 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.
• Development of program to monitor births resulting from Assisted Reproductive Technology in the State of California.
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 a number of countries throughout the world. A fifth NIH initiative is underway, led by Dr. Chambers, to develop for the first time a population estimate of Fetal Alcohol Spectrum Disorders in a major urban center in the U.S.

A third research area is a recently completed National Children’s Study (NCS). The general objectives of the NCS vanguard sites were to test the feasibility, acceptability and cost of recruiting and following a population-based sample of pre-conception and pregnant women and collecting information on environmental exposures, other exposures, and outcomes in children who will be followed up to 21 years of age. The San Diego County site for this study was 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 defined a rationale 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 AND TRAINING ACTIVITIES

Christina D. Chambers, PhD, MPH

Classroom Teaching

Dr. Chambers developed and continues to teach an elective course in Human Teratology which is offered in the Skaggs School of Pharmacy and Pharmaceutical Sciences (SPPS 261) to pharmacy students, and open to students in other health sciences.

She teaches one session on perinatal/reproductive epidemiology each year in the CREST clinical research graduate program, one lecture each year in the clinical epidemiology course (FPM247) in Family and Preventive Medicine, one lecture in the Joint Doctoral Program in Public Health doctoral seminar, and one lecture in the Environmental and Preventive Health Issues course (USP144) for undergraduates. She has been a group leader for the medical students’ course on epidemiology and biostatistics, and has taught sessions on reproductive health for the last two years in ERM-2 for second year medical students at UCSD.

Pre-Doctoral Students

Each year, she conducts six-week elective rotations in teratology for four to eight UCSD pre-doctoral pharmacy students. She has chaired the independent study committee for one CREST program MAS student and mentored the internship and masters’ thesis of two Masters level students at San Diego State University 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 defined a rationale 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.

Awards, Honors and Major Presentations

Christina D. Chambers, PhD, MPH

Workshop Member, Centers for Disease Control Influenza Summit, October 2011

U.S. Interagency Coordinating Committee for Fetal Alcohol Spectrum Disorders Annual Review, 2012

Workshop Member, U.S. Institute of Medicine Workshop on Caffeine, 2103

Member, U.S. Food and Drug Administration Special Advisory Panel on Risk Evaluation and Management Strategies for Medications in Pregnancy, 2012

Member, External Review Panel, Centers for Disease Control and Prevention, Regional FASD Training Centers, 2013
<table>
<thead>
<tr>
<th>Grant/Contract #</th>
<th>Total Direct Dollars/ Duration of Grant</th>
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<tr>
<td>ACTIVE</td>
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<tr>
<td>Community Service Project, Jones (PI)</td>
<td>$300,000 annual Continuous</td>
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<td>State of California Department of Education: California Teratogen Information Service &amp; Clinical Research Program</td>
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<tr>
<td>Contract, Chambers (PI) Prospective Follow-Up of Pregnancy Exposure to Leflunomide--an OTIS Autoimmune Diseases in Pregnancy Project</td>
<td>$2,052,694 July 2005-July 2014</td>
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<tr>
<td>Grant, Chambers (PI) NARCH - Native American Screening, Brief Intervention, and Referral for Treatment U26IHS300292 HI176/ NIH/NIGM/IHC</td>
<td>$1,300,000 Sept. 2009-Aug. 2013</td>
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<td>Contract, Chambers (PI) H1N1 and Influenza Vaccines and Antiviral Medications in Pregnancy (VAMPSS) HHSO100201000029C/DHHS BARDA</td>
<td>$2,841,228 Feb. 2010-Sept. 2015</td>
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<td>Contract, Chambers (PI) Menevo Vaccine Pregnancy Registry – A VAMPSS Study 201003461/Novartis</td>
<td>$1,967,324 Aug. 2010-Nov. 2013</td>
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<tr>
<td>Grant, Chambers (PI) Co-FASP Measurement of Prevalence of FASD in San Diego County U01 AA019879-01/NIH-NIAA</td>
<td>$8,471,070 Sept. 2010-Aug. 2015</td>
</tr>
<tr>
<td>Grant/Contract #</td>
<td>Total Direct Dollars/ Duration of Grant</td>
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</table>
| Contract, Chambers (PI)  
The Terflunomide Pregnancy Exposure Registry – an OTIS Autoimmune Diseases in Pregnancy Project  
20113565/Genzyme (Sanofi-Aventis) | $1,964,287  
| Contract, Chambers (PI)  
Cimzia® Pregnancy Exposure Registry – an OTIS Autoimmune Diseases in Pregnancy Project  
20113868/UCB Pharma, Inc | $3,061,363  
Feb. 2012-Feb. 2017 |
| Grant, Jones (PI)  
Dysmorphology Core  
2U24AA014815-09/NIH/NIAAA | $1,820,529  
Sept. 2003-May 2017 |
| Grant, Chambers (PI)  
Early Identification of Affected Children and Risk Factors for FASD in Ukraine  
2U01AA014835-09/NIH/NIAAA | $7,003,179  
Sept. 2003-May 2017 |
| Grant, Chambers (PI)  
Influence of Nutrition on Growth and Neurodevelopment in Children with FASD in Ukraine  
R01: AA021551 NIH/NIAAA | $972,300  
Sept. 2012-July 2017 |
| Contract, Chambers (PI)  
Stelara Pregnancy Exposure Registry: OTIS Autoimmune Diseases in Pregnancy Project  
2013-2318/Janssen Biotech, Inc | $2,340,938  
June 2013-Dec. 2020 |
| Contract, Chambers (PI)  
Tofacitinib Pregnancy Exposure Registry OTIS Autoimmune Diseases in Pregnancy Project  
2013-1407/Pfizer | $3,708,451  
June 2013-June 2018 |
| Contract, Chambers (PI)  
California Birth Defects Monitoring Program  
California Department of Health | $4,360,065  
| **COMPLETED**  
Contract, Chambers (PI)  
National Children's Study – San Diego County (Base) Location  
HHSN267200700021C/20083263/NIH/NICHD/UCI | $14,255,127  
| Contract, Chambers (PI)  
National Children's Study Formative Research  
HHSN275201200013C/NIH/NICHD/UCI | $597,452  
| Contract, Chambers (PI)  
Post-marketing Safety Study to Assess Pregnancy Outcomes Including Miscarriage Following Administration of CERVARIX in the U.S. and Canada—a VAMPSS Study  
20105154/Glaxo Smith Kline Bio | $3,108,411  
Dec. 2010-Mar. 2013 |
Member, Advisory Board, California Biobank Program (CBP), California Department of Public Health, Sacramento, CA, 2013-
Chair, BRAID Child Health Steering Committee, Clinical and Translation al Science Institute, University of California, UCOP, 2013-
Deputy Editor, Wiley Blackwell, Birth Defects Research Part A: Clinical and Molecular Teratology, 2012-
Guest Editor, International Journal of Drugs and Alcohol, Special Issue FASD, 2012-2013
Instructor, Human Teratogens Course, Massachusetts General Hospital, Boston, MA, 2011
Japanese Rheumatology Society, Tokyo, Japan, 2011
Visiting Professor, Japanese Drug Information Institute in Pregnancy, Japanese National Center for Child Health and Development, Tokyo, Japan, 2011
Pregnancy Outcomes in Women Exposed to Adalimumab for the Treatment of Rheumatoid Arthritis, 28th International Conference on Pharmacoepidemiology and Therapeutic Risk Management, Barcelona, Spain, August 23-26, 2012
2nd European Conference on FASD, Barcelona, Spain (October 20-25, 2012)
Debates: Substance Abuse: Every Clinician’s Problem. The Society for Maternal Fetal-Medicine 33rd Annual Meeting–The Pregnancy Meeting, American College of Surgeons, Divi-
Long-term use of mental health medication and pregnancy. March of Dimes National Communications Advisory Council (NCAC) luncheon for journalists–New York City, June 6, 2013
Centers for Disease Control and Prevention Treatment for Two Workshop, Atlanta, GA, July 2013
The Global Impact of Fetal Alcohol Spectrum Disorders, South Korea Substance Abuse Task Force annual symposium, Seoul, Korea, July 2013
Update on Toxicology in Human Pregnancy: Epidemiological Methods for Detecting Adverse Fetal Effects of Human Exposure to Medicines During Pregnancy. 13th International Congress of Toxicology 2013-Symposia 11, Seoul, Korea, July 2013
ART and Birth Defects. Center for Disease Control and Prevention: 5th Annual States Monitoring Assisted Reproductive Technology (SMART) Meeting, Atlanta, GA, August 12-13, 2013
Kenneth Lyons Jones, MD
Annual Kurt Benirschke Lecture at the UCSD School of Medicine
Dr. David W. Smith Teaching Award-Academy of Pediatrics; Section on Genetics and Birth Defect Vancouver, British Columbia, March 2011
Excellence in Research Award – RCHSD, San Diego, CA
Starfish Award – 5th International Conference on Fetal Alcohol Spectrum Disorders, Vancouver, British Columbia, 2012
Visiting Professor
PUBLICATIONS
The Division of Pediatric Emergency Medicine provides medical care to sick and injured children. It comprises 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 that is solely dedicated to the care of children. It is also the only Level 1 pediatric trauma center in San Diego County. The emergency care center specializes in a host of services including evaluation and treatment of medical illnesses, treatment of minor injuries (including lacerations), acute orthopedic care, pediatric sedations, non-accidental injuries, stabilization and treatment of children with critical illnesses and trauma, poisonings, water submersion illnesses, acute psychiatric illnesses, and the care of children with special needs among others. The UCCs provide after-hours pediatric care conveniently located at four different locations outside of our main campus.
FACULTY
Bema Bonsu, MD, Chief and Medical Director, Professor of Clinical Pediatrics
Keri Carstairs, MD, Director of Clinical Operations, Assistant Clinical Professor of Pediatrics
Joyce Arpilleda, MD, Associate Clinical Professor of Pediatrics
Yu-Tsun Cheng, MD, Assistant Clinical Professor of Pediatrics
Heather Conrad, MD, Assistant Clinical Professor of Pediatrics
Arit Edwin-Enyenihi, MD, Associate Clinical Professor of Pediatrics
Marc Etkin, MD, Medical Informatics Champion, Associate Clinical Professor of Pediatrics
Clare Haas, MD, Assistant Clinical Professor of Pediatrics
Jim Harley, MD, MPH, Clinical Professor of Pediatrics
Cynthia Hoecker, MD, Clinical Professor of Pediatrics
David Gutglass, MD
Paul Ishimine, MD, Associate Clinical Professor of Emergency Medicine and Pediatrics
John Kanegaye, MD, Clinical Professor of Pediatrics
Jason Lowe, DO
Simon Lucio, MD, Associate Clinical Professor of Pediatrics
Mathew Murray, MD, Assistant Clinical Professor of Pediatrics
Seema Shah, MD, Associate Clinical Professor of Pediatrics
Stacey Ulrich, MD, Assistant Clinical Professor of Pediatrics
Shannon Wai, MD, Assistant Clinical Professor of Pediatrics

INTERMEDIATE CARE PEDIATRICIANS
Janet Friday, MD, 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
Priya Narayanan, MD, Assistant Clinical Professor of Pediatrics

URGENT CARE PEDIATRICIANS
Katherine Konzen, MD, MPH, Medical Director, Clinical Professor of Pediatrics
Hannah Awai, MD, Associate Physician
Shaun Berger, MD, Associate Clinical Professor
Adam Braddock, MD, Associate Clinical Professor

The vision 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 and the best site on the West Coast and beyond for providing emergency medical services to children. The mission is to strive daily for the health and welfare of acutely ill and injured children and their families. To this end, the goal is to provide safe, consistent, high-quality services at all times and under all circumstance, and to promote high-quality teaching and research that benefits the children of San Diego and beyond.

The plan is to employ a three prong strategy comprising: (1) Better Space: a greater number of high-quality multi-functional rooms in a cohesive floor plan; (2) Better Staffing: recruitment of pediatric emergency physicians, pediatricians, mid-level providers and nurses who are dedicated to the care of children, to building strong cohesive teams, and furthering instruction and scientific knowledge and (3) Better Systems and Operations: continue to innovate with regard to how best to achieve daily efficiency, safety and quality to benefit guests.

PEDIATRIC EMERGENCY MEDICINE FELLOWS
John Auten, MD
Sara Combs, MD
Julia Magaña, MD
Michele McDaniel, MD
Kristy Putnam, MD
Amy Williams, MD

Jehrib Cabarlo, DO, Associate Clinical Professor
Patricia Eck, DO, Associate Physician
Kara Hutton, MD, Associate Physician
Weena Joshi, MD, Associate Physician
Sarah Judd, MD, Associate Physician
Lauren Kearney, MD, Associate Physician
Jenny Ilfeld, MD, Associate Physician
Weena Joshi, MD, Associate Physician
Lauren Kearney, MD, Associate Physician
Gregory Langley, MD, Associate Clinical Professor of Pediatric Seema Mishra, MD, Assistant Clinical Professor of Pediatrics
Jennifer Tiller, MD, Associate Physician
NURSE PRACTITIONERS
Lindsay Grubensky, NP
Stephanie Reittinger, NP
Kristi Westphaln, NP

EMERGENCY CARE CENTER (ECC)
Bema Bonsu, MD, serves as the new chief and medical director of the Division of Emergency Medicine. He assumed his present position in June 2012. Dr. Keri Carstairs is the Director of Clinical Operations. The director of nursing is Lesley Carlson, RN.

The ECC is the busiest pediatric emergency department on the West Coast. From July 2012 through June 2013 (FY2013), 74,999 patients arrived in the ECC for treatment. This represents more than a 5% increase in volume over the previous year. In spite of this massive increase in volume, the Division continues to make strides in improving customer service and increasing access.

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

Quality Improvement Initiative
The ECC continues to strive to improve the quality of care and to increase satisfaction with the services. A continuing challenge in emergency departments around the country is how to reduce the interval from arrival to evaluation by a clinician. To succeed, groups have had to wrestle over finding the right levels and kinds of staffing, space and operations. This site is no different. Over the years, meetings are held regularly with various stakeholders to examine reasons for delays to care and to fashion solutions. Ongoing deliberations have yielded useful insights and suggested possible solutions. One finding was the negative impact on left without being seen rates (LWBSR) of the number of patients present in the ER for over 400 minutes. By reducing the number of patients with prolonged ECC stays, there was a salutary effect on LWBSR. In turn, lower LWBS rates resulted in improvements in patient satisfaction. These findings were published in the Society for Health Systems (SHS) monthly newsletter. Other operational innovations have yielded similar results. Examples include a winter influenza clinic noted to improve lengths of stay and LWBSR during the last influenza epidemic; nurse initiated orders; changes in clinician workflows to maximize efficiency; data-optimized matching of patient arrival times to shift times; direct bedding of patients; and bedside registration.

The ECC has also recently increased the number of beds and presently reconfiguring the ECC floor plan to increase overall efficiency. An aggressive program of physician and mid-level provider recruitment has begun to better match service demands to supply. Efforts to optimize electronic medical records are ongoing and have yielded improvements in safety and quality of medical care, created opportunities for research, and afforded the ability to perform the kinds of audits that are helpful for identifying areas in need of attention and quality improvement. There are now several clinical pathways that have been developed for use in ensuring high quality care for all guests. Most importantly, beyond efforts centered in the ECC, a number of complementary programs are being pursued at the hospital to improve the efficiency of patient flow through the hospital. ECC-based and hospital-wide innovations are expected to further improve safety, quality and efficiency as measured by wait times, lengths of stay, safety events and patient satisfaction.

URGENT CARE CENTERS (UCC)
Under the leadership of Dr. Katherine Konzen, Urgent Care Medical Director, the Urgent Care Centers saw 47,909 patients at the four off-site urgent care facilities last year. This was over a 20% 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 Care Center. 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. Clinics provide after-hours care 365 days a year. The sites are open 4pm-10pm weekdays and holidays, and 1pm-10pm on weekends.

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. This past year, our team of providers saw 11,922 patients.

East County
The 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 12,029 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 service that is unparalleled in quality and efficiency to an area where most patients must use public transportation to travel beyond their neighborhoods. This site provides services seven days a week and is open until 10pm. There were 16,524 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 in April of 2010 and saw 7,398 patients through the end of the fiscal year. This was almost a 50% increase in volume from the previous year.

Teaching in the Urgent Care Centers
There are 2-week long elective rotations for UCSD Pediatric Residents in the Urgent Care. Family practice residents from Scripps also do a 2-week rotation with us. Education is key to our program. Drs. Sarah Judd and Shaun Berger have taken the lead as the coordinators of our educational program. Effective July, 2013 all UCSD Pediatric residents will have a mandatory 2-week urgent care rotation in the Intermediate Care of the Emergency Care Center or in the Urgent Care Centers.

Drs. Adam Braddock and Shaun Berger have both participated in the Introduction to Clinical Medicine program at UCSD.

Drs. Berger, Langley and Konzen have also participated as mentors to the UCSD and SDSU NP Teaching programs.

Drs. Braddock and Konzen have given many lectures to the UCSD medical students and residents on a variety of topics.

Clinical Activities in the Urgent Care Centers
The Urgent Care Center Teams of Physicians, Nurses and Patient Access Reps have had an annual retreat over the past 3 years and work as a team to solve challenging issues. This year, the RN-MD Interaction Survey resulted in a score of 79.19 which is the highest of any division at RCHSD. Monthly team meetings occur to discuss efficiency and patient satisfaction; the focus is on systems issues that can improve our care. The high commitment to efficiency and quality accounts for the large number of patients seen and treated. 2-4% of patients are transferred to the Emergency Department/or Inpatient Unit. Overall, 96% of the patients and families who seek our care are seen.

EMERGENCY MEDICINE
Medical Staff
The provider staff is comprised of 18 board certified pediatric emergency medicine specialists, 6 board-certified pediatricians, and 2 nurse practitioners. All pediatric emergency medicine specialists in the Division have completed residencies in Pediatrics or Emergency Medicine and 2 to 3 years of fellowship training in Pediatric Emergency Medicine. Pediatricians and nurse practitioners staff less acutely ill guests in the Intermediate Care area of the Emergency Center.

CLINICAL ACTIVITIES
Clinical Care
The Emergency Care Center is the only emergency care center in the San Diego region solely dedicated to the emergent care of children and the only Level I pediatric trauma center in San Diego County. It specializes in the evaluation, diagnosis and treatment of a variety of medical illnesses and injuries. Work continues to improve services to its guests and families.

Disaster Preparedness
Heather Conrad, MD, was appointed as disaster director for the 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.

Emergency Medical Services
The 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. Dr. Jim Harley is on the California State Technical Advisory Committee for EMS-C (Emergency Medical Services for Children).

TEACHING ACTIVITIES
Residents And Medical Students
Education is a core mission of the Division. Rotating through our program are residents from programs in Pediatrics, Emergency Medicine, and Family Medicine located in San Diego and beyond. Residents are trained to recognize and stabilize sick and injured children. Medical students from the University of California, San Diego (UCSD) rotate with us. Dr. Jennifer Weglowski directs our medical student rotation and Dr. Seema Shah, MD directs resident education. Members of our faculty provide bedside teaching and instruction in basic procedures such as suturing or lumbar punctures. The fourth-year UCSD medical student rotation is one of the most popular selections among students interested in pediatrics or emergency medicine.

The Division participates with UCSD in using a state of the art, computer programmed resuscitation model for teaching residents and medical students. We are presently gearing up to start an in-hospital simulation program for 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. Training future pediatric emergency medicine physicians is a key priority of the department to help meet this need. There are only four other similar training programs in California.

Outreach
Drs. Ishimine and Shah host Pediatric Emergency Medicine conferences annually that have drawn audiences from around the county. Faculty members have been asked to and continue to provide lectures both within and outside the confines of the university. Several members have also published articles in public news magazines that are directed at educating the public.
RESEARCH ACTIVITIES
The Division of Emergency Medicine is committed to research. Current research interests are wide and include the study of infectious diseases (urinary tract infections, meningitis, and bacteremia), sickle cell disease, Kawasaki disease, head trauma, and innovations in ED operations among others. Funding for research has come from intramural and extramural sources such as the NIH (Kawasaki disease). Kawasaki disease research has been highly successful with collaboration among clinical researchers in our Division (Dr. Kanegaye in particular), basic science researchers, and Dr. Jane Burns, an internationally recognized expert. Members of the group have also participated in large multicenter collaborative studies. Members of the Division have continued to publish manuscripts in prestigious scientific journals.

RESEARCH PUBLICATIONS


BOOK CHAPTERS
Endocrinology

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, Division Chief, Clinical Professor of Pediatrics, Vice Chair for Education

Ivka Afrikanova, PhD, Assistant Project Scientist

Carla Demeterco, MD, PhD, Assistant (2012) Clinical Professor of Pediatrics

Ergeng Hao, MD, Associate Project Scientist

Alberto Hayek, MD, Professor Emeritus

LEFT TO RIGHT: Jianhua Shao, Andrew Hinton, Karen Klein, Ken Lee Jones, Sue Phillips, Michael Gottschalk, Ulupi Jhala, Maike Sander, Carla Demerteco, C.C. King, Jane Kim, Ron Neufield, Maja Mariakovic, Tom Kelly
Andrew Hinton, PhD, Assistant Research 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
Jane Kim, MD, Assistant Adjunct Professor of Pediatrics
Charles C. King, PhD, Associate Research Scientist
Karen Klein, MD, Associate Clinical Professor of Pediatrics
Janel Kopp, PhD, Assistant Project Scientist
Maja Marinkovic, MD, Assistant Clinical Professor of Pediatrics
Anthony Montgomery, PhD, Research Scientist
Ron Newfield, MD, Associate Clinical Professor of Pediatrics
Susan Phillips, MD, Assistant Professor of Pediatrics in Residence
Liping Qiao, PhD, Associate Project Scientist
Maike Sander, MD, Associate Professor of Pediatrics
Philip A. Seymour, PhD, Assistant Project Scientist
Jianhua Shao, MD, PhD, Associate Professor of Pediatrics
Hung Ping Shih, PhD, Assistant Project Scientist
Mayra Yebra, PhD, Associate Project Scientist

POSTDOCTORAL FELLOWS
Hiba Al-Zubedi, MD
Audrey Briscoe, MD
Abigail Gelb Fruzza, MD
Bjoern Gaertner, PhD
Zoya Kai, PhD
Maria Eleni Nikita, MD
Allen Wang, PhD
Matthew Wortham, PhD
Ruiyu Xie, PhD
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 interlace 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.
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 and Neuro-Oncology Clinic. Recently the Division established the Gender Management Clinic to provide care for transgender children and adolescents. 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 12,000 endocrine/diabetes outpatient visits, and over 1,300 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/pharmacodynamic 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 a long acting growth hormone formulation for the treatment of children with growth hormone deficiency.

Alberto Hayek, MD research 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.

Andrew Hinton, PhD, has focused on understanding molecular mechanisms that regulate the vitro production of insulin-producing beta cells. This work is focused on characterization of microRNA profiles during human embryonic stem cell (hESC) differentiation, and the development of reporter cell lines that will allow isolation and characterization of target cell populations during hESC differentiation. Other cell lines are being developed that can inductively express small RNAs in order to test their effects on current differentiation protocols.

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 cytokines and fatty acids in inducing inflammation and apoptosis. 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 studying the misdiagnosis of type 2 diabetes in children and unreported causes of monogenic diabetes. He is also pursuing investigation of unusual endocrine disorders in children, most recently thyrotoxic, hypokalemic periodic paralysis and generalized arterial calcification of infancy.

Jane Kim, MD investigates how insulin acts at the cellular level in different tissues to alter glucose metabolism and other physiologic events in diabetes. Presently Dr. Kim’s research identifies key factors that contribute to insulin resistance and pancreatic beta cell failure in type 2 diabetes. Adipose tissue is the body’s largest endocrine organ, representing a complex, essential and highly metabolic site of insulin action. Excess adiposity, or obesity, is associated with insulin resistance, diabetes, atherosclerosis, dyslipidemia and hypertension. Dr. Kim’s work has primarily focused on how transcription factors regulate adipose tissue metabolism. Her current research investigates epigenetic mechanisms that influence metabolism by studying how in changes in our diet alter gene transcription and our predisposition to insulin resistance. Discovering mechanisms that govern transcription factor function is expected to lead to novel treatments in treating diabetes.

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 these molecules and has begun to develop treatments that could be used to enhance the production of these cells.
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 endocrinology, and hopes to increase collaboration using his expertise and her patient population.

Maja Marinkovic, MD is the local principal investigator studying treatment of children with IGF-1 deficiency and 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 induce 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. He also has a type 1 diabetes-specific retrospective study to assess weight gain and glycemic response to insulin as well as evaluating other conditions at presentation. The database and diabetes-specific protocols have 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, a study to assess QOL in children with short stature, and pharmacokinetic and efficacy studies of lipid-lowering medications. The 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, was terminated due to lack of efficacy in an equivalent study in Europe. The site at Rady Children’s Hospital has tested over 500 subjects that are relatives of patients 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. Dr Newfield has 2 industry-based studies with subjects already enrolled, and 2 more to begin enrolling, to study new therapies in children and adolescents with type 2 diabetes. He also initiated a study in collaboration with Quest Diagnostics, to retrospectively evaluate thyroid tissue from pediatric thyroid cancer surgical specimens, and assess the frequency of different mutation classes, and genotype vs. phenotype correlations.

Susan Phillips, MD translational research is focused on improving our understanding of the development of metabolic diseases such as diabetes and fatty liver disease in human obesity. Obesity is recognized to increase the risk of developing type 2 diabetes, yet only about 20% of obese subjects have diabetes. To better understand the factors that contribute to the development of diabetes in the obese, Dr. Phillips has developed methods to study the hormonal activity of freshly isolated human fat tissue and cells over prolonged periods of time. Using this culture technique Dr. Phillips has worked to better understand the regulation of the insulin sensitizing in the obese are associated with reductions in the production of adiponectin by visceral (central) fat cells and that these fat cells are poorly responsive to currently available therapeutics. The cellular mechanisms responsible for synthesis and secretion of adiponectin are poorly understood. In recently published work Dr. Phillips reported that cellular obesity, hypertrophy, appears to contribute significantly to the low circulating levels of adiponectin in the obese. Ongoing studies are directed towards the identification of regulatory mechanisms that link cell size to adiponectin production. The ultimate goal of this work is to identify key regulatory steps in adiponectin synthesis and secretion for targeted therapeutic intervention to prevent obesity-related metabolic disease.

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. The main objective of Dr. Sander’s current research is to identify strategies for producing functional insulin-producing beta cells from pluripotent stem cells in vitro. To track changes in gene expression and chromatin state during beta cell differentiation, the Sander laboratory recently published the first epigenetic map of human embryonic stem cells during their progression to
beta cells. The goal is to use this knowledge to identify factors that can induce beta cell differentiation in vitro.

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 AND TRAINING 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 programs.
<table>
<thead>
<tr>
<th>Grant/Contract #</th>
<th>Total Direct Dollars/ Duration of Grant</th>
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| Audrey Briscoe, MD | Fellowship Genentech  
Genentech - Briscoe | $100,000  
Aug. 2010-July 2012 |
| Michael Gottschalk, MD, PhD | Immune Tolerance Network (ITN) Trial- ATG for New-onset T 1DM  
Sub ITN10187-00 (N01-Al-15416)/(UCSF) UC San Francisco | $581,082  
|  | Effect of Antithymocyte Globulin on Preserving Beta-Cell  
Function in New-onset Type 1 Diabetes Mellitus  
Sub 108131 (AI15416)/(UCSF) UC San Francisco | $348,755  
|  | T1D Exchange Clinic-based Registry  
Sub CLINIC No. 26/JAEB Center For Health Research, In | $278,862  
Nov. 2010-Feb. 2013 |
|  | Combination Therapy with Sitagliptin (DPP-4 Inhibitor) and  
Lansoprazole (Proton Pump Inhibitor) to Restore Pancreatic Beta Cell Function in Recent-Ons  
20113926 RepairT1D/Sanford Usd Medical Center | $51,980  
| Albert Hayek, MD | Modeling Pancreas from Human Embryonic Stem Cells  
Juvenile Diabetes Foundation | $1,002,878  
Aug. 2007-July 2012 |
| Ulupi Jhala, PhD | Signaling Cascades in Regulation of Pancreatic Beta Cell Mass  
1 R01 DK080147-01/NIH (NIDDK) | $1,320,190  
|  | Mixed Lineage Kinases as Drug Targets in Type 1 Diabetes  
40-2009-706/Juvenile Diabetes Foundation | $454,509  
Jan. 2010-Dec. 2011 |
|  | Epigenetic Regulation of PDX1 Gene  
40-2010-747/Juvenile Diabetes Foundation | $649,076  
Nov. 2010-Oct. 2011 |
|  | Modeling Pancreas from Human Embryonic Stem Cells (Hayek, PD)  
35-2008-622/JDRF | $1,002,878  
Sept. 2008-Aug. 2011 |
| Jane Kim, MD | Studies of FoxO1 in Insulin Resistance and its Interaction with PPARgamma  
1 K08 DK075479-01A1/NIH (NIDDK) | $725,658  
| Karen Klein, MD | Growth and Menstrual Cycles in Girls with Precocious Puberty  
After Discontinuation of Treatment  
2008218/Abbott Laboratories | $125,798  
Sept. 2009-Jan. 2015 |
|  | Racial Diversity and Obesity Impact on Pubertal Onset  
2005-0355/Pfizer | $54,714  
<table>
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<tr>
<th>Grant/Contract #</th>
<th>Total Direct Dollars/ Duration of Grant</th>
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<tbody>
<tr>
<td><strong>Anthony Montgomery, PhD</strong>&lt;br&gt;Kinase Inhibitors and the Endocrine Specification of hESC Derivatives&lt;br&gt;1-11-10-19/American Diabetes Assn</td>
<td>$95,000&lt;br&gt;Jan. 2011-Dec. 2011</td>
</tr>
<tr>
<td><strong>Maike Sander, MD</strong>&lt;br&gt;Epigenetic strategies for the in vitro generation of replacement beta cells&lt;br&gt;1 U01 DK089567-01/NIH (NIDDK)</td>
<td>$3,478,613&lt;br&gt;Sept. 2010-June 2013</td>
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<tr>
<td>Enhancer-Based Beta-Cell Programming Strategies&lt;br&gt;Sub VUMC38646(DK072473)/Vanderbilt University (TN)</td>
<td>$480,807&lt;br&gt;Aug. 2011-July 2012</td>
</tr>
<tr>
<td>Quantitative Comparison of hESC and hiPSC Lines to Generate Pancreatic Endoderm and Endocrine Cells&lt;br&gt;Sub VUMC 38186 (DK072473)/Vanderbilt University (TN)</td>
<td>$163,163&lt;br&gt;Apr. 2011-Mar. 2012</td>
</tr>
<tr>
<td>Investigation of New Permissive Environments for Beta Cell Engraftment&lt;br&gt;VUMC 38642/Vanderbilt University (TN)</td>
<td>$135,000&lt;br&gt;Aug. 2011-July 2012</td>
</tr>
<tr>
<td>Nkx6.1 Induces Alpha-Cell Conversion and Enhanced Beta-Cell Regeneration&lt;br&gt;Sub VUMC36123 (DK072473)/Vanderbilt University (TN)</td>
<td>$125,000&lt;br&gt;Sept. 2009-Aug. 2011</td>
</tr>
<tr>
<td>Epigenetic Regulation of Endocrine Cell Transcription (ERECT)&lt;br&gt;Sub VUMC36149 (DK072473)/Vanderbilt University (TN)</td>
<td>$112,500&lt;br&gt;Sept. 2009-Aug. 2011</td>
</tr>
<tr>
<td>3D Growth of Human Pancreatic Tissue from PSCs&lt;br&gt;Sub VUMC38644/Vanderbilt University (TN)</td>
<td>$104,000&lt;br&gt;Aug. 2011-July 2012</td>
</tr>
<tr>
<td>Support for the NIH-NIDDK Beta Cell Biology Consortium Coordinating Center&lt;br&gt;Sub VUMC 37644 (DK078473)/Vanderbilt University (TN)</td>
<td>$19,689&lt;br&gt;Jan. 2011-July 2012</td>
</tr>
<tr>
<td><strong>Jianhua Shao, MD, PhD</strong>&lt;br&gt;Adiponectin and Regulation of Triglyceride Metabolism&lt;br&gt;7 R01 DK080418-03/NIH (NIDDK)</td>
<td>$947,689&lt;br&gt;July 2009-Jan. 2013</td>
</tr>
<tr>
<td>Transcriptional Regulation of Adiponectin Gene Expression&lt;br&gt;7-07-CD-23/American Diabetes Assn</td>
<td>$587,331&lt;br&gt;July 2009-June 2012</td>
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</tbody>
</table>
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 independent study project. In addition, he was invited to speak at meetings of the Endocrine Society and has been interviewed on local television.

Andrew Hinton, PhD
Dr. Hinton teaches an online course in Stem Cell Biology at UCSD extension, and he mentors undergraduate researchers in his laboratory.

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.

Thomas Kelly, MD
Dr. Kelly provides lectures to residents and fellows, and teaches in the endocrine/diabetes clinic and inpatient service. He serves as a mentor to a Medicine-Pediatric resident at UCSD. He also gives lectures in endocrinology to primary care physicians as an invited speaker at several conferences.

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.

Charles C. King, PhD
Dr. King lectures to graduate studies on insulin signal transduction and on siRNA/miRNA. Additionally, Dr. King mentors an Assistant Research Scientist, a postdoctoral fellow, and four undergraduate students. He serves on the Review and Appraisals Committee.

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 2 fellowship scholarship oversight committees.

Maja Marinkovic, MD
Dr. Marinkovic teaches endocrine fellows, pediatric residents and medical students in inpatient and outpatient settings. She gives lectures for pediatricians, students and residents at pediatric grand rounds at Mercy Hospital. She has given lectures in the first-year medical student Endocrinology and Metabolism course. She served 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 serves on a fellowship scholarship oversight committee. He mentored a UCSD student volunteer, and together they published a manuscript, and had 2 abstracts accepted at 2 National meetings in 2013. He has given several presentations to local health professionals and presented at endocrine grand rounds.

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 an instructor in the Endocrinology and Metabolism course for first and second year medical students. She provides didactic lectures on a variety of topics in diabetes and endocrinology to rotating medical students, housestaff and fellows at Rady’s and the VA Medical. She continuously serves as an ISP to one student yearly and to mentor rotating undergraduates and medical students in the laboratory. Dr. Phillips also serves as a member of the core curriculum committee involved in the policy and administration of medical student education.

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 teaches a core class for first year graduate students in the Biomedical Sciences Graduate Program and co-lectures a class in human genetics for medical students. Dr. Sander supervises postdoctoral fellows, graduate students, and undergraduate researchers in her laboratory.

Ulupi Jhala, PhD
Speaker, Annual Pediatrics Faculty Retreat, La Jolla CA, January 2013

Thomas Kelly, MD
Invited Speaker, Metabolic Syndrome in Children and Short Stature, Binational Conference, Tijuana, Mexico, May 2013
Invited Speaker, Diabetes Mellitus in Children at Binational Conference, Tijuana, Mexico, February 2012
Invited Speaker, Pediatric Endocrinology in Jacobsen Syndrome. 2012 Bi-Annual 11 Q-Conference (Jacobsen Syndrome), June 2012

Jane Kim, MD
UCSD/UCLA Outstanding Junior Faculty Development Award, May 2012
UCSD/UCLA Junior Faculty Development Award, January 2012

Charles C. King, PhD
Speaker, PDRC Symposium, San Diego CA, February 2012

Karen Klein, MD
Invited Speaker, Grand Rounds, Miller Children’s Hospital, Precocious Puberty: Too Soon, Too Late, Just Right, October 2012

Maja Marinkovic, MD
Lecturer, Endocrine Emergencies. Pediatric Grand Rounds, Scripps Mercy Hospital, San Diego, CA, May 2013
Lecturer, Diabetes Insipidus. Pediatric Grand Rounds, Scripps Mercy Hospital, San Diego, CA, May, 2012
Invited Speaker, Diabetes Mellitus in Children. Binational Conference, Tijuana, Mexico, February 2012

Ron Newfield, MD
CF Related Diabetes (CFRD). A Lecture Given on CF Parents Day. RCHSD, October 20, 2012

Susan Phillips, MD
Keynote Speaker, Role of Adipose Tissue in Metabolic Disease. AMSA Society UC Berkeley, 2012
Keynote Speaker, Fat Cell Size and Adiponectin, Does Fat Cell Size Matter? Cleveland Clinic Obesity Days Cleveland, OH, 2012
**Maike Sander, MD**

Invited Speaker, Pancreatic Cancer Symposium, Salerno, Italy, June 2013


Invited Speaker, Beta Cell Workshop, Kyoto, Japan, April 2013

Invited Speaker, GNF-JDRF Diabetes Research Symposium, San Diego, CA, 2012

Invited Speaker, Cedars-Sinai Stem Cell Symposium, Los Angeles, CA, September 2012

Invited Speaker, Gastrointestinal Stem Cell Biology, AGA Freston Conference, Chicago, IL, 2012

Invited Speaker, Advances In Acute And Chronic Pancreatitis: From Development to Inflammation and Repair, Bethesda, MD, 2012

Invited Speaker, Improving Animal Models or Regenerative Medicine, Bethesda, MD, May 2012

Invited Speaker, Immunity and the Beta Cells. NIH Workshop, Washington, MD, 2012

Invited Speaker, Cell Replacement Sources for T1D: Beta Cells, Islets, Progenitors. JDRF Workshop, Washington, MD, 2012

Invited Speaker, Advances in Diabetes Research. 12th Annual Rachmiel Levine Diabetes Symposium: Diabetes and Obesity Symposium, Pasadena, CA, 2012

Invited Speaker, Liver and Pancreas: From Development to Disease. Current Trends In Biomedicine Workshop, Baeza, Spain, 2011

Invited Speaker, Symposium on Stem Cells in Development and Disease. Max-Delbrück Center, Berlin, Germany, 2011

Invited Speaker, Translating Pancreatic Development To Treat Diabetes. SDB Satellite Symposium, Chicago, IL, 2011

Elected Member, American Society for Clinical Investigation, 2011

**RESEARCH PUBLICATIONS**


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.
FACULTY

Ariel E. Feldstein, MD, Professor of Pediatrics and Division Chief
Lars Bode, PhD, Associate Professor of Pediatrics
Kerri Boutelle, PhD, Associate Professor of Clinical Pediatrics and Psychiatry
Rebecca Cherry, MD, Assistant Clinical Professor
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 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
Tamara Taketani, MD
Elizabeth Yu, MD

POSTDOCTORAL FELLOWS

Dana Patton-Ku, MD
Nidhi Goyal, MD
Daphne Say, MD
Sara Kathryn Smith, MD
Catherine Lacey, MD
Jonathan Africa, 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 setting, 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.
Major Goals & Plans

• 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 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.
**RESEARCH ACTIVITIES**

Kerri Boutelle, PhD performs research focusing on the causes, characterization, prevention and treatment of childhood, adolescent and adult 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.

Rebecca Cherry, MD, MPH, is the Interim Director of the Motility Center at RCHSD, providing consultation and diagnostic procedures for children with GI dysmotility as well as persistent abdominal pain. She is also the Interim Director for Nutrition Support, overseeing clinical management of patients with intestinal failure and other complex nutritional needs. She has recent and ongoing research activities in both these fields. In the area of motility and abdominal pain, she is studying outcomes of physical therapy for intractable chronic constipation. She also has obtained compassionate use access to cisapride, a prokinetic medication. She is actively collaborating with the UCSD Center for Mindfulness to develop mind-body programs for patients with chronic abdominal pain. She has an upcoming project to study the genetics of carbohydrate digestion in patients with abdominal pain. In the area of nutrition, Dr. Cherry was the local investigator for the Second International Study of PICU Nutrition in 2012. She is involved in the experimental use of fish-oil based lipid emulsions for patients with parental-nutrition related cholestatic liver disease, and will soon be investigating the use of teduglutide, a GLP-2 analogue, to increase intestinal adaptation in patients with short bowel syndrome.

She is also studying the use of oral viscous budesonide for symptomatic and histologic improvement in patients with eosinophilic esophagitis.

Lillian Choi, MD has special interests in pediatric gastroenterology that include functional abdominal pain. She was an active co-investigator of a pilot open-labeled trial investigating the effectiveness of SAM-e for the treatment of Functional Abdominal Pain (FAP) in children. Dr. Choi is also the Director of Endoscopy. Her goals are to maximize quality and patient safety. This includes regularly updating the endoscopy suite in regards to the latest endoscopic technologies and procedural equipment, and to expand the repertoire of endoscopic procedures available to patients which will allow for more efficient, more therapeutic, and most importantly, more reliable and safer care for patients. She has instituted regular and iterative quality improvement evaluations regarding the procedural service to ensure excellent patient care and comfort.

Ranjana Dohil, MB, BCh’s research interest has included eosinophilic esophagitis in childhood and gastrointestinal manifestations of cystinosis. He has been awarded grants from the Hearst and the Cystinosis Research Foundation which have allowed him to study different aspects of these diseases. Data accrued from studies of the pharmacokinetics and pharmacodynamics of cysteamine bitartrate in children with cystinosis were used to develop a new formulation of cysteamine which patients could tolerate better (fewer GI symptoms) and required twice-daily rather than every 6 hour ingestion. On April 2013 the new delayed and extended-release formulation of cysteamine (RP103 or ProcystbiTM), developed at UCSD along with Raptor Pharmaceuticals, was FDA approved and will now be commercially available for the treatment of cystinosis. The new drug has already been shown in the long-term studies to improve the quality of life for many of these patients. An article about the development of Procysbi was recently published in the New York Times. Following the development of RP103 a number of multicenter studies have been started using this drug in the treatment of NAFLD and Huntington’s disease.

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 (nonalcoholic 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 has led and currently 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 (TAHLC), a technology (website + SMS)-based intervention for adolescents with chronic disease to increase health-related self-efficacy and healthcare engagement among adolescents with chronic disease as they prepare for their transition to adult care; Fit4Life, a technology-based weight management program among children who have survived acute lymphoblastic leukemia; and SMART: A Social and Mobile Weight Control Program for Young Adults, that utilizes the Facebook platform to deliver a weight management program to obese youth.

Dr. Huang also is PI of a state-of-the-art NIH-funded project with Dr. Bartlett in the School of Engineering using facial recognition technologies to evaluate pain expressions in children with clinical pain. Finally, she is a co-investigator in two NSF-funded projects with Drs. Patrick and Tilak from the Qualcomm Institute of Technology at UCSD evaluating how cloud data processing may be used to provide real-time clinical feedback for real world health sensor data.

Dr. Huang, who is the Director of the UCSD Pediatric Gastroenterology and Hepatology Fellowship, has also been and currently is involved in a number of national medical education efforts, including the award-winning Health and Obesity: Prevention and Education project. She is the Chair of the NASPGHAN Maintenance of Certification Task Force and currently leads a number of national quality improvement projects targeting both clinical and procedural issues.

Sherry Huang, MD is involved in studies of kindreds with early colon cancer risk, with particular interest in patients with hamartomatous polyposis syndromes. She is involved in research evaluating the genetics of early colon cancer in children and its pathogenesis. Her projects involve the role 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 hamartomatous 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 serves as the Director of the Celiac Disease Clinic at Rady Children’s Hospital, San Diego. This clinic is one of fewer than 5 clinics in the western United States dedicated to the diagnosis and treatment of celiac disease in children. Once diagnosed, children are followed closely to ensure adaptation and adherence to the gluten-free diet, and to monitor growth and other nutritional parameters over time. The clinic currently cares for over 220 children with celiac disease. Dr. Newton has recently participated in a national working group, which is currently developing Best Practices expert consensus statement pertaining to management of celiac disease in children. She has also been actively engaged in numerous outreach and educational activities including the formation of a new pediatric celiac disease support group, Kickstart. In addition to celiac disease, Dr. Newton’s clinical focus has broadened to include

Gastroenterology, Hepatology & Nutrition
hepatology, and she is currently the Interim Medical Director of the Pediatric Liver Transplant Program at RCHSD, and is also co-investigator in several clinical research studies investigating pediatric nonalcoholic fatty liver disease.

**Jeffrey Schwimmer, MD** is Director of the Weight and Wellness Center, a multi-disciplinary program for the evaluation and treatment of childhood obesity at RCHSD. Dr. Schwimmer’s research emphasis is on the complications of obesity, both metabolic and behavioral. Dr. Schwimmer also directs the Fatty Liver Clinic at RCHSD. He is dedicated to the care of children with fatty liver disease. Fatty liver is now the most common cause of chronic liver disease in children. Dr. Schwimmer’s research includes the development and validation of non-invasive imaging for diagnosis, clinical trials for the treatment of steatohepatitis in children, and the role of the intestinal microbial environment in susceptibility to fatty liver.

**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.

**Elizabeth L. Yu, MD** completed her pediatric GI fellowship at Rady Children’s hospital/UCSD (’12) and joined the GI Division. Her research focuses on Histone deacetylase inhibitor (HDACi) mediated hepatoprotective effects on nonalcoholic steatohepatitis (NASH) and attenuation of obesity-induced metabolic dysfunction. As current therapy for NASH is lifestyle modification through diet and exercise, the eventual goal is to have a clinical application for HDACis in treatment of NASH.

**TEACHING AND TRAINING 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**

**Lars Bode, PhD**

- Received the Norman Kretchmer Memorial Award in Nutrition and Development from the American Society for Nutrition
- Received the 2012 Ehrlich-Koldovsky Award from the International Society for Research in Human Milk and Lactation
- Speaker, Human milk oligosaccharides: An update from the milk gang. 16th Annual Glycobiology Symposium, Glycobiology Research and Training Center, San Diego, CA, January 2013
- Speaker, Human milk oligosaccharides: Two Short Stories and a Hairy Monster. Department of Pediatrics Faculty Research Symposium, UCSD/RCHSD, CA, February 2013

**Jean Feldstein, MD**

Moderator, Mechaisms 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

Faculty Member, Symposium Hepatic Apoptosis & NASH. Canadian DDW.

Co-Chair, Nonalcoholic Steatohepatitis (Experimental oral session), AASLD, 2011

Faculty Member, 16th ISCHS Meeting, Florence, Italy, 2011

Visiting Professor, Liver Unit, Bambino Gesu Children’s Hospital, Rome, Italy, September 19-21, 2011


Visiting Professor, University of Southern California. Los Angeles, CA, October 6, 2011


Invited Speaker, Symposium on Lipid Metabolism and Liver Disease. Pontificia Universidad Catolica de Chile, March 9, 2012
<table>
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<tr>
<th>Grant/Contract #</th>
<th>Total Direct Dollars/Duration of Grant</th>
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<td><strong>Kerri Boutelle, PhD</strong></td>
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<td>Parents as the Agent of Change for Childhood Obesity</td>
<td>1R01DK075861 (PI: Boutelle)/NIH/NIDDK</td>
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<td>$2,050,437 July 2010-June 2015</td>
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<td>Learning Theory to Improve Obesity Treatments</td>
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<td>$2,744,966 Apr. 2012-Mar. 2017</td>
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<td>The Treatment of Childhood Obesity</td>
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<td>$593,556 Apr. 2012-Mar. 2017</td>
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<td><strong>Rebecca Cherry, MD</strong></td>
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<td>Pilot Study of Esophageal Dysmotility in Eosinophilic Esophagitis</td>
<td>UCSD Department of Pediatrics Intramural Clinical Research Grant</td>
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<td>$50,000 July 2010-July 2011</td>
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<td>Pilot Study of Clinical Hypnosis for Treatment of Abdominal Pain in Children</td>
<td>iUCSD Academy of Clinical Scholars/STRI Faculty Research Award</td>
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<td><strong>Ranjan Dohil, MB, BCh</strong></td>
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<td>Treatment of Cystinosis with EC-Cysteamine</td>
<td>20062926/Cystinosis Research Foundation</td>
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<td>Various Studies in Cystinosis</td>
<td>20092338/Cystinosis Research Foundation</td>
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<td>Two year funding proposal for Betty Cabrera, B.S., MPH</td>
<td>20113432/Cystinosis Research Foundation</td>
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<td>Food-Effect on Bioavailability of Cystagon in Normal, Healthy Adults</td>
<td>20114753/Raptor Pharmaceutical Corp.</td>
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<td><strong>Ariel Feldstein, MD</strong></td>
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<td>The Lysosomal-Mitochondrial Pathway in Nonalcoholic Fatty Liver Disease</td>
<td>R01 DK076852/NIH/NIDDK (Feldstein, PI)</td>
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<td>Caspase Dependent Cell Death in Nonalcoholic Fatty Liver Disease</td>
<td>R01 DH082451/NIH/NIDDK (Feldstein, PI)</td>
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<td>Preclinical Studies on the effects of the pan caspase inhibitor</td>
<td>IDN-6556 on models of steatohepatitis</td>
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<td>Conatus Pharmaceutical (PI: Feldstein)</td>
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<td><strong>Jeannie Huang, MD</strong></td>
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<td>TAHLC: Texting to Promote Adolescent Health Liaisons and Chronic Disease Management</td>
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<td>$647,250 Sept. 2009-July 2012</td>
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<td>Development of a New Technology for Assessing Pediatric Pain (NTAP)</td>
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<td>NIH/NINR (Co-PI with Dr. Marian Bartlett)</td>
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<td>Neurobiology of Pain Processing in Children with Gastrointestinal Disorders</td>
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<td>CTRI/Intramural (PI: Huang)</td>
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<td>Jeffrey Schwimmer, MD</td>
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<tr>
<td>Clinical Research Network in Non-Alcoholic Steatohepatitis (NASH)</td>
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<td>NIH U01DK61734</td>
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<td>Technical Validation of MRI Biomarkers of Liver Fat</td>
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<td>NIH 5 R01 DK088925-02</td>
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<td>Intestinal Bacterial Metagenome In Pediatric NAFLD</td>
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<td>Development of MR Based Biomarker Panels for NAFLD_A NASH</td>
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<td>CRN Ancillary Study</td>
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<td>Mamata Sivagnanam, MD</td>
<td>$669,500 Aug. 2009-July 2014</td>
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<td>Intestinal Epithelial Function in Congenital Tufting Enteropathy</td>
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<td>1 K08 DK078672-01A2/NIH (NIDDK)</td>
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<td>Investigation of the Role of Epithelial Adhesion Molecule in the Intestinal Epithelium</td>
<td>$75,000 Dec. 2008-Dec. 2011</td>
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<td>07-1646/Children's Digestive Health</td>
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Visiting Professor, Northwestern University, Division of Hepatology, Chicago, IL, April 2012
Visiting Professor, UT Health Science Center at Houston, Department of Gastroenterology, June 5-6, 2012
Faculty Member, AASLD Postgraduate Course, 2012

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
Invited Speaker, California Institute for Telecommunications and Information Technology, UCSD Research Exchange Meeting, 2011
Invited Speaker, NASPGHAN Annual Meeting, Maintenance of Certification, 2011 and 2012
Invited Speaker, International Workshop of Wireless Healthcare Technologies And Applications. National Central University, Jhongli, Taiwan, 2012
Invited Speaker, What kind of academic are you? Fellows Conference, NASPGHAN, 2012
Invited Speaker, Education Forum in Pediatric Obesity. Pediatric Academic Societies Annual Meeting, 2012
Recipient, Learning! 100 Award, The Health Professional Obesity: Prevention & Education (HOPE) Project, 2012
Inaugural Recipient, Teri Li Education Award, NASPGHAN, 2012 Selected, Best Doctors in America, 2012-3
PUBLICATIONS


of randomized regimen and nucleoside reverse transcriptase inhibitor (NRTI) selection from ACTG A5142. *HIV Clinical Trials* (in press).


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 $5 million in grants and contracts, and have published over 60 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 has 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 (Dr. La Spada, Human Molecular Genetics).

There have been a number of significant developments for the Division within the past two years, including: the establishment of an accredited Clinical Genetics fellowship training program that participates in the annual Match, accepting one fellow per year, for the last two years; receipt of extramural grant awards totaling more than $5 million, making the Division a leader in acquisition of research funding for the Department; and bestowing of numerous national and international awards on Division faculty in recognition of outstanding contributions to academic research and clinical medicine.

**FACULTY**

**Bruce A. Barshop, MD, PhD,** Professor of Pediatrics; Director, Metabolic Disease Section, RCHSD; Director, Biochemical Genetics Laboratory, Hillcrest County Hospital

**Craig L. Bennett, PhD,** Adjunct Assistant Professor of Pediatrics

**Lynne M. Bird, MD,** Associate Professor of Pediatrics

**Stephanie Cherqui, PhD,** Assistant Professor of Pediatrics

**Annette Feigenbaum, MD,** Clinical Associate Professor of Pediatrics

**Theodore Friedmann, MD, PhD,** Professor of Pediatrics

**Pamela Itkin-Ansari, PhD,** Assistant Project Scientist of Pediatrics

**Marilyn C. Jones, MD,** Professor of Pediatrics; Clinical Service Chief Director, Cleft Palate and Craniofacial Treatment Programs; Medical Director, Helen Bernardy Center for Medically Fragile Children

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

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 care.

RCHSD and the UC San Diego (UCSD) Medical Center have a long established tradition of excellence in Biochemical Genetics. Drs. Barshop, Levine, Feigenbaum, and Nyhan are the principal providers of biochemical genetics services in San Diego. At RCHSD, they admit patients, consult on inpatients, and participate in two weekly Metabolic Clinics, evaluating more than 700 patients annually.

At the UCSD Medical Center, they serve in an Adult Neuro-Metabolic Clinic and in the Clinical Translational Research Institute. Drs. Barshop, Levine, Feigenbaum, 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 they provide consultation services for referring physicians. The laboratory processes more than 4,000 clinical samples and 1,000 research samples annually.

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 involved with the California Newborn Screening Program, which includes an expanded number of conditions, since the introduction of tandem mass spectrometry in 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 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, 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 Hospital de las Californias in Tijuana, and biannual full-day clinic at the El Centro Regional Center for the Developmentally Disabled.

Dr. Willis staffs the Genetics Clinic at the Balboa Naval Hospital and participates in their multi-specialty Craniofacial Clinic. In addition, she participates in Metabolic Clinic at RCHSD twice monthly. Dr. Nunes is the Chief of Genetics for the Kaiser-Permanente Healthcare system in San Diego County and sees patients in Cardiogenetics and Adult multi-specialty clinics. Both Dr. Willis and Dr. Nunes participate in the education of medical students, residents, and fellows, and host Clinical Genetics fellows who rotate through their respective services.

CLINICAL GENETICS FELLOWSHIP PROGRAM

The UCSD School of Medicine was founded in 1965, and from its very inception, UCSD established itself as a leader in the field of human genetics and medical genetics. The founding chairman of the Department of Pediatrics at UCSD was Dr. William Nyhan, renowned for his seminal work in the field of biochemical genetics, and after whom Lesch-Nyhan syndrome was named. In 1997, the UCSD School of Medicine became accredited for the training of clinical geneticists through the ACGME. Since that time, the program has continued to maintain an outstanding environment for the training of clinical genetics practitioners and academicians. With Dr. Albert La Spada as the Division Chief and now Genetics Program Director, the training program has been overhauled to broaden the scope of the resident experience to expand opportunities for exposure to adult inherited disease, including cancer genetics at the NCI Moores Cancer Center at UCSD. Through a number of significant changes to the organization of the training program curriculum, residents rotate through a variety of clinics at UCSD Medical Center and Rady Children’s Hospital, in which both children and adults are seen to counsel them about or evaluate them for the possibility of genetic disease. Indeed, one significant change to the training program since the last site visit is the addition of two participating sites to further enhance the range and diversity of patients and practice environments to which trainees will be exposed. These two sites, the Naval Medical Center San Diego and the Kaiser-Permanente Healthcare System, are staffed by board-certified clinical geneticists who hold affiliate faculty appointments in the Genetics Division and are actively involved in didactic training of residents, fellows, and medical students.

Another distinguishing feature of the UCSD Genetics Training Program is its emphasis on providing its residents with unparalleled opportunities to engage in cutting edge basic research, translational investigation, or clinical studies. This philosophy is supported by a training program curriculum that provides at least
80% protected time for research during 6 months of a trainee's second year, and encourages an optional third year to further immerse the trainee in such an academic undertaking. The strength and diversity of such academic opportunities in genetics and genomics at UCSD is underscored by the recent creation of a new Institute for Genomic Medicine, comprised of 21 faculty members who are engaged in clinical and basic research that spans the field of human genetics. In addition to assuring that trainees receive outstanding clinical training and are given wonderful opportunities for basic research, the UCSD program also includes extensive laboratory genetics services that allow residents to rotate in Biochemical Genetics, Cytogenetics, and Molecular Diagnostics. This combination of a long-standing tradition of excellence and staffing by incredibly accomplished clinicians, coupled with exciting developments in both our clinical training and basic research environment, indicates that UCSD has never been a better place to pursue advanced training in genetics.

Current Clinical Genetics Fellows:
Jaime Barea, MD
Lawrence Wong, MD

RESEARCH ACTIVITIES
Bruce A. Barshop, MD, PhD, is an accomplished biochemical geneticist with expertise in metabolic disorders, and he is nationally recognized for his work on lysosomal storage disease, metabolomics testing, and cystinosis. His work in metabolic disease has led him to be a key intramural UCSD collaborator on numerous grants, or the San Diego site PI on multiple clinical trials, including three trials for Fabry's disease, two trials for Pompe's disease, a trial for Gaucher's disease, and a trial for urea cycle disorders. Dr. Barshop has focused on developing a state-of-the-art metabolomics research program over the last three years, primarily to allow UCSD colleagues to leverage their own research projects and extramural funding. This metabolomics effort has facilitated research work on lysosomal storage diseases (PI = Barshop), diabetes (PI = Sharma), and infectious diseases (PI = Schooley). Dr. Barshop has served as the metabolomics lab for a U24 effort aimed at establishing a regional metabolomics resource center here at UCSD, in collaboration with Drs. Dennis and Sharma. During the last five years, Dr. Barshop has also continued to play a leadership role in the cystinosis field, running a proteomics research study, advancing methods for intracellular cystine measurement, and supporting clinical trial work.

Craig L. Bennett, PhD, is interested in inherited motor neuron diseases, and has been focused upon ALS4, a juvenile-onset form of ALS caused by mutations in the senataxin gene. He is in the process of generating mouse models and iPSC models of this disease.

Lynne M. Bird, MD, 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 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.

Stephanie Cherqui, PhD, laboratory focuses on developing stem cell and gene therapy strategies for degenerative multi-systemic disorders such as cystinosis, and to understand the molecular mechanisms by which hematopoietic stem cells can lead to tissue repair in non-hematopoietic genetic diseases. Using a mouse model for cystinosis, she showed that syngeneic hematopoietic stem and progenitor cell (HSPC) transplantation from wild-type donors into Ctns-/- mice led to significant decreases of cystine in every tissue tested and the impact correlated with the abundant tissue integration of bone marrow-derived cells. This treatment also protected these animals from the progression of the kidney tissue injury if a relatively high level of donor-derived blood cell engraftment of Ctns-expressing cells was achieved. This work represents the first proof of concept for using HSPC transplantation as a therapy for cystinosis and led to the first stem cell clinical trial for this disease. Because of the risks associated with allogeneic stem cell transplantation, the long-term goal is to develop autologous HSPC transplantation using a lentivirus vector to introduce a functional allele of CTNS. A pre-IND has been submitted and reviewed by the FDA in April 2013. The pharmacology/toxicology studies to test the safety of the lentiviral vector construct have now started and should lead to an IND for a phase I clinical trial for cystinosis.

Theodore Friedmann, MD, PhD, 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. The lab is using microarray and proteomic approaches to characterize the molecular basis for the defect in...
the basal ganglia dopamine pathways by beginning to characterize the molecular events that accompany the differentiation of human embryonic stem cells toward the dopaminergic neuronal phenotype. Dr. Friedmann is continuing to study the assembly and gene transfer properties of synthetic virus-like nanoparticles (virions), and the molecular mechanisms of growth enhancement by the growth factor IGF-1 in cultured cells and in mice in vivo. In addition, he has continued an extensive series of studies in vitro and in vivo of the mechanism of action of insulin-like growth factor (IGF-1), using gene expression and proteomic approaches. As part of that research program, he has 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 un-er the auspices of WADA.

Marilyn C. Jones, MD, 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.

Albert R. La Spada, MD, PhD, 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 the role of mTOR signaling in neuro-protection; altered gene transcription in neurological disease and retinal degeneration; unraveling the complexity of CNS gene regulation, including microRNAs and non-coding RNAs; bioenergetics of neurons, and understanding mitochondrial dysfunction in neurological disease, including mitophagy and mitochondrial dynamics; and cross-talk between the insulin signaling pathway and neurological disease pathways. Dr. La Spada’s group also is involved in translational research, and is currently advancing therapies for spinobulbar muscular atrophy, Huntington’s disease, and spinocerebellar ataxia type 7 in mouse and human stem cell models of these inherited disorders.

Fred Levine, MD, PhD, 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.

Alysson Muotri, PhD, 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.

Robert K. Naviaux, MD, PhD, is conducting research in autism and mitochondrial medicine. His team at the UCSD Mitochondrial and Metabolic Disease Center identified the first causative mutations in a gene called POLG (the mitochondrial DNA polymerase γ) as the cause of Alpers syndrome. 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.

William L. Nyhan, MD, PhD, 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 nitisine 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 RCHSD; 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.

Craig L. Bennett, PhD
Dr. Bennett joined the Division in July, and served as a substitute small group instructor for reorganized ‘Genetics in Medicine’ course for medical school and pharmacy school students. He is also involved in the training of graduate students and postdoctoral fellows who are pursuing research training in neurogenetics.

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 premedical students, and also became involved in the UCSD Medical Scholars Clinical Rotation program. Since 2009, she has served as a small group instructor in the reorganized ‘Genetics in Medicine’ course for medical school and pharmacy school students, and now she is an active lecturer in the Medical Genetics didactic training course.

Stephanie Cherqui, PhD
Dr. Cherqui currently mentors 2 post-doctoral fellows and 1 California Institute for Regenerative Medicine (CIRM) intern participating to the CIRM Bridges to Stem Cell Research Program. She is lecturing in the Medical Genetics didactic course and assisting with teaching genetics to the medical students in small group sessions.

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. 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. Since 2009, she has 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, and in teaching our fellows in the Medical Genetics didactic course.

Albert R. La Spada, MD, PhD
Dr. La Spada took over the organization of the Genetics in Medicine course in 2009 with Dr. 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 organized a clinical genetics monthly meeting, and instructs Pediatrics residents and fellows in this venue and other teaching forums at Rady Children’s Hospital. In 2012, Dr. La Spada organized the Medical Genetics didactic course, which meets weekly during the academic year and is intended for first or second year clinical fellows whose specialty relies upon Genetics for patient care. 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 gives lectures in graduate courses, including Molecular Neurobiology Cell and Tissue Engineering, and Gene Therapy.

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### Research Support

<table>
<thead>
<tr>
<th>Grant/Contract #</th>
<th>Total Direct Dollars/Duration of Grant</th>
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<tr>
<td><strong>Bruce A. Barshop, MD, PhD</strong></td>
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<td>1 DP3 DK094352-01/NIH (NIDDK)</td>
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<tr>
<td>Improvement of Intracellular Cystine Determination</td>
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<td>Major goals: Optimize the principal procedure used for diagnostic and monitoring biomarker in cystinosis.</td>
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<td>20110537/Cystinosis Research Foundation</td>
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<td>National Health &amp; Medical Research Council (NHMRC) (APP1045520)</td>
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<td>National Institutes of Health (NIGMS) (GM094384-01)</td>
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<td>Senataxin/TDP-43 Interaction in Motor Neuron Disease James Cook University (Faculty Research Grant)</td>
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<td><strong>Lynne M. Bird, MD</strong></td>
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<td>Rare Diseases Clinical Research Network NICHD</td>
<td>$321,579 Aug. 2009-July 2014</td>
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<td>Phase II Trial of Levodopa in Angelman Syndrome FDA</td>
<td>$170,074 August 2010-July 2014</td>
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<td><strong>Stephanie Cherqui, Ph.D</strong></td>
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<td>NIH/NIDDK R01-DK090058</td>
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<td>Toxicology Studies for Gene-Modified Stem Cell Transplantation for Cystinosis (PI)</td>
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<td>Mechanism of Bone Marrow Stem Cell-Mediated Therapy in the Mouse model of cystinosis (PI)</td>
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<td><strong>Pamela Itkin-Ansari, PhD</strong></td>
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<td>Individual Biomedical Research Award</td>
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<td>The Hartwell Foundation</td>
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<td><strong>Albert R. La Spada, MD, PhD</strong></td>
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<td>Models of SBMA Motor Neuron Degeneration (PI)</td>
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<td>Modeling Motor Neuron Degeneration in SBMA (PI)</td>
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<td>Muscular Dystrophy Association</td>
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<td>SCA7 Neurodegeneration: Molecular Epigenetic Basis &amp; Therapy (PI)</td>
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<td>Role of NNA1 in Retinal and Cerebellar Neurodegeneration (PI)</td>
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<td>Autophagy and Protein Translation in Neural Function and Neurodegeneration (PI)</td>
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<td>PPAR-Delta Signaling Pathway in Neural Function and HD Neuropathology (PI)</td>
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<td>Neuronal RNA Processing Defects in ALS4 Caused by SETX Mutation (PI)</td>
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<td>Regulation of Autophagy and Lysosomal Network through TFEB</td>
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<td>Antisense Oligonucleotide Knock-Down of Ataxin-7 in A SCA7 Mouse Model (PI)</td>
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<td>R21 NS082112-01/NIH/NINDS</td>
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<td>Development of a High Throughput Screening assay for TFEB modulation (PI)</td>
<td>$20,000 2012-2013</td>
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<td>UCSD CTRI Pilot Project</td>
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<td>Fred Levine, MD, PhD</td>
<td>$494,224 Oct. 2011- Sept. 2015</td>
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<td>European Commission Directorate-General (PI)</td>
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<td>TG2-01162/CIRM Research Training Program II (Piran, PI; Levine, Advisor)</td>
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<td>Alysson Muotri, PhD</td>
<td>$1,500,000 Sept. 2009-Sept. 2014</td>
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<td>Modeling Autism with Human Pluripotent Cells (PI)</td>
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<td>NIH Director’s New Innovator Award</td>
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<td>1 DP2 OD006495-01</td>
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<td>Young Investigator Award</td>
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<td>Emerald Foundation, Inc.</td>
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## Research Support

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<tr>
<td>Developing A Drug-Screening System for ASD Using Human Neurons (PI) CIRM</td>
<td>$1,149,800 Jan. 2011- Mar. 2014</td>
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<td>Modeling Familial ALS8 with Human Induced Pluripotent Stem Cells (PI) MDA</td>
<td>$547,763 Jan. 2011-Jan. 2014</td>
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<td>Linking Behavior to Cellular Phenotypes: iPSC for Williams Syndrome (PI) NIH</td>
<td>$194,268 Aug. 2010-Sept. 2013</td>
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<td>The Impact of L1 Retrotransposition in the Nervous System (PI) NIMH</td>
<td>$1,740,000 July 2011-June 2016</td>
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<td>Modeling Anorexia Nervosa with Human Pluripotent Stem Cells (PI) NIMH</td>
<td>$395,000 Apr. 2011-Mar. 2014</td>
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**Robert K. Naviaux, MD, PhD**  
Therapeutic Approaches to Mitochondrial Disease  
The William Wright Foundation  
$100,000/year Sept. 2013-Aug. 2014  
MRS-II Demonstration Project: Metabolomic Signatures of Stress Resilience and Risk  
NIMH and DOD  
$34,482 Sept. 2012-Aug. 2013  
Mechanisms of Mitochondrial Disease  
UCSD Foundation Christini Fund, La Jolla, CA  
$75,000/year Oct. 1999-Present  
Mechanisms of Mitochondrial Disease  
UCSD Mitochondrial Research Fund—The 5k Mito Walk And Roll  
Novel Paradigms in Diabetic Complications  
NIH/NIDDK 1DP3DK094352-01  
Purinergic Signaling in Autism  
Jane Botsford Johnson Foundation, New York, NY  
$424,000 April 2013-Mar. 2014  
Therapeutic Approaches to Mitochondrial Disease  
The William Wright Foundation, Vernon, TX  
Mechanisms of Mitochondrial Disease  
Lennox Foundation, Dallas, TX  
$100,000 May 2007-April 2012
Alysson Muotri, PhD
Dr. Muotri has managed to take on numerous teaching responsibilities. In addition to mentoring a prodigious number of graduate students and postdoctoral fellows, Dr. Muotri co-directs the Neurological Diseases block of the introductory BIOM 200 course for entering BMS graduate students, and serves as instructor and course co-organizer for an advanced BISP194 seminar course for UCSD undergraduates, entitled, “Molecular basis of neurological disease”. Dr. Muotri also teaches in the following courses: BIOM252 (Human Genetics and Genomics); BIOM225 (Introduction to Anthropogeny); BGGN231 (Current concepts in stem cell biology); NEU221 (Stem Cells and Neurological Disorders); BIOM/PHARM234 (Careers in Biomedical Sciences); and CMM250 (Core course in stem cell biology; medicine and ethics).

Robert K. Naviaux, MD, PhD
Dr. Naviaux teaches Biomedical Sciences 223, Human Genetics and Metabolism, and lectures on Mitochondrial Medicine as part of SOMC 229, Endocrinology, Reproduction, and Metabolism (ERM). BMS 223 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. ERM 229 is a core course given every spring. Dr. Naviaux gives lectures and grand rounds presentation around the world, most recently at Leiden University, the Netherlands, 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.

William L. Nyhan, MD, PhD
Dr. Nyhan participates in the Metabolic Clinics at Rady Children’s Hospital, 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.

Mary J. Willis, 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 Cmte, College of American Pathologists
• Guidelines Committee, California Newborn Screening Program
• Web Site Oversight Committee, American College of Medical Genetics
• Best Doctors in America, 2003-2011
• Benard L. Maas Chair in Inherited Metabolic Disease, UCSD, 2007-present

Lynne M. Bird, MD
• R.R. Skoglund Physician Recognition Award for Excellence in Teaching, 2008
• San Diego Magazine Top Doctors List, 2006-2012
• Election to UCSD Academy of Clinician Scholars, 2011
• Secretary-Treasurer of the Academy of Clinician Scholars, 2013

Stephanie Cherqui, PhD
• Member, Scientific Review Board of the Cystinosis Research Foundation, 2010-present
• Member, Cure Cystinosis International Registry (CCIR) Scientific Council, 2010-present
• Chair, CRF Cystinosis Gene Therapy Consortium, 2010-present
• Member, American Society of Gene and Cell Therapy (ASGCT)
• Gene & Cell Therapy of Genetic and Metabolic Diseases Committee, 2011-present
• Assembly Resolution from the California Legislature Assembly for Dr. Cherqui’s Research on Cystinosis Awarded October 5, 2012, Sacramento, CA

Annette Feigenbaum, MD
• Project investigator Research Institute The Hospital for Sick Children Toronto, Canada
• Rady Childrens Hospital Committee membership: Genetic testing panel (Medical justification/approval) active member 2012-
• Ad Hoc Journal Reviewer: Disease Models and Mechanisms 2013; Epilepsy Research 2012; European Journal of Paediatrics 2011; Molecular Genetics and Metabolism 2013
• National Urea Cycle Foundation 2007 – present Scientific and Medical Advisory Board member
Theodore Friedmann, MD, PhD

- Member, 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, Clingene Intl Board; Member, Hastings Center (N.Y.) Gene Therapy Project
- Associate Editor, Molecular Therapy
- Editorial Board, Human Gene Therapy

Pamela Itkin-Ansari, PhD

- Invited Speaker, Mechanisms and models of cancer, 2013
- Invited Speaker, Islet Society (International), Stockholm, Sweden, 2012
- Invited Speaker, Pancreatic cancer. Hirshberg Symposium, 2012
- Invited Speaker, UCLA, 2011
- Invited Speaker, American Society of Gene and Cell Therapy, Seattle, WA, 2011

Marilyn C. Jones, MD

- Member, Committee on Data Standards, American Cleft Palate-Craniofacial Assn, 2000-present
- Co-chair, Preconference Symposium, American Cleft Palate-Craniofacial Association, 2014
- Of Council, Western Society for Pediatric Research, 2006-present
- Chair, Commission on Approval of Teams, 2007-present
- Member, Committee on Genetics, American Academy of Pediatrics, 2009-present
- Member, Basil O’Connor Review Committee, March of Dimes, 2012-present

Albert R. La Spada, MD, PhD

- Inducted into the American Society for Clinical Investigation (ASCI) in 2006
- Editorial Board, Human Molecular Genetics
- Member, “Faculty of 1000”
- American Society of Human Genetics Meeting Program Committee, Planning and Organizing Committee, 2006-2009

Fred Levine, MD, PhD

- Director, Sanford Children's Health Research Center, 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
- The 100 most influential people in Brazil, Epoca, SP, Brazil, 2010
- PopTech Science and Public Leadership Fellow, 2011
- “Stigma Buster” from the National Alliance on Mental Illness (NAMI), 2011
- Kavli Frontiers of Science Fellow, 2012
- Winner of Pride Autism Brazil, 2013
Robert K. Naviaux, MD, PhD
- Associate Editor, Mitochondrion
- Autism Speaks Trailblazer Award, 2011
- Appointed to the Scientific Advisory Council; The US National Autism Speaks Autism Treatment Network (ATN), 2012-Present
- Invited Speaker on Autism, Mitochondria, and Environmental Health, Autism Research Institute annual meeting, Anaheim, CA, 2012
- Appointed as international advisor to the Association Française contre les Myopathies, Plateforme Maladies Rares (AFM—The French Muscular Dystrophy and Rare Disease Council), Paris, France, 2013
- Invited Speaker for the NIH-sponsored Child Neurology Society Meeting on Mitochondrial Disease, Austin, TX, 2013

William L. Nyhan, MD, PhD
- Member Scientific Advisory Board, United Mitochondrial Disease Foundation
- Presenter, Lesch-Nyhan Disease, Menarini Ricerche, Florence, Italy, September 2013

PUBLICATIONS
Gertsman I, Gangotia JA, Barshop BA. Validation of a dual LC-HRMS platform for clinical metabolic diagnosis in serum, bridging quantitative analysis and untargeted metabolomics. Metabolomics, in press.


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Izumi K, Konczal LL, Mitchell AL, Jones...


Tsunemi T, Sorilence KR, Morrison BE, Au J, Vázquez Roque RA, Lazarowski ER, Damian VA, Masliah E & La Spada AR. PGC-1a rescues Huntington's disease by preventing oxidative stress and promoting TFEB function. Science Translational Medicine, 4:142ra97, 2012 (Selected by DISCOVER magazine as one of the top 100 scientific advances for 2012.)


Zatz M. Downregulation of VAPB expression in motor neurons derived from induced pluripotent stem cells of ALS8 patients. *Hum Mol Genet*, 20(18):3642-52, 2011. *co-corresponding authors*


Beltrão-Braga PCB*, Pignataro GI, Maiorka PC, Oliveira NAJ, Lizier NF, Wenceslau CV, Miglino MA, Muotri AR,* Kerkis I. Feeder free derivation of induced pluripotent stem cells from human immature dental pulp stem cells. *Cell Transplantation*, 20: 1707-1719, 2011. *co-corresponding authors*


Genome Information Sciences

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 (UCSD) 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-San Diego (RCHSD). Genome Information Sciences collaborates frequently with the University’s 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 complex diseases and cancer starting in childhood but spanning the whole age spectrum. 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, Division Chief, Professor of Pediatrics
Olivier Harismendy, PhD, Adjunct Assistant Professor of Pediatrics
Christian L. Barrett, 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. Christi- na 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. Drs. Frazer and Smith study whether ancestry, as estimated from high-throughput genetic data, can be effectively used as a surrogate for self-reported race and ethnicity. Their results will aid the ongoing study as they enroll 100,000 children throughout the United States.

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 Rosenfeld, and Dr. Gene Yeo. The goal of the project is to use iPSC-derived cardiomyocytes from 225 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 and Smith have generated whole-exome sequencing of 920 individuals and are analyzing these data 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 and Smith have generated whole-exome sequencing of 500 individuals and are analyzing these data 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. The research goals are to identify new genes responsible for recessive structural brain defects in consanguineous families.

**Cancer Genomics**

Clinical sequencing at the Moores Cancer Center began in December of 2012 with the start of a personalized medicine program led by Dr. Kurzrock. Dr. Harismendy is assisting Dr. Kurzrock in inter-
pretation of the clinical sequence data by participation in the weekly molecular tumor board.

In collaboration with Dr. Thomas Kipps at the UCSD Moores Cancer Center, Drs. Frazer and Smith are conducting a retrospective matched case-control study comparing an early-progressing group of chronic lymphocytic leukemia (CLL) patients with a later-progressing group. They have used genomic methods to identify changes in DNA mutations, epigenetic regulatory sites, and gene expression that occur as tumors become more aggressive during the progression of CLL.

Drs. Barrett and Frazer are developing the computational capabilities for using transcriptome sequencing data (RNA-seq) for the discovery of mRNA isoforms specifically expressed in tumors. The intended applications of discovered tumor specific isoforms include development of early tumor detection assays, identification of therapeutic targets for small molecules and monoclonal antibodies, and the design of vaccines. Development work has been done for ovarian serous adenocarcinoma (in conjunction with Cheryl Saenz, MD) and is now starting to encompass additional cancer types.

Drs. Barrett and Frazer, in collaboration with Drs. Carson, Schwab, Thistlewaite, Jamieson, have recently reported on their use of transcriptome sequencing to study mRNA isoform expression differences in cell subpopulations of squamous cell lung cancer. Their investigation revealed a spectrum of new therapeutic options that could be effective for treating the disease and which would, importantly, likely target the subpopulation of cancer stem cells.

Dr. Harismendy leads a project to develop an ultra-deep targeted sequencing 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. This assay was implemented to study 38-breast cancer specimens. In parallel, Dr. Harismendy has developed an analysis pipeline (Mutascope) dedicated to the identification of somatic mutations at low allelic fraction using amplicons sequencing. The presentation of Mutascope was published in the journal Bioinformatics and Mutascope is available for public download.

Dr. Harismendy is collaborating with Drs. Martinez and Schwab (Moores Cancer Center) to study the genetic and epigenetic changes associated with breast-feeding in Hispanic women with triple negative breast cancer. He is also leading a collaboration with Dr. Steve Howell (Moores Cancer Center) to identify the location of cisplatin-DNA adducts in vivo. The development of this method is important to understand the specific interactions between chromatin and the formation of adducts and why DNA damaging chemotherapy has strongly different sensitivity in different types of cancer. This project was awarded a pilot award from the San Diego Center for Systems Biology and, subsequently, an R21 award from the NCI, Innovative Molecular Analysis and Technology (IMAT) program.

Dr. Harismendy has collaborated with Dr. Karin (Moores Cancer Center) to study the mutational profile of two mouse models of hepatocellular carcinoma: spontaneous or genetic. The results showed extensive differences between the two models and are of primary importance to study the HCC progression in mouse. These results were included in a broader study published in the journal Cell (in press).

Drs. Harismendy and Frazer collaborated with Dr. Lowy (Moores Cancer Center) to study the mutations in a rare form of cancer: mucinous appendix cancer. This genome-wide study revealed two major signaling pathways, ras and PKA that are activated in this cancer. The study also highlights the molecular differences with colorectal cancer and offers new avenues for diagnosis and treatment.

TEACHING AND TRAINING ACTIVITIES

Members of the Division are actively involved in teaching UCSD graduate and medical students. Several members of the faculty (Frazer, Barrett, and Smith) participated in teaching the graduate level course on quantitative methods in genomics as well as lectures in the Stem Cell Course and the medical genetics course. The faculty provides formal lectures in a variety of conferences on the UCSD campus attended by students and clinical residents including the Bioinformatics graduate student lecture series. 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.

Erin Smith, PhD
Speaker, American Society of Human Genetics, November 2012
Speaker, Salk Cancer Day Symposium, San Diego, February 2013
Invited Speaker, Nordic Coagulation Meeting, Tromso, Norway, June 2013
Speaker, International Society of Thrombosis and Haemostasis, July 2013

Kelly Frazer, PhD
• Invited Speaker at the Cardiovascular Research Conference, October 7, 2011
• Invited Speaker at the Annual Frontiers of Clinical Investigation Symposium, October 15, 2011
• Invited Speaker at the Chile International Genomics meeting, October 24–28, 2011
• Invited Speaker at Silé symposium on Human Genomic Variation in Berkeley, CA, January 13, 2012
• Invited Speaker at EBML meeting on Omics and Personalized Medicine in Heidelberg, Germany, February 28-20, 2012
• Invited Speaker at the IEO (European Institute of Oncology) in Milan, Italy, February 21, 2012
• Invited Speaker at ARO (Association for Research in Otolaryngology) in San Diego, CA, February 28, 2012
• Invited speaker at the NHGRI next generation sequencing meeting in San Diego, CA, April 12, 2012
• Invited Speaker at the Arteriosclerosis, Thrombosis and Vascular Biology 2012 Scientific Sessions in Chicago, CA, April 17 and 18, 2012
• Advisory board meeting for Vancouver Genome Center, June 12, 2012
• Speaker at the Teratology Society meeting in Baltimore, MD, June 27, 2012
• Invited Speaker, Genome Informatics is a joint Cold Spring Harbor. Welcome Conference, September 5-8, 2012
• Invited Speaker, Sommarøy Arctic meeting on VTE September 9-12, 2012
• Invited Speaker, International Society of Hypertension Scientific Meeting & Genetics Satellite Meeting, September 24 – October 1, 2012
• Invited keynote talk in Lake Tahoe, CA, January 13-18, 2013
• Participated and presented in day long CTRI Directors Retreat, March 12, 2013
• Invited Speaker at the Deans Spring Symposium, April 30, 2013
• Invited Speaker at the UCSD T32 Genetics Training Retreat, May 24, 2013
• Organized Keystone Meeting on Human Genomics and Personalized Medicine, June 17-21, 2013

Olivier Harismendy, PhD
• Invited Speaker, CHI-Next Generation Dx Summit, Washington D.C., August 2012
• Invited Speaker, Moores Cancer Center Industry Symposium, April 2013
• Keynote Speaker French Biotech Tour, Oncology/Biomarkers/Diagnostics, San Diego, CA, June 2013
• Lecturer, Cancer Therapeutic Training Program (CT2), Moores UCSD Cancer Center, October 2012
• Lecturer, MED262-Current Trends in Biomedical Informatics, May 2013
• Lecturer, UCSD Children Health and Education Research Seminars (CHERS) Pediatric Faculty Research Seminars (PFRS), May 2013
• Instructor, BNFO 283-Student Research Talks. UCSD Bioinformatics Graduate Program, Fall 2012, Winter/Spring 2013
• Lecturer, topics and advances in internal medicine (CME), San Diego, CA, February 2013

Christian Barrett, PhD
• Invited Speaker, Sanford Consortium for Regenerative Medicine, July 2012
• Invited Speaker, Intelligent Systems for Molecular Biology Conference, July 2012
• Invited Speaker, Sanford Consortium for Regenerative Medicine, August 2012
• Invited Speaker, Scripps Institute of Oceanography, November 2012

PUBLICATIONS


<table>
<thead>
<tr>
<th>Grant/Contract #</th>
<th>Total Direct Dollars/Duration of Grant</th>
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<tr>
<td>Major Goals: Implement clinical targeted sequencing in Chile</td>
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<tr>
<td>Proyecto de Interês Publico D11i1029 (Ricardo Armisen and Kelly Frazer)</td>
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<tr>
<td>FONDEF Chile</td>
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<td>Major Goals: develop a molecular method to directly located single strand DNA</td>
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<td>adducts in vivo</td>
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<tr>
<td>SDCSB Seed Grant (Olivier Harismendy)/San Diego Center for Systems Biology</td>
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<tr>
<td>Identification of Somatic Mutations in Rare Subclones of Solid Tumors</td>
<td>$282,784 Sept. 2011-July 2013</td>
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<td>Major Goals: Develop and validate an ultra-deep targeted sequencing assay</td>
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<td>for the clinical assessment of actionable somatic mutations in</td>
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<td>heterogeneous tumor samples. (PI)</td>
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<td>1R21CA155615 (Olivier Harismendy)/NIH/NCI</td>
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<tr>
<td>Regulatory Genomic Studies in a cohort of IPS cell derived cardiomyocytes</td>
<td>$10,094,034 July 2011-June 2016</td>
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<td>Major Goals: Generation and use of IPSC derived cardiomyocytes from</td>
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<td>genotyped individuals as cellular models to investigate how human genetic</td>
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<td>variation influences the gene regulatory networks Involved In cardiac biology</td>
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<tr>
<td>and disease. 1U01HL107442-01 (Frazer, Kelly)/NIH/NHLBI</td>
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<td>Major Goals: Develop and Validate a molecular method to detect and locate</td>
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<td>DNA adduct genome-wide (PI)</td>
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<td>1R21CA177519-01 (Olivier Harismendy)/NIH/NCI</td>
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<td>Discovery of mRNA isoforms specifically expressed in clear cell renal cell</td>
<td>$78,500 Sept. 2013-Sept. 2014</td>
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<td>carcinoma (Barrett, PI)</td>
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<tr>
<td>Sponsored Research Tanabe Research Labs, USA</td>
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FACULTY
John W. Moore, MD, MPH, Division Chief, Professor of Clinical 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
Sanjeet Hegde, MD, HS Assistant Clinical Professor
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
Heather Sun, MD, HS Assistant Clinical Professor

POSTDOCTORAL FELLOWS
Mohammad Ebrahim, MD 1st year, UCSD
Serena Sah, MD, 2nd year, UCSD
Gabrielle Vaughn, MD, 3rd year, UCSD
Juliana Gomez-Arostegui, MD, 3rd year, UCSD
Matthew Williams, MD, 3rd year, UCSD
Kiran Mallula, MD, 4th year Interventional Clinical Fellow, UCSD
CLINICAL ACTIVITIES
INPATIENT/OUTPATIENT
The Cardiology 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 2012-2013 were 12,085 total outpatient visits including 1397 patients seen in satellite offices. 697 catheterizations were performed, about 70% of which were interventional catheterizations. The echocardiography laboratory performed 9511 echocardiograms.

In the last five years there has been steady growth in all categories. 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 Division’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 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 studying 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 Division’s faculty and fellows have also been involved in a large number of clinical research projects. There are currently 31 active IRB approved clinical projects:

**Christopher Davis, MD, PhD**
Determination of the Natural and “Unnatural” history of Anomalous Aortic Origin of a Coronary Artery with Interarterial or Intracanal or Intramural Course (AAOCA); Establishing a Multi-Institutional Registry
The Hybrid Procedure as an Alternative to the Norwood Sano in High Risk Hypoplastic Left Heart (HLHS) Patients (Retrospective Chart Review)

**Howaida El-Said, MD, PhD**
ADO II Clinical Study
Closure of Muscular Ventricular Septal Defects with the AMPLATZER Muscular VSD Occluder - Post Approval Study native to the Norwood Sano in High Risk Hypoplastic Left Heart (HLHS) Patients (Retrospective Chart Review)
Use of the Melody Transcatheter Pulmonary Valve Ensemble (Melody TPV) as a Humanitarian Use Device (HUD) under a Humanitarian Device Exemption (HDE) HDE#: H080002 designated July 10, 2007 and approved January 25, 2010 - HUD #07-0810
The Damus-Kaye Stansel (DKS) Surgical Procedure: Quality of Life After DKS Continued Access to Covered Cheatham Platinum Stent for Prevention or Treatment of Aortic Wall Injury Associated with Aortic Coarctation (COA II CA)
Coarctation of the Aorta Stent Trial (COAST) Phase I
Implantation of the Medtronic Melody Transcatheter Pulmonary Valve (TPV) in Patients with Dysfunctional Right Ventricular Outflow Tract (RVOT) Conduits: A Post Market Approval Study
Covered Cheatham-Platinum Stent for Prevention or Treatment of Aortic Wall Injuries Associated with Aortic Coarctation (COA II)
The Damus-Kaye Stansel (DKS) Surgical Procedure: Long-term Follow-up of Survivors and Analysis of Possible Sequelae Congenital Cardiac Catheterization Outcomes Project (C3PO) Protocol Version 3 - May 2009
Congenital Cardiac Catheterizations Project on Outcomes (C3PO-QI) Quality Improvement Registry
Congenital Cardiac Catheterizations Project on Outcomes (C3PO-QI) Quality Improvement – Radiation Project
Transcatheter Closure of Atrial Septal Defect (ASD) using the Amplatzer Septal Occluder with Transluminal Catheterization

**Jeffrey Frazer, MD**
Outcomes in Preterm and Low Birthweight Newborns Undergoing Cardiac Surgery

**Raymond Fripp, MD**
Trial of Beta Blocker Therapy (Atenolol) vs. Angiotensin II Receptor Blocker Therapy (Losartan) in Individuals with Marfan Syndrome. This study is sponsored by the National Heart, Lung & Blood Institute (NHLBI) of the National Institutes of Health (NIH), through the Pediatric Heart Network (PHN). New England Research Institutes serves as the Data Coordinating Center (DCC) for the PHN Network under grant No. U01 HL68270, CFDA # 93.837. IND#76,539

**Paul Grossfeld, MD**
Trial of Beta Blocker Therapy (Atenolol) vs. Angiotensin II Receptor Blocker Therapy (Losartan) in Individuals with Marfan Syndrome. This study is sponsored by the National Heart, Lung & Blood Institute (NHLBI) of the National Institutes of Health (NIH), through the Pediatric Heart Network (PHN). New England Research Institutes serves as the Data Coordinating Center (DCC) for the PHN Network under grant No. U01 HL68270, CFDA # 93.837. IND#76,539
John W. Moore, MD, MPH
Pulmonary Artery Repair with Covered Stents (PARCS): The Use of Covered Cheatham Platinum Stents for Repair of RV to PA Conduits Disruption During Preparation for Implantation of the Melody Transcatheter Pulmonary Valve – Pending Approval

Continued Access to Covered Cheatham Platinum Stent for Prevention or Treatment of Aortic Wall Injury Associated with Aortic Coarctation (COAST II CA)

Coarctation of the Aorta Stent Trial (COAST ) Phase I

Implantation of the Medtronic Melody Transcatheter Pulmonary Valve (TPV) in Patients with Dysfunctional Right Ventricular Outflow Tract (RVOT) Conduits: A Post Market Approval Study

Covered Cheatham-Platinum Stent for Prevention or Treatment of Aortic Wall Injuries Associated with Aortic Coarctation (COAST II)

Congenital Cardiac Catheterization Outcomes Project (C3PO) Protocol Version 3 - May 2009

Use of the Melody Transcatheter Pulmonary Valve Ensemble (Melody TPV) as a Humanitarian Use Device (HUD) under a Humanitarian Device Exemption (HDE) HDE#: H080002 designated July 10, 2007 and approved January 25, 2010 - HUD #07-0810

ADO II Clinical Study

Closure of Muscular Ventricular Septal Defects with the AMPLATZER Muscular VSD Occluder - Post Approval Study

Transcatheter Closure of Atrial Septal Defect (ASD) using the Amplatzer Septal Occluder with Transthoracic Echocardiography or Transesophageal Echocardiography

Congenital Cardiac Catheterization Outcomes Project (C3PO) Protocol Version 3 - May 2009

Congenital Cardiac Catheterizations Project on Outcomes (C3PO-QI) Quality Improvement Registry

Congenital Cardiac Catheterizations Project on Outcomes (C3PO-QI) Quality Improvement – Radiation Project

The Hybrid Procedure as an Alternative to the Norwood Sano in High Risk Hypoplastic Left Heart (HLHS) Patients (Retrospective Chart Review)

Vishal Nigam, MD
MicroRNA Profiling in Neonates Undergoing Cardiopulmonary Bypass

Profiling of Tissues from Patients with Congenital Heart Defects

Modeling Hemodynamic Stresses in Congenital Heart Disease

Retrospective Profiling of Hypoplastic Left Heart Ventricular Tissue

The Damus-Kaye Stansel (DKS) Surgical Procedure: Quality of Life After DKS

The Damus-Kaye Stansel (DKS) Surgical Procedure: Long-term Follow-up of Survivors and Analysis of Possible Sequelae

James Perry, MD
Transmural Atrial Leads in Adult Congenital heart patients: Lead Performance in Long-Term Follow-Up (Retrospective Chart Review)

SPKLS002: Echocardiographic Assessment of Cardiac Left Ventricular Strain, Torsion and Blood Flow Analysis in Subjects with Congenital and Acquired Heart Disease

A Retrospective Study of Children Presenting with Tachycardia-Mediated Cardiomyopathy

The Damus-Kaye Stansel (DKS) Surgical Procedure: Quality of Life After DKS

Outcomes in Preterm and Low Birthweight Newborns Undergoing Cardiac Surgery

Beth Printz, MD, PhD
SPKLS002: Echocardiographic Assessment of Cardiac Left Ventricular Strain, Torsion and Blood Flow Analysis in Subjects with Congenital and Acquired Heart Disease

Implantation of the Medtronic Melody Transcatheter Pulmonary Valve (TPV) in Patients with Dysfunctional Right Ventricular Outflow Tract (RVOT) Conduits: A Post Market Approval Study

Use of the Melody Transcatheter Pulmonary Valve Ensemble (Melody TPV) as a Humanitarian Use Device (HUD) under a Humanitarian Device Exemption (HDE) HDE#: H080002 designated July 10, 2007 and approved January 25, 2010 - HUD #07-0810

TEACHING ACTIVITIES

The Division provides a comprehensive accredited educational program for fellowship training in pediatric cardiology. Dr. Grossfeld is the Fellowship Program Director. 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, Electro-physiology 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 elective 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
Howaida EL-Said, MD, PhD
Randomized trial of transnathoracic echocardiography versus transesophageal echocardiography for definitive assessment and guidance of transcatheter closure of ASDs in children using the Amplatzer Septal Occluder. Pediatric Interventional Cardiac Symposium (PICS), Boston, MA, July 2011
A risk stratified algorithm for eclectic use of hybrid palliation in high risk neonates. PICS, Boston, MA, July 2011
Use of TPA for femoral artery obstruction post catheterization. PICS, Boston, MA, July 2011
First report of atretic coronary sinus stenting resulting in dramatic improvement of ventricular function in functional single ventricle. PICS, Boston, MA, July 2011
Fetal Echocardiography from the Sonographer to the Interventionalist. Genetic Ultrasound, Basic Sonography and Hands-On Patient Scanning, Schaeftel Center, San Diego, CA, March 2012
Breaking the Limits-Extensibility of Medium and Large Stents. Presented in PICS, April 2012
Walking on Ice with the GUCH. Interventions for Adults with Congenital Heart Disease. Invited speaker: Maui Cardiovascular Symposium, September 2012
Prospective Randomized Trial of Trans-thoracic Echocardiography (TTE) vs. Trans-esophageal Echocardiography (TEE) for Definitive Assessment and Guidance of Transcatheter Closure of Atrial Septal Defects (ASD) in Children using the Amplatzer Septal Occluder (ASO). Oral presentation PICS, Miami, FL, January 2013
Paul D. Grossfeld, MD
Oral presentation, New basic and genetic insights into HLHS. American Heart Association, Orlando, FL, November 2011
Update on genes causing cognitive and behavioral disorders in 11q. Seventh European 11q Research and Resource Group meeting, Pforzheim, Germany, November 2011
The role of ETS-1 in causing human congenital heart defects. Department of Cardiology, University of Arizona School of Medicine, March 2012
John W. Moore, MD, MPH
Invited Speaker, Controversies in Pediatric Cardiology for the Primary Care Professional. Small PDA’s & ASD’s: Do They Need to be Closed? Orange, CA, March 3, 2012
Invited Speaker, PDA in Children and Adults. ACC.12, Chicago, IL, March 2012
Invited Speaker, IMPACT Registry. Children’s Hospital Association Meeting, San Diego, CA, April 9, 2012
Invited Speaker, IMPACT Registry. Treatment of Coarctation in Adults. SCAI, Las Vegas, NV, May 11, 2012
Invited Testimony before FDA Panel investigating ASD device safety representing American College of Cardiology, Gaithersburg, MD, May 24, 2012
Invited Speaker, Embolization Therapy in Congenital Heart Disease. ACC 13, March 9, 2013, San Francisco, CA
Moderated Abstract, IMPACT Registry: First Review of Community Practice with Respect to Device Closure of ASD and PDA. ACC 13, March 12, 2013, San Francisco, CA
Invited Speaker, WSOPC. Melody Valve. Monterey, CA, June 8, 2013
James Perry, MD
Device therapy in adult congenital heart patients: saving lives? Prague Symposium on Congenital Heart Disease, Prague, Czech Republic, December 2011
Adults with Congenital Heart Disease: What Does Transition Look Like? UCSD/Rady Children’s Grand Rounds, San Diego, CA, December 2011
When is Primary Prevention ICD Therapy an Appropriate Consideration in Adult CHD? Evolving Concepts in CV Management Symposium, San Diego, CA, January 2012
Good Old Antiarrhythmic Therapy. Heart Rhythm Society Annual Sessions, Boston, MA, May 2012
Beth Printz, MD, PhD
Invited Speaker, Conference on Sudden Cardiac Arrest in Children, Anaheim, CA (Non-invasive Imaging), 2011
MRI assessment of cardiac tumors. International Society for Cardiac MR, January 2013
Friday AM Core Cardiology Lecture – Pediatric Heart Network Review, January 2013
Pediatric Residency Noon Conference Lecture – Cardiac MRI and CT. April 2013
San Diego Society for Cardiac MRI Lecture – Case Presentation, June 2013
Heather Sun, MD
Pediatric Resident Board Review, Cyanotic Congenital Heart Disease. Lucile Packard Children’s Hospital, August, 2012
Echocardiography Laboratory Teaching Conference, Single Ventricle Reconstruction Trial Highlights, Fetal Cardiac Interventions, Measures of RV Function, Neurodevelopmental Outcomes in Congenital Heart Disease. Lucile Packard Children’s Hospital, 2012/2013

PUBLICATIONS


CARDIOTHORACIC SURGERY

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 and he is Division Chief of Cardiovascular Surgery at RCHSD. Dr. Eric Devaney joined the Division on April 1, 2012. Dr. Devaney is an Associate Professor of Surgery at UCSD and he is the Director of Cardiac Transplantation and Cardiac Assist Devices at RCHSD. Dr. Devaney has also assumed the role of Medical Director of Pediatric Cardiac Surgery Critical Care at RCHSD.

The Division’s clinical volume for the academic years 2011-2013 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

John J. Lamberti, MD, Professor of Surgery, Chief of Cardiac Surgery at RCHSD Eugene and Joyce Klein Director of the RCHSD Heart Institute

Eric J. Devaney, MD, Associate Professor of Surgery Director of Cardiac Transplantation and Assist Devices at RCHSD

Peter Pastuszko, MD, Associate Clinical Professor of Surgery (resigned eff. 4/8/2013)
POSTDOCTORAL FELLOWS
Seemal Mumtaz, MD 2011-2013

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 2011-2013 included 514 open-heart, 137 closed-heart and 229 miscellaneous cardiovascular surgical procedures. The faculty provides consultative services at UCSD Medical Center, RCHSD, Sharp Mary Birch Hospital and at all referral sites in Hawaii. In addition, faculty members provide varying levels of 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 2012. The symposium was entitled “Evolving Concepts in the Management of Complex Congenital Heart Disease III”. The symposium represented the third 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
John J. Lamberti, MD: The Division participates in multiple longitudinal studies of congenital heart disease sponsored by the Congenital Heart Surgeon’s Society. Dr. Lamberti is the principal investigator on multiple clinical 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.

LEFT TO RIGHT: John Lamberti, Eric Devaney
The RCHSD and UCSD Pediatric 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. successfully completed the recruitment of a third pediatric cardiothoracic surgeon, who is expected to begin operating on site in November 2013. We have recently added additional cardiology faculty with strong expertise in fetal echo and cardiac MRI.

2. funding for and are in the process of physician recruitment for leadership positions in Cardiac Transplantation and Cardiac Critical Care.

3. completed the installation of and are currently actively using a dedicated pediatric Cardiac MRI Scanner and a new state of the art dedicated Pediatric Cardiac Catheterization Laboratory. We are also working in our new cardiac operating room. We have opened a dedicated Cardiovascular Intensive Care Unit (CVICU), and we are on the verge of moving into an expanded, new Heart Center.

4. administrative and Board of Directors approval in place to establish an in-house pediatric heart transplant program associated with the UCSD adult program. We are in process of submitting our UNOS application for cardiac transplantation with the long range goal of adding a program in lung transplantation.
Eric J. Devaney, MD: Dr. Devaney has a strong interest in basic science, clinical research and cardiac transplantation. Dr. Devaney has been instrumental in the creation of a cardiovascular ICU (CVICU) at RCHSD. Dr. Devaney is responsible for the recruitment of personnel and the creation of the infrastructure that will permit RCHSD to begin cardiac transplantation in 2014. Dr. Devaney is a member of the RCHSD Research Council.

Dr. Devaney's research interests:
Basic Science Focus:
1. Sarcomeric basis of contractile dysfunction in heart failure and cardiomyopathy
2. Genetic modification of motor proteins in normal and failing myocytes
3. Analysis of thin filament maintenance in cardiac myocytes

Clinical Focus:
1. Clinical applications of assist devices in pediatric heart failure
2. Clinical outcomes in pediatric cardiac surgery

Dr. Peter Pastuszko: Dr. Pastuszko is the primary cardiac surgeon involved in an ongoing 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. In addition, Dr. Pastuszko collaborated with Dr. Vishal Nigam from the Division of Cardiology on several projects (see publications).

DIVISIONAL FACULTY TEACHING ACTIVITIES
The cardiac surgeons 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.
• Dr. Devaney leads a surgical team on an annual humanitarian teaching mission to Arturo Grullo Children’s Hospital, Santiago, Dominican Republic and Bloom Hospital, San Salvador, El Salvador.

AWARDS, HONORS, AND MAJOR PRESENTATIONS
John J. Lamberti, MD
### Research Support

<table>
<thead>
<tr>
<th>Grant/Contract #</th>
<th>Total Direct Dollars/ Duration of Grant</th>
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| **Paul David Grossfeld, MD**  
Marfan Trial  
NHBLI/National Marfan Foundation  
Children's Heart Foundation  
Identification of Genes for Cognition in Distal 11q: Further Genotyping  
2009-PEDGENO | **$50,000 per year**  
**$75,000 per year**  
**$75,000**  
June 2009-Dec. 2009 |
| **Vishal Nigam, MD**  
Mechanisms Of Notch1 In Aortic Valve Calcification  
Nih/Nhlbi/7 K08hl086775-03  
AGA Medical Corporation  
ADO II Clinical Study | **$85,000**  
**$432,567**  
Dec. 2008-Indefinite |
| **John Moore, MD**  
STARFlex in Atrial Septal Defect- Long term Status Assessment of Patients  
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)  
Johns Hopkins University  
Closure of Muscular Ventricular Septal Defects with the Amplatzer Muscular VSD Occluder-Post Approval Study (Muscular VPA)  
AGA Medical Corporation | **$2,900**  
Aug. 2007-Indefinite  
**$198,865**  
Sept. 2007-Indefinite  
**$26,600**  
Sept. 2008-Indefinite |
| **Eric Devaney, MD**  
NIH K08 Mentored Scientist Award | **$620,000**  
2009-2014 |

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**Dr. Lamberti’s Publications**


EL-Said H, Hamzeh R, Lamberti J, Moore J.


**Book Chapters**


**Brief Publications**


**Dr. Pastuszko’s Publications**


**Dr. Devaney’s Publications**


**Book Chapters**


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 Southwest 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
Palliative/Supportive Care Program, funded by a grant from the Peckham Family Foundation
Integrative Medicine Program
Comprehensive Psychosocial Services Program, funded in part by the Celebration of Champions through the Rady Children’s 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. Joint efforts in International Outreach have led to the creation of a successful Pediatric Oncology Program in Tijuana, Mexico and the development of a new Pediatric Oncology Program in La Paz, Mexico.

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, which accepts two new fellows per year in to the three-year program.

FACULTY
William D. Roberts, MD, Division Chief, Clinical Professor of Pediatrics
Donald L. Durden, MD, PhD, Professor of Pediatrics, Vice Chair for Research, Department of Pediatrics, Associate Director Pediatric Oncology, UCSD/ MCC
Hyunah Ahn, MD, Associate Clinical Professor of Pediatrics
Eric J. Anderson, MD, Associate Clinical Professor of Pediatrics
John R. Crawford, MD, MS, Assistant Professor of Neurosciences & Pediatrics
Mitchell B. Diccianni, PhD, Associate Project Scientist
Andrew C. Dietz, MD, MS, Assistant Clinical Professor
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
• Strengthen basic, translational, and clinical research in pediatric hematology and oncology.
• Further develop clinical trials and scientific collaborations with our partners in San Diego and beyond.
• Expand the Hematology/Oncology Clinical Research Center to support more early phase, innovative investigator-initiated clinical trials.
• Expand access to alternative donor stem cell transplantation at RCHSD.
• Collaborate with the UCSD Moores Cancer Center to develop new programs in Adolescent & Young Adult Oncology and in Long Term Follow-up of Adult Survivors of Childhood Cancer.
Professor of Pediatrics

• Neuro-Oncology, a multidisciplinary endeavor in clinical care, quality, outcomes, program at UCSD, and includes combined efforts in the care of patients with central nervous system malignancies. This includes a specific Neuro-Oncology Tumor Board.

• 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.

• A Pain Management Program, managed by the Anesthesiology Department, works closely with the hematology/oncology patients providing pain control therapy and sedation for patients undergoing procedures, such as bone marrow aspiration/biopsy and lumbar puncture.

RESEARCH ACTIVITIES

Andrew Dietz, MD, MS is the Director of the Neuro-Oncology Program. He was awarded a UCSD Department of Pediatrics Intramural Grant for his work studying pulmonary complications among survivors of childhood cancer. He is a member of the Cardiopulmonary subgroup of the COG Survivorship Guidelines Task Force.

Donald L. Durden, MD, PhD is Vice Chair for Research in the Department of Pediatrics. Over the past 2 years he has developed and executed a sophisticated Rady/UCSD Biorepository for the collection of pediatric tissues for genomic research for all Divisions within the Department of Pediatrics. He is currently the Director of the UCSD/Rady Biorepository. Dr. Durden is the Director of Basic and Translational Research in the Division and Director of the Clinical Trials Office for Pediatric Hematology-Oncology. He is Associate Director for Pediatric Oncology at the Moores UCSD Cancer Center (MCC). He is the PI on a multicenter Phase II trial of a biologic response modifier, poly-ICLC in low grade glioma brain tumors in collaboration with Dr. Crawford. This Phase II trial was recently funded by the NIH. He developed one of the first PI-3 kinase inhibitors to go into human clinical trials. This drug, SF1126, is slated for pediatric oncology clinical trials in late 2013 and for a genome-driven bucket Phase II trial in adult cancer at the MCC. He is a member of the iHOPE Committee at UCSD/RCHSD; an initiative between Illumina and UCSD/RCHSDs to use whole genome sequencing to identify the molecular causation of undiagnosed pediatric genetic diseases. He developed the first recombinant L-asparaginase which is now slated for Phase I clinical trials in ALL and is now funded by the NIH to develop nanoparticle protected asparaginases for leukemia therapeutics.

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 signal relay 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.” His group is actively involved in drug discovery and development and in opening Phase I and Phase II clinical trials of novel targeted therapeutic agents in pediatric oncology. His group was recently awarded a patent on a novel small molecule scaffold which will allow his group to generate a large number of dual small molecule inhibitors for pediatric oncologic therapeutics.

Amy E. Geddis, MD, PhD studies megakaryocyte differentiation and 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 Immune Thrombocytopenia (ITP). She is the RCHSD/UC San Diego PI for a St Jude HOD08: Reduced Duration Stanford V Chemotherapy with or without Low-Dose Tailored-field Radiation Therapy for Favorable Risk Pediatric Hodgkin Disease, and SJBC3: Mature B-Cell Lymphoma and Leukemia Study III. 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”. This project is a collaboration with Don Durden, MD (UCSD), Joel Linden, PhD (La Jolla Institute for Allergy and Immunology), Kelly Frazer, PhD (UCSD), and Jennifer Yu, MD, Pediatric Hematology/ Oncology fellow and Courtney Thornburg, MD (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.

Catherine E. Madigan, MD is the Associate Director of the Sickle Cell Disease and Hemoglobinopathy Program and a member of the UCSD Institutional Review Board.

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 NMTRC clinical trials, including the following: NMTRC008: A Feasibility Trial using Molecular-Guided Therapy for the Treatment of Patients with Relapsed and Refractory Childhood Cancer, NMTRC003: A Phase II Preventative Trial of DFMO as a Single Agent in Patients with High Risk Neuroblastoma in Remission. NMTRC005: A Randomized, Phase I/II trial of Irinotecan and Temozolomide compared to Irinotecan and Temozolomide in Combination with TPI 287 in Patients with Primary Refractory or Early Relapsed Neuroblastoma, and NMTRC004: A Phase I/II Trial of TPI 287 in Patients with Refractory or Recurrent Neuroblastoma and Medulloblastoma. He is a co-PI of a study of the molecular basis of metastasis in the Ewing Sarcoma Family of Tumors with Dr. Jing Yang, which was awarded a 2-year Hyundai Hope on Wheels grant in 2012. 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 measuring drug sensitivity of acute leukemia cells. Along with Drs. Paula Arisitzabal, and Raul Ribeiro, he has developed a joint RCHSD/UCSD/St. Jude Children’s Research Hospital pediatric oncology international outreach program in Tijuana, Mexico, and is involved in the development of a similar program in La Paz, Mexico.

Deborah E. Schiff, MD conducts clinical research related to palliative care in her role as the Medical Director of the Hematology/Oncology Palliative Care Program. She is the Physician Coordinator of the RCHSD/UCSD/St. Jude Children’s Research Hospital Alliance. She is the RCHSD/UCSD principal investigator for the following St. Jude studies: ALLR18: A Phase II Study of Therapy for Pediatric Relapsed or Refractory Precursor B-cell Acute Lymphoblastic Leukemia and Lymphoma, 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, MEL06: Phase II Study Incorporating Pegylated Interferon in the Treatment for Children with High-Risk Melanoma, and TBANK: A Protocol for Collecting, Banking, and Distributing Human Tissue Samples.
<table>
<thead>
<tr>
<th>Grant/Contract #</th>
<th>Total Direct Dollars/ Duration of Grant</th>
</tr>
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<tr>
<td>Andrew Dietz</td>
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<tr>
<td>University of California San Diego, Department of Pediatrics</td>
<td>$48,011 Jan. 2013-Dec. 2013</td>
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<tr>
<td>A Pilot Study of Pulmonary Complications in Survivors of Childhood Cancer</td>
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<tr>
<td>Donald L. Durden, MD, PhD</td>
<td></td>
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<tr>
<td>RO1 CA94233-09 (PI)</td>
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<tr>
<td>Genomics of Sickle Cell Disease</td>
<td>$50,000 May 2013-Apr. 2014</td>
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<tr>
<td>UCSD Department of Pediatrics Genomics Grant</td>
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<tr>
<td>Jenny M. Kim, MD</td>
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<tr>
<td>Biomarkers of Sickle Cell Disease. Examine iNKT cells and biomarkers of inflammation at baseline and during pain crisis in children with sickle cell disease</td>
<td>$25,000 2011-2012</td>
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<tr>
<td>UCSD Clinical and Translational Research Institute Pilot Translational Studies Award</td>
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<td>William D. Roberts, MD</td>
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<td>U10 CA 98543-08/National Institutes of Health Children’s Oncology Group (COG)</td>
<td>$221,926 Mar. 2009-Feb. 2014</td>
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<tr>
<td>Multi-Institution Clinical Trials Group (Adamson) (#19630)</td>
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<td>Institution P.I.: William D. Roberts, M.D.</td>
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<tr>
<td>Accelerating Clinical Trials in Novel Oncology Pathways (ACTNOW)</td>
<td>$36,507 2011-2012</td>
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<td>ARRA Program for Protocol ANBL0931 (Adamson)</td>
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<td>3U1098543-07S1/National Institutes of Health/National Cancer Institute</td>
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<tr>
<td>Environmental and Molecular Epidemiology of Childhood Leukemia</td>
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<td>5R01ES009137-12/National Institute of Environmental Health Services</td>
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<td>Dissecting the Molecular Basis of Ewing’s Sarcoma Metastasis. Hyundai Hope Grant</td>
<td>$86,956 Sept. 2012-Sept. 2014</td>
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<td>St. Baldrick's Foundation Infrastructure Award</td>
<td>$45,239 2012-2013</td>
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<td>Courtney D. Thornburg, MD, MS</td>
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<td>Region IX Comprehensive Hemophilia Care Program</td>
<td>$11,350 July 2011-June 2013</td>
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<td>MCHB 5-H30MC-0036-10HRSA</td>
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<td>Data Collection of Complications of Hemophilia and Serum Testing and Storage</td>
<td>$31,390 July 2011-June 2013</td>
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<td>CCU0916521-07/CDC U27</td>
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<td><strong>Jing Yang, PhD</strong></td>
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<td>Epithelial-Mesenchymal Transition in Tumor Metastasis</td>
<td>$1,500,000 Sept. 2007-Aug. 2012</td>
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<td>1 DP2 OD002420-01/2007/NIH Director’s New Innovator Award</td>
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<td>Hyundai Hope Grant: Dissecting the Molecular Basis of Ewing’s Sarcoma Metastasis</td>
<td>$86,956 Sept. 2012-Sept. 2014</td>
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<td>1R01CA168689-01 (PI: Yang)</td>
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<td>Regulation of Tumor Invasion by Twist1</td>
<td>$1,232,550 Sept. 2012-June 2017</td>
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<td>RSG-09-282-01-CSM (PI: Yang)</td>
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<td>In vivo activation of Twist in breast cancer metastasis</td>
<td>$600,000 Jan. 2010-Dec. 2013</td>
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<td>American Cancer Society Scholar Research Grant</td>
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<td>Targeting Neural Crest Migration Program to Treat Ewing’s Sarcoma Metastasis</td>
<td>$300,000 May 2012-April 2015</td>
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<tr>
<td>The Hartwell Foundation Individual Research Grant (PI: Yang)</td>
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<td>Developing a Novel Therapeutic Approach for Ewing’s Sarcoma Metastasis</td>
<td>$60,091 Sept. 2012-Dec. 2014</td>
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<td>Hyundai Hope Grant (PI: Yang)/ Hyundai Hope On Wheels Foundation</td>
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<tr>
<td>Regulation of breast cancer stem cell by matrix stiffness</td>
<td>$300,000 June 2013-May 2016</td>
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<td>DOD Breast Cancer Program IDEA Award (PI: Yang)</td>
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<td><strong>Alice L. Yu, MD, PhD</strong></td>
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<tr>
<td>Predicting outcome and Ameliorating Toxicities of the Immunotherapy of Neuroblastoma</td>
<td>$300,000 July 2011-June 2013</td>
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<td>20113297/Alex’s Lemonade Stand Foundation</td>
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<td>Role of antibodies to non-human glycans in immunotherapy of neuroblastoma</td>
<td>$81,533 July 2011-June 2012</td>
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<td>20113706/St. Baldrick’s Foundation</td>
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<td>Sub 021051(CA098543)/National Childhood Cancer Foundation</td>
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</tbody>
</table>
Courtney Thornburg, MD, MS is the Director of the Hemophilia/Bleeding Disorder program. She has held a leadership role in several multi-center studies of the role of hydroxyurea in the management of sickle cell disease. She was the first author on a publication in Pediatric Blood and Cancer describing medication and visit adherence, the first author on a publication in Blood describing clinical events, and a co-author on other related manuscripts, including the primary paper which was published in Lancet. She has also been involved in multi-center studies of stroke prevention, pain management, quality of life, and neurocognitive outcomes. She is the principal investigator for the RCHSD/HTC Universal Data Collection Study and the HTRS Registry for public health surveillance of individuals with bleeding disorders. She is participating in the Kids-DOTT trial to better determine the optimal duration of anticoagulation therapy in pediatric thrombosis patients.

Jing Yang, PhD conducts basic science research related to metastases in cancer and Twist mutations in metastatic cancers. She is involved in the study of the molecular basis of metastasis in the Ewing Sarcoma Family of Tumors with Dr. Roberts, and Dr. Sun Choo, a Pediatric Hematology/Oncology fellow. She was awarded a 2007 NIH Director’s New Innovator Award to develop a novel Epithelial-Mesenchymal Transition in Tumor Metastasis detection/selection system in mice to identify, image and isolate migrating carcinoma cells in primary tumors and to explore the signal pathways that promote carcinoma cells to migrate and disseminate into distant organs.

Janet Yoon, MD is the RCHSD/UCSD principal investigator for Phase II Study of everolimus for recurrent or progressive low-grade gliomas in children, conducted through the Pacific Pediatric Neuro-Oncology Consortium.

Alice Yu, MD, PhD is pursuing translational cancer research. She chairs a multi-national Phase III trial of anti-GD2 in high-risk neuroblastoma, which is a pivotal trial for future licensing of this antibody by the FDA. In addition, Dr. Yu directs a research laboratory, which includes Drs. Diccianni and Batova. Their research focuses on the role of immune effector cells in immunotherapy of cancer, the role of micro-RNA in leukemia, and novel therapy of cancer targeting molecular abnormalities associated with chromosome 9p21, which is frequently altered in many types of cancer.

TEACHING ACTIVITIES
All faculty members are actively involved in teaching activities for the hematology/oncology fellows, residents in the UCSD/RCHSD Pediatric Residency Program, other residents and fellows working at RCHSD, and UCSD medical students. Clinical teaching occurs in the inpatient and outpatient settings. The faculty provides formal lectures to the residents and students, attend morning report, morbidity & mortality conferences, and other teaching conferences.

Andrew C. Dietz, MD, MS
Dr. Dietz is a member of the Fellowship Scholarship Oversight Committee and an advisor for fellows in the Hematology/Oncology Fellowship Program.

Donald L. Durden, MD, PhD
Dr. Durden as Vice Chair for Research in the Department of Pediatrics, he is the director of the bimonthly Subspecialty Fellowship Research conference for all subspecialty clinical fellows within the UCSD/Rady clinical fellowship training 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. She is the chairperson of the Fellowship Scholarship Oversight Committee. She is an advisor for fellows in the Hematology/Oncology Fellowship Program.

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

Catherine Madigan, MD
Dr. Madigan 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 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 preceptor and advisor for UCSD medical and pharmacy student independent study projects. She is an advisor for fellows in the Hematology/Oncology Fellowship Program and a member of the Fellowship Scholarship Oversight Committee.

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

Janet Yoon, MD
Dr. Yoon is the coordinator for the hematology/oncology rotation for second-year pediatric residents in the UCSD/RCHSD Pediatric Residency Program. She is an advisor for fellows in the Hematology/Oncology Fellowship Program.

AWARDS, HONORS, AND MAJOR PRESENTATIONS
John R. Crawford, MD, MS
UCSD Neurosciences Program. Junior Attending Faculty Teaching Award for the 2012-2013 Academic Year Neuropsychology Grand Rounds Rady Children’s Hospital, UCSD, Pediatric Brain Tumors, October 5, 2011 Brain Tumors: 2nd Annual Collaborative Care Conference, UCSD, Moores Cancer Center, January 21, 2012 3rd Annual Neuro-Oncology Family Day, Rady Children’s Hospital. A Team work approach in the management of childhood brain tumors, May 19, 2012


41st Annual Child Neurology Society Meeting Breakfast Seminar: Childhood encephalitis: Neuroradiographic, electrodiagnostic, and laboratory crossroads, November 1, 2012 (Speaker and Organizer)

Preuss Foundation Translational NeuroOncology Conference: Translational pediatric neurooncology, February 21, 2013, San Diego, CA

Muores Cancer Center/NF1 California Symposium: Ask the doctor, San Diego, CA, June 29, 2013


O’Halloran HS, Fikhman M, Crawford J. Surgery as primary intervention in glaucoma in the pediatric population. World Ophthalmology Congress, Abu Dhabi, UAE, February 2012


Amy E. Geddis, MD, PhD
American Society of Hematology Scientific Committee Member, Bone marrow failure, 2010-present
Co-chair, Non-immune Thrombocytopenia Registry of the International Society of Thrombosis and Hemostasis Medical Advisory Board, Platelet Disorders Support Association, 2006-present
Editorial Board, Blood, 2006-2011
ITP, does it run in the family? PDSA meeting, July 2011

Jenny M. Kim, MD
Dr. Kim was recognized by U.S. News & World Report as a “Top Doctor” in the specialty of sickle cell disease care

William D. Roberts, MD
Dr. William Roberts was recognized by the San Diego County Medical Society as a “2013 Top Doctor”

Deborah E. Schiff, MD
Dr. Schiff was the recipient of the Emilio Nares Foundation 2011 Excellence in Pediatric Oncology Award
Aristizabal P, Singer J, Martinez ME, Schiff D. Racial/Ethnic Diversity in Pediatric Oncology Clinical Trial Enrollment at RCHSD. Poster presented at the 26th Annual Meeting of the American Society of Pediatric Hematology/Oncology-ASPHO; Miami, FL, April, 2013
Kline C, Reineke A, Auger J, Willert J, Roberts W, Schiff D. Effects of a unique hematology-oncology pediatric palliative care program on medical decision-making and communication between healthcare providers and families. AAHPM Meeting, March 2012
Schiff D, Auger J. PleurX Catheter placement for palliation of pediatric patients with symptomatic malignant effusions. AAHPM Meeting, March 2012
Schiff D, Medzihradsky O, Fisher ES, Auger J. An end-of-life order set is associated with improved pain control and decreased artificial nutrition use for terminally ill pediatric hematology-oncology patients at a tertiary cancer center. AAHPM Meeting, March 2012


Fletcher E, Schiff D. Parent’s perspectives: Assessment of a pediatric oncology summer camp as supportive care. Annual Biomedical Research Conference for Minority Students, November 2011


**PUBLICATIONS**


Hartman L, Crawford JR, Makale M, Milburn M, Joshi S, Salazar AM, Hasenauer B, MacDonald TJ, Durden DL. A Phase II trial of PolyICLC in the management of newly diagnosed and


Brown R, Reinke L, Damerow M, Perez D, Chodosh L, Yang J, Cheng C. CD44...


BOOK CHAPTERS


The Hospital Medicine Division and 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, and has a physician turnover rate of 0.2 in its 35 year existence. 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. These facilities are part of the larger Rady Children's Hospital and Health Center (RCHHC) system in San Diego and Riverside counties.

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 of hospital medicine. Most have had additional post-residency training through chief residency or fellowships including child abuse pediatrics, genetics, hospice and palliative care medicine, critical care and pediatric hospital medicine. The Hospital Medicine Division has faculty in two integrated Sections: Child Abuse (Vulnerable Child Section) and Hospital Medicine.

The hospitalists work closely with hospital staff and administrative leadership to optimize patient flow and hospital capacity and to address patient care issues across the healthcare system. Additionally, the hospitalists coordinate non-neonatal critical care transports of acutely ill pediatric patients at risk for clinical deterioration for San Diego and neighboring counties.
FACULTY
Cynthia L. Kuelbs, MD, Division Chief, Hospital Medicine, Vulnerable Child Section Chief, UCSD Clinical Professor of Pediatrics

Vulnerable Child Section
Jennifer Davis, MD, Assistant Clinical Professor of Pediatrics
Premi Suresh, MD, Associate Physician
Wendy Wright, MD, Clinical Professor of Pediatrics

Hospital Medicine Section
Julia Beauchamp-Walters, MD, Clinical Professor of Pediatrics
Laurie Bernard-Stover, MD, Associate Clinical Professor of Pediatrics

Alicia Cantu, MD, Associate Clinical Professor of Pediatrics
Weijen Chang, MD, Associate Clinical Professor of Internal Medicine and Pediatrics
Jennifer Davis, MD, Assistant Clinical Professor of Pediatrics
Ami Doshi, MD, Assistant Clinical Professor of Pediatrics
Edward Epstein, MD, MBA, CPE, Clinical Professor of Pediatrics
Erin Stucky Fisher, MD, MHM, Acting Hospital Medicine Section Chief, Professor of Clinical Pediatrics, PHM Fellowship Director
Jessie Gargas, MD, Clinical Instructor of Pediatrics
Daniel Hershey, MD, Associate Clinical Professor of Pediatrics
Sara Marchese, MD, Associate Clinical Professor of Pediatrics
Heather Pierce, MD, Assistant Clinical Professor of Pediatrics
Kyung Rhee, MD, MSc, Assistant Adjunct Professor of Pediatrics
Keith Vaux, MD, Clinical Professor of Pediatrics

POSTDOCTORAL FELLOWS
Lisa M. Benz, MD
Elizabeth Mannino Avila, MD
Brian Williams, MD

LEFT TO RIGHT: Erin Stucky Fisher, Cynthia Kuelbs, Elizabeth Avila, Daniel Hershey, Alicia Cantu, Brian Williams, Laurie Bernard-Stover, Keith Vaux, Ami Doshi, Heather Pierce, Sara Marchese, Wendy Wright, Julia Beauchamp-Walters, Lisa Benz
CLINICAL ACTIVITIES
INPATIENT/OUTPATIENT

The Hospital Medicine Service accounts for approximately 25% of all admissions to the Rady Healthcare system and over 98% of general pediatric admissions. Patients cared for may present with common or complex problems, and may have no past issues or multiple chronic co-morbid medical and surgical conditions. The average census varies by season, averaging 45 patients in winter months and 20 in the traditionally quieter summer months. Volume is high, with 25-35 admissions in a 24 hour period during the winter months at the Rady site alone. Service activities include provision of inpatient care, consultation for sub-specialty and emergency department patients, sedation, 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-resident service is part of a larger Rady program that includes newborn nursery and the neonatal intensive care unit. The hospitalists also provide consultation for the emergency department at this location.

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 that increases in the winter to 6-8. 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 RCHHC:
- 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, Accountable Care Initiative
- Medical Director, Quality and Safety
- Medical Director, Continuing Medical Education

The major Divisional goals are:
- Develop a robust hospital medicine clinical research/quality program
- Enhance fellow, resident and medical student education in hospital medicine
- Expand hospital medicine consult services
• Medical Staff, RCHHC Department of Pediatrics Chair
• Medical Director, Chadwick Center for Children and Families
• Medical Director, Subacute Unit Bernardy Center
• Medical Director, RCH at Sharp Grossmont Pediatric Unit
• Medical Staff, Chair, Pharmacy and Therapeutics Committee
• Medical Staff, Chair, Quality Improvement Committee
• Medical Staff, co-director, Children’s Emergency Transport

For UC San Diego Department of Pediatrics:
• Fellowship Director, Hospital Medicine
• Fellowship Director, Child Abuse
• Vice Chair for Clinical Affairs
• Director of Graduate Medical Education Quality and Safety
• Residency related committees (multiple)

For Community Facilities and Partners:
• 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
• Physician Advisor for Utilization, Children’s Physicians Medical Group

In addition, hospitalists serve as members of key RCHHC, RCSSD, Palomar, Sharp Grossmont and UC San Diego (UCSD) School of Medicine committees including:

For RCSDD/Medical Practice Foundation:
• Board of Directors
• Executive Board
• Board of Governance Committee
• Benefits
• Billing
• Clinical Practice
• Credentialing and Quality
• Contracts

For RCHHC:
• Anaesthesia Services Committee
• Bioethics
• Bylaws
• Clinical Leadership Council
• Clinical Pathway Committees
• Code Blue
• Continuing Medical Education
• Information Technology
• Infection Control
• Marketing
• Medical Staff Executive Committee
• Morbidity and Mortality Conferences including:
  • CHET
  • Pediatrics
  • PICU
  • Systems
  • Trauma
• Pediatric Leadership Council
• Pediatric Department
• Pharmacy and Therapeutics
• Quality Improvement
• RCHSD Board Committees including:
  • Information Technology
  • Recruitment and Retention

For UCSD School of Medicine:
• Academic Review and Appraisal Committee
• Graduate Medical Education
• Liaison Committee on Medical Education (LCME), Educational Resources Committee

RESEARCH ACTIVITIES
• Pediatric Research in the Inpatient Setting (PRIS). Clinical Survey of Pediatric Hospitalist Practice Patterns through the PRIS Network.
• Discharge collaborative with University of California member hospitals: creation of PediBOOST Toolkit, in partnership with the Society of Hospital Medicine
• Re-admissions in asthma and the relationship to Asthma Action Plans
• Quality improvement education and trainee engagement
• Predictors of respiratory failure in bronchiolitis and use of pressure support
• 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
• Safety and efficacy of Moxifloxac in complicated intraabdominal infections in children
• Family Centered Rounds: perceptions and outcomes
• Predictors of C. Difficile infection in hospitalized children
• Changing physician behaviors and use of the electronic medical record (EMR)

Laurie Bernard-Stover, MD
Sub-Investigator. An evaluation of the safety, efficacy and pharmacokinetics of daptomycin in pediatric subjects aged 7-17 years with complicated skin and skin structure infections caused by gram positive pathogens. 2009-present
Sub-Investigator. A randomized, double-blind, multicenter trial to evaluate the safety and efficacy of sequential (intravenous, oral) moxifloxacin versus comparator in pediatric subjects with complicated intra-abdominal infection. Study Number RAY 12-8039/11643. 2010-present
Sub-Investigator. A multicenter, randomized, observer-blinded, active-controlled study to evaluate the safety, tolerability, efficacy, and pharmacokinetics of ceftaroline versus comparator in pediatric subjects with acute bacterial skin and skin structure infections (ABSSSI). Study Number Cerexa P903-23. PI Christopher Cannavino.

Ami Doshi, MD
Co-Investigator with Dr. Charles von Gunten, Dr. Kim Bower, Dr. Tanya Dansky. Survey/needs assessment of pediatric residents, fellows, and faculty at UCSD and RCHSD to assess competence, concerns, and knowledge in pediatric palliative care; RCHSD, Palliative Studies - San Diego Hospice. Current
Co-Investigator with Dr. Mindy Ross, Dr. Mark Pian, Patricia Pian and London Carrasca. Improving pediatric residents knowledge and confidence about palliative end of life care through comfort code modules. RCHSD and UCSD. 2010-Current

Erin Stucky Fisher, MD

Study of re-admissions and asthma. Investigators: J. Yang, K. Rhee, E. Stucky Fisher. 2010-Present


Are you my doctor? A survey of families' ability to correctly identify their treatment team members (TTM) in an academic inpatient pediatric hospital medicine service. Amit Singh MD, Erin Fisher MD. 2011-Present

Changing physicians views: Improving electronic medical record (EMR) results review activity (RRA) and shifting behavior. Amit Singh MD, Erin Fisher MD. 2011-Present

A randomized, double-blind, multicenter trial to evaluate the safety, tolerability, efficacy and pharmacokinetics of ceftaroline versus comparator in pediatric subjects with acute bacterial skin and skin structure infections. 2012-present

Heather Pierce, MD
Clinical Trials, Sub-investigator:
A prospective, multicenter study of brocholithiasis admissions: etiology and disposition (BABY BREATHE STUDY). NIH U01A 167693. 2007-present


Keith Vaux, MD
University of California, San Diego FUNDING: Organization of Teratology Information Specialists (OTIS), Amgen. Study ID numbers: 20040246 Clinical Trials Identifier – NCT01017016
Principle Investigator, Keith Vaux / Kelly Frazer Kabuki Syndrome blood draw study, RCHSD 12401, March 23, 2010 (Completed)
Co-investigator, West Coast Kawasaki Disease Epidemiology Consortium. UCSD 110306 (Active)
Co-Principal Investigator, CIRM RFA 12-02 (CIRM Tissue Collection for Disease Modeling Awards) Grant IT1-06611, UCSD IRB Project 090293

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

Julia Beauchamp-Walter, MD
Pediatric CNS Infections/Diabetes Management, Pediatric Hospital Medicine Fellowship Curricula. 2009-present
Update on Pediatric UTIs, RCHHC NNP Lecture Series, June 2013

Laurie Bernard-Stover, MD
Co-developed/Faculty for Pediatric Hospital Medicine Elective Rotation. 2010-present
P.A.C.E. (Physician Assessment and Clinical Education) Program Instructor, 2012-present
Co-coordinator of a 3 month International Elective in Critical Care Medicine for rotating residents from Mozambique, 2013

Alicia Cantu, MD
Core Curriculum Instructor UCSD Hospital Medicine Fellowship, Rady Children’s Hospital, University of California, San Diego, CA, teaching Hospital Medicine Fellows. 2007-present
Mentor for UCSD Pediatrics Interns, 2009-present
UCSD Health Professions Mentor Program for undergraduate students, 2010-present
SOM 410 Adolescent Medicine Case Discussions University California, San Diego, CA - Problem based learning course for fourth year UCSD medical students, 2005-2012

Jennifer Davis, MD
Physical Indications of Abuse. Promises to Kids and San Diego County Commission on Children, Youth, and
Revisiting how we think: Innovative ideas for promoting and assessing clinical reasoning. Pediatric Hospital Medicine Tri-Sponsored International Meeting, Kansas City, MO. Workshop. Leaders: Becky Blankenburg, MD, MPH; Michele Long, MD. Group facilitators: Glenn Rosenbluth, MD; Nicole Marsico, MD; Noelle Johnstone, MD; Erin Stucky, MD. July 2011

Fellowships in pediatric hospitalist medicine: A practical guide for development. Pediatric Hospital Medicine Tri-Sponsored International Meeting, Kansas City, MO. Workshop. Leader: Neha Shah, MD. Group facilitators: Jennifer Maniscalco, MD, MPH; Mary Ottolini, MD, MPH; Rani Gereige, MD; Paul Mancione, MD; Lou Bell MD; Erin Stucky, MD. July 2011

Making the pediatric hospital medicine core competencies work for you. Pediatric Hospital Medicine Tri-Sponsored International Meeting, Kansas City, MO. Workshop. Leader: Jennifer Maniscalco MD, MPH. Group facilitators: Neha H. Shah, MD; Lindsay H. Chase, MD; Benjamin D. Bauer, MD; Erin R. Stucky, MD; Mary C. Ottolini, MD, MPH. July 2011

Is a complete asthma action plan associated with reduced 30 day readmissions? (Poster) Pediatric Hospital Medicine Tri-Sponsored International Meeting, Kansas City, MO. Workshop. Leader: Jennifer Maniscalco MD, MPH. Group facilitators: Neha H. Shah, MD; Lindsay H. Chase, MD; Benjamin D. Bauer, MD; Erin R. Stucky, MD; Mary C. Ottolini, MD, MPH. July 2011

Are there race/ethnic or SES disparities in infant hospital readmission rates? (Poster) Pediatric Hospital Medicine Tri-Sponsored International Meeting, Kansas City, MO, Joyce Yang, MD; Eastern Kang, MPH; Erin Stucky, MD; Sheila Galagan, MD. July 2011

Putting PDSA into action for asthma action plans. Abstract (Platform presentation). Pediatric Hospital Medicine Tri-Sponsored International Meeting, Kansas City, MO, Joyce Yang, MD; Eastern Kang, MPH; Erin Stucky, MD; Sheila Galagan, MD. July 2011

Pediatric hospitalists collaborate to improve discharge communication. (Poster) Pediatric Hospital Medicine Tri-Sponsored International Meeting, Kansas City, MO. Mark Shen, MD; Julia Shelburne, MD, David Cooperberg, MD, Elizabeth L. Robbins, MD, Daniel Hershey, MD, Joyce Yang, MD, Leah Mallory, MD, Lora J. Bergert MD, Erin Stucky Fisher, MD. A study from the Value in Inpatient Pediatrics (VIP) Network Discharge Handoff Collaborative (Phase 1). July 2011

An end-of-life pathway is associated with improved pain control and less frequent TPN administration among terminally ill inpatients at a tertiary cancer center. Abstract (Platform) 2011 American Academy of Pediatrics (AAP) National Conference and Exhibition, Boston, MA, Oliver F. Medzihradsky, MD, MPH; Deborah Schiff, MD; JoAnne Auger, RN; Erin Stucky Fisher, MD, MHM, FAAP. Divisions of Pediatric Hospital Medicine and Pediatric Hematology and Oncology and the Peckham Center for Cancer and Blood Disorders, UCSD at RCHSD, San Diego, CA, October 2011

Invited Faculty, SHM Hospital Focused Practice. Las Vegas, NV, November 2011

Core faculty, quality and safety educators academy, Sponsors: Society of Hospital Medicine; Alliance for Academic Internal Medicine. A three-day course training educators to teach quality and safety. Tempe, AZ, February 2012

An end-of-life order set is associated with improved pain control and decreased artificial nutrition use for terminally ill pediatric hematology-oncology patients at a tertiary cancer center. (Poster) American Academy of Hospice and Palliative Medicine (AAHPM) and Hospice and Palliative Nurses Association (HPNA) Annual Assembly, Oliver F. Medzihradsky, MD, MPH; JoAnne Auger, RN; Erin Stucky Fisher, MD, MHM, FAAP; Deborah Schiff, MD. Denver, CO, March 2012

Research Support

Grant/Contract #

Erin Stucky Fisher, MD
A randomized, double-blind, multicenter trial to evaluate the safety and efficacy of sequential (intravenous, oral) moxifloxacin versus comparator in pediatric subjects with complicated intra-abdominal infection. BAY 12-8039/11643/Bayer Pharmaceuticals

Pediatric Discharge Program Pedi-BOOST (Consultant) 
University of California Center for Health Quality & Innovation Program (CHQI) (PI: Shaikh, Co-I: Manesh, Clay, Amin, Ranji)

Total Direct Dollars/ Duration of Grant

$400,000 Sept. 2010-Apr. 2014

$750,000 Sept. 2011-Aug. 2014

Creating a QI curriculum workshop. Society of Hospital Medicine Annual Meeting, Erin Stucky Fisher, MD; Jennifer Myers, MD; Nasim Asfar-manesh, MD. Quality Track. San Diego, CA, April 2012


Invited speaker, Children's Hospital Los Angeles, University of Southern California School of Medicine Department of Pediatrics Hospital Medicine Section Strategic Planning Retreat. Job Sustainability and Satisfaction for Pediatric Hospitalists: Lessons Learned. November 2012

Invited speaker, Washington University School of Medicine, Internal Medicine and Pediatrics. Society of Hospital Medicine St. Louis Chapter Meeting. Quality and the hospitalist: Why should I care? What should I do? St. Louis, MO, November 2012


Are you my doctor? A survey of families’ ability to correctly identify their treatment team members (TTM) in an academic inpatient pediatric hospital medicine service. (Poster) Pediatric Hospital Medicine Annual Meeting, Amit Singh MD, Erin Fisher MD. New Orleans, LA, August 2013

Changing physicians views: Improving electronic medical record (EMR) results review activity (RRA) and shifting behavior. (Poster) Pediatric Hospital Medicine Annual Meeting, Amit Singh MD, Erin Fisher MD. New Orleans, LA, August 2013

Pediatric Hospital Medicine Annual Meeting, Fellowship Workshop. New Orleans, LA, August 2013


Journal of Hospital Medicine, Associate Editor. 2007-2013


Association of Pediatric Program Directors (APPD), Abstract Reviewer. 2009-Present

Pediatric Hospital Medicine Annual Conference, Abstract Reviewer. 2011 to Present

Pediatric Hospital Medicine National Quality Improvement Collaboratives: 1-Discharge Communication Project and 2-Patient Identification Project. QI Content Experts and Mentors for both collaborations: S. Muething, E. Stucky. (Also site member for Project 1, with Dr. Hershey.) 2009-Present

American Board of Pediatrics (ABP), Hospital Quality and Patient Safety Medical Knowledge Module. Co-cre-
EXTRACTED TEXT

Pediatric Discharge Program Pedi-BOOST (Consultant) $750,000
BAY 12-8039/11643/Bayer Pharmaceuticals
with complicated intra-abdominal infection.

A randomized, double-blind, multicenter trial to evaluate the safety and efficacy
Erin Stucky Fisher, MD

Duration of Grant
Grant/Contract # Total Direct Dollars/

1/23/14 5:06 PM hospital medicine v5.indd 165

Pediatric Grand Rounds, Throughout San Diego Magazine’s 2011 Top Doctors
Best Doctors in America 2011-2012

Children’s Hospital Association (CHA),
Society of Hospital Medicine (SHM),
American Academy of Pediatrics (AAP),
Associate Program Director, Resident & Fellow Quality Education,
UCSD Department of Pediatrics, 2013-Present
American Academy of Pediatrics (AAP)
Section on Hospital Medicine Executive Committee (elected position, two
three-year terms), 2009-2015
Society of Hospital Medicine (SHM),
Board Member (elected position)
Joint Council of Pediatric Hospital Medicine (JCPHM). Chair 2012-2015. A
coordinating body for the pediatric hospital medicine efforts of the AAP,
APA, SHM and the Pediatric Hospital Medicine community. Previously
"PHM Leadership Group"; name formally changed as of July 2011. 2011-Present
Children’s Hospital Association (CHA),
Strategic Planning Advisory Committee on Quality, Safety and Performance
(CHI is the merger of Child Health Corporation of America (CHCA) and
National Association of Children’s Hospitals and Related Institutions (NACHRI), 2012-2013
Best Doctors in America 2011-2012
Master in Hospital Medicine Lifetime Achievement Award (MHHM), Society of Hospital Medicine, 2011
San Diego Magazine’s 2011 Top Doctors
(SD County Medical Society Physicians of Exceptional Excellence), 2011
Best Doctors in America 2013
San Diego Magazine’s 2013 Top Doctors
(SD County Medical Society Physicians of Exceptional Excellence), 2013
Pediatric Grand Rounds, Throughout
the Journey-Case Studies in Palliative Care. RCHSD and UCSD Pediatrics,
July 29, 2011
Clinical Grand Rounds, Pediatric Palliative Care & Comfort Codes. RCHSD
October 25, 2011
Fostering Excellence in Pediatric Palliative Care Conference, Economics of Palliative Care. Long Beach Memorial Medical Center, Long Beach, CA,
December 4, 2012
UCSD Pediatric Noon Teaching Conference: Palliative Care Series: Delivering Bad News. RCHSD, Yearly
Hospital Medicine Fellows Core Curriculum, Apparent Life-Threatening Event. RCHSD, Yearly
Palliative Care Presentation, Dokkyo University Japanese Medical Students, RCHSD, September 1, 2011
UCSD PICU Fellows Teaching Conference, Pediatric Palliative Care: What you need to know. RCHSD, Yearly
UCSD Pediatric Resident Noon Teaching Conference: Pediatric Palliative Care 101. RCHSD, Yearly
UCSD Pediatric Noon Conference, Palliative and End of Life Care: Comfort Code Project. RCHSD, June 4, 2012
Palliative Intern Core Curriculum: Coping with the Death of Your Patients. RCHSD, July 20, 2012
Society of Hospital Medicine HQPS Subcommittee on Education, 2008-2012
Society of Hospital Medicine Diversity Committee, 2011
American Academy of Pediatrics, Pediatric Hospital Medicine Fellows Conference Planning Committee, 2011-Present
Society of Hospital Medicine Awards Committee, 2012-2013
Society of Hospital Medicine Finance Committee, 2011-Present

Daniel Hershey, MD
Bioethics, RCHSD Committee, 2008-present
Community Asthma Task Force. San Diego Public Health Department, San Diego, CA, 2010-2012
Director, Sedation Services Outside of Operating Room. Anesthesia Services/Sedation, RCHSD Committee, 2011-present
Development of Deep Sedation Training Program for Pediatric Hospitalists. RCHSD. February 2012-present

Cynthia Kuelbs, MD
San Diego Magazine’s “Best Doctors” Award, October 2012
Catholic Diocese of San Diego, Diocesan Review Board for the Protection of Children and Young People, 2008-present
Family Foundations Community Advisory Board, 2008-present
Chair, Clinical Practice Committee, American Medical Association National Advisory Council on Violence and Abuse, 2008-present
Integrated Services for Violence Witness Children in California, Canada and Taiwan. Taiwan Women’s Rescue Foundation International Conference Taipei, Taiwan, August 29-September 3, 2011
The Community support network for the recovery of children’s exposure to domestic violence. Taiwan Women’s Rescue Foundation International Conference Taipei, Taiwan, August 29-September 3, 2011
Family rebuilding approach and clinical interaction model. Taiwan Women’s Rescue Foundation International Conference Taipei, Taiwan, August 29-September 3, 2011
The community support network for the recovery of children’s exposure to domestic violence. National Taiwan University Hospital & Children’s Hospital, September 2011
Tracking Suspected Child Abuse Reports. Epic UGM, Madison, WI, September 19, 2011
The Hospital-based Child Protection Team. Creating Centers of Excellence, University of Uppsala, Uppsala Sweden, November 10, 2011
Medical record systems and child abuse. 26th Annual San Diego International Conference on Child and Family maltreatment, January 23, 2012
Domestic violence for the child abuse pediatrician. 26th Annual San Diego International Conference on Child and Family Maltreatment, January 25, 2012
The neurobiology of stress: A pediatrician’s perspective. San Diego Regional Center, April 12, 2012
Injury Prevention Advisory Committee, RCHSD, 2009 – present
Board of Governance Committee, Rady Children’s Medical Foundation, 2009 – present
College of Healthcare Information Management Executives Membership, 2009 – present
American Medical Informatics Association Membership, 2009 – present

Sara Marchese, MD
Co-developed/Faculty for Pediatric Hospital Medicine Elective, 2010-Present
POM410-From Principals to Practice-Small Group Facilitator for Adolescent Medicine, February 2012
UCSD, Health Professions Mentor Program, July 2013-present

Keith Vaux, MD
Chair, Planning and Curriculum Committee, American Academy of Pediatrics and RCHSD
2011 Advances in the Practice of Pediatrics Conference, 2010-present
University of California, San Diego, School of Medicine, Continuing Medical Education, Dean’s Advisory Committee, 2010-present
2011 Planning and Curriculum Committee, UCSD/RCHSD Evolving Concepts in the Management of Complex Congenital Heart Disease, April 2012
2012 Planning and Curriculum Committee, UCSD/RCHSD Pediatric Dermatology for the Practitioner, April 2013
Recognition, management and etiology of pediatric seizures. Pediatrics and Hospital Medicine Fellowship Core Curriculum, San Diego, CA, 2011

The technology dependent child. Pediatrics and Hospital Medicine Fellowship Core Curriculum, San Diego, CA, 2011
Evidence based medicine. UCSD Pediatric Fellowship Core Curriculum, San Diego, CA, 2011
Update on genetic testing and its impact on patient care. Pediatric Grand Rounds at Scripps Mercy Hospital, March 15, 2012

RECENT PUBLICATIONS

Laurie Bernard-Stover, MD

Ami Doshi, MD
Co-author with Dr. Mark Pian, Dr. Mindy Ross, Patricia Pian, London Carrasca and Joan Auger UCSD Pediatrics Residents Handbook entitled “Palliative and End of Life Care,” published April 2012

Erin Stucky Fisher, MD


Cynthia Kuelbs, MD

Sara Marchese, MD
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.

LEFT TO RIGHT: John Leake, Rolando Viani, Stephen Spector, Alice Pong, John Bradley, Juan Chaparro, Mark Sawyer
FACULTY
Stephen A. Spector, MD, co-Chief, Distinguished Professor of Pediatrics
John S. Bradley, MD, co-Chief, Professor of Clinical Pediatrics
Grant Campbell, PhD, Assistant Project Scientist
Christopher R. Cannavino, MD, Assistant Clinical Professor of Pediatrics
John Leake, MD, MPH, Clinical Professor of Pediatrics
Alice Pong, MD, Clinical Professor of Pediatrics
Mark H. Sawyer, MD, Professor of Clinical Pediatrics
Kumud K. Singh, PhD, Associate Adjunct Professor
Rolando M. Viani, MD, MTP, Associate Professor of Clinical Pediatrics

POSTDOCTORAL FELLOWS
Juan Chaparro, MD
Kimberly Sprague, MD

CLINICAL ACTIVITIES
INPATIENT/OUTPATIENT
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. Dr. Alice Pong and other members of the Division are responsible for the Hospital Epidemiology Program, as well as the RCHSD Antimicrobial Stewardship Program.

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.
Grant Campbell, PhD studies the mechanisms that control autophagy in response to HIV-1 and M. tuberculosis infection by developing our understanding of how the endo/lysosomal system of macrophages is converted into providing a niche environment for controlled replication by M. tuberculosis and HIV-1. With a view to controlling infection, he is in the process of identifying pharmacological agents that induce autophagic flux and inhibit both HIV-1 and M. tuberculosis in macrophages. Through this work he has shown that the active metabolite of vitamin D induces autophagy and inhibits both HIV-1 and M. tuberculosis infection of macrophages.

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.

Kumud K. Singh, PhD lab is involved in understanding the unique role of innate immunity in HIV-1 neuropathogenesis and neurodegenerative diseases. His lab focuses on how complement activation in HIV-1 infected brain leads to immune complex deposition, neuroinflammatory cytokine response and HIV-1 associated neurocognitive disorders. The Singh lab hypothesizes that complement activation is a common mechanism of neuroinflammation and CNS impairment due to an infection (HIV), autoimmunity (multiple sclerosis) and aging related consequences (Alzheimer’s disease).

Stephen A. Spector, MD has sought to discover novel approaches for the detection, treatment, prevention and immunopathogenesis of HIV and human cytomegalovirus (CMV). His laboratory has been involved with HIV/AIDS research since the beginning of the epidemic. Current ongoing research examines HIV pathogenesis with a particular emphasis on host-virus interactions, and the associations of host genetic variants on HIV diseases progression and HIV-related diseases including CNS impairment in children and adults. The laboratory’s interest in the identification of host factors that affect HIV pathogenesis led to the novel finding that during permissive infection, HIV down-regulates autophagy to promote its own replication, and the induction of autophagy (using mTOR inhibitors as well as vitamin D3) inhibits HIV replication. The laboratory has also identified specific host genetic variants that are associated with mother-to-child transmission, HIV disease progression, and antiretroviral pharmacokinetics and adverse effects. This research has led to his laboratory examining the association of host factors that control HIV replication with the goal of identifying novel strategies to eradicate HIV from those infected. Dr. Spector also directs the Mother-Child-Adolescent HIV Program that provides care, social service, case management and research opportunities for HIV-infected and affected women, pregnant women, youth and children.

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 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-expect ed 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
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.

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...
<table>
<thead>
<tr>
<th>Grant/Contract #</th>
<th>Total Direct Dollars/Duration of Grant</th>
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<tbody>
<tr>
<td>An open label, prospective, pharmacokinetic/pharmacodynamics and safety evaluation of intravenous oseltamivir (Tamiflu®) in the treatment of infants less than one year of age with influenza infection NP25138/Roche (Bradley, PI)</td>
<td>$72,883 Feb. 2010-Jan. 2013</td>
</tr>
<tr>
<td>An Evaluation of the Pharmacokinetic Profile and Safety of a Single Dose of Daptomycin in Pediatric Subjects Aged Three Months to Twenty-Four Months Who are Concurrently Receiving Standard Antibiotic Therapy for Proven or Suspected Gram-positive Infection DAP-PEDS-09-01/Cubist Pharmaceuticals (Bradley, PI)</td>
<td>$37,663 Mar. 2010-Nov. 2012</td>
</tr>
<tr>
<td>A Phase 3 Randomized, Double-Blind, Multicenter Study Comparing the Efficacy and Safety of Intravenous to Oral 6-Day TR-701 Free Acid and Intravenous to Oral 10 Day Linezolid for the Treatment of Acute Bacterial Skin and Skin Structure Infections TR701-113/Trius Pharmaceuticals (Bradley, PI)</td>
<td>$317,904 Nov. 2012-Current</td>
</tr>
<tr>
<td>An Evaluation of the Safety, Efficacy and Pharmacokinetics of Daptomycin in Pediatric Subjects Aged One to Seventeen Years With Complicated Skin and Skin Structure Infections Caused by Gram-Positive Pathogens Protocol DAP-PEDS-07-03/Cubist Pharmaceuticals (Bradley, PI)</td>
<td>$974,039 July 2009-Current</td>
</tr>
<tr>
<td>Safety, Tolerability and Pharmacokinetics of Single Dose Intravenous Moxifloxacin in Pediatric Patients BAY 12-8039/11826/ Bayer Healthcare Pharmaceuticals Inc. (Bradley, PI)</td>
<td>$57,151 Apr. 2010-Current</td>
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<tr>
<td>An Open-Label, Multi-Center, Single Arm Study to Evaluate the Safety and Tolerability of Intravenous Zanamivir in the Treatment of Hospitalized Adult, Adolescent and Pediatric Subjects with Confirmed Influenza Infection NAI113678/ GlaxoSmithKline (Bradley)</td>
<td>$97,970 Oct. 2010-Current</td>
</tr>
<tr>
<td>Postmarketing observational study of the impact of prevnar 13 (pneumococcal 13-valent conjugate vaccine) on otitis media in children 6096A1-4024-US (B1851040)/Pfizer, Inc. (Bradley, PI)</td>
<td>$39,631 Nov. 2010-Current</td>
</tr>
<tr>
<td>Phase 1B Study of the Safety, Tolerance, and Pharmacokinetics of Oral Posaconazole in Immunocompromised Children with Neutropenia P03579/Merck &amp; Co (Bradley, PI)</td>
<td>$92,643 Jan. 2011-Current</td>
</tr>
<tr>
<td>Colistimethate Single Dose Pharmacokinetics in Infants and Children U54HD071600/NIH (Bradley, PI)</td>
<td>$278,550 Sept. 2011-June 2016</td>
</tr>
<tr>
<td>Plasma and Intracellular Cathelicidin Responses to Infection in Infants and Young Children U54HD071600/NIH (Bradley, PI)</td>
<td>$90,000 Sept. 2011-June 2016</td>
</tr>
<tr>
<td>Grant/Contract #</td>
<td>Total Direct Dollars/ Duration of Grant</td>
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<tr>
<td>A Comparative Evaluation of the Safety, Efficacy and Pharmacokinetics of Daptomycin with Standard of Care in Pediatric Subjects 2 - 17 Years of Age With Bacteremia caused by Staphylococcus aureus DAP-PEDBAC-11-02/Cubist Pharmaceuticals (Bradley, PI)</td>
<td>$332,466 Jan. 2013-Current</td>
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<td>A Phase I Study to Assess the Pharmacokinetics, Safety and Tolerability of a Single Dose of Ceftazidime-Avibactam (CAZ-AVI) in Children From 3 Months of Age to &lt;18 Years Who Are Receiving Systemic Antibiotic Therapy for Suspected or Confirmed Infection D4280C00014/AstraZeneca (Bradley, PI)</td>
<td>$98,301 June 2013-Current</td>
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<td>Pharmacokinetics of a Single Dose of Ceftaroline fosamil in Children Ages Birth to Younger than 12 Years with Suspected or Confirmed Systemic Infection P903-21/Cerexa, Inc. (Cannavino, PI)</td>
<td>$50,810 Mar. 2011-June 2013</td>
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<td>A Multicenter, Randomized, Observer-Blinded, Active-Controlled Study to Evaluate the Safety, Tolerability, Efficacy, and Pharmacokinetics of Ceftaroline Versus Comparator in Pediatric Subjects With Acute Bacterial Skin and Skin Structure Infections P903-23/Cerexa, Inc. (Cannavino, PI)</td>
<td>$137,666 Oct. 2011-Current</td>
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<td>A Prospective, Randomized, Double-Blind, Multicenter Study to Establish the Safety and Tolerability of Doripenem Compared With Meropenem in Hospitalized Children With Complicated Intra-abdominal Infections DORIPED3001/Johnson &amp; Johnson (Cannavino, PI)</td>
<td>$325,266 Aug. 2012-Current</td>
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<td>A Multicenter, Randomized, Observer-Blinded, Active-Controlled Study Evaluating the Safety, Tolerability, Pharmacokinetics, and Efficacy of Ceftaroline Versus Ceftriaxone in Pediatric Subjects With Community-acquired Bacterial Pneumonia Requiring Hospitalization. Cerexa Protocol P903-31/Cerexa, Inc. (Cannavino, PI)</td>
<td>$150,000 Nov. 2012-Current</td>
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<td>A Multicenter, Randomized, Observer-Blinded, Active-Controlled Study Evaluating the Safety, Tolerability, Pharmacokinetics, and Efficacy of Ceftaroline Versus Ceftriaxone Plus Vancomycin in Pediatric Subjects With Complicated Community-acquired Bacterial Pneumonia P903-24/Cerexa, Inc. (Cannavino, PI)</td>
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<td>United States Multicenter Pediatric Meningococcal Surveillance Study RCHSD Contract #11774/Baylor College of Medicine (Leake)</td>
<td>$3,000 2001-Current</td>
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<td>Retrospective Chart Reviews for the Pediatric Fungal Network AI103315-01/NIH RO1 (Pong, PI)</td>
<td>$5,000 Jan. 2012-Current</td>
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<td>Identification of HLA Class II T Cell Epitopes from Mycobacterium bovis HHSN272200900044C/La Jolla Institute for Allergy and Immunology/NIH (Pong, PI)</td>
<td>$9,748 Jan. 2013-Current</td>
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Research Support

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| Immunization Program Services  
County of San Diego Contract 45950 | $19,980,482  
July 2002-June 2014 |
| South Region Immunization Services  
County of San Diego Contract 519893 | $1,304,771  
July 2007-June 2014 |
| Innovative Registry-based Outreach Component  
Society for Adolescent Health and Medicine | $120,000  
| San Diego Beacon Project  
HHS ARRA 90BC00115 (through Dr. Chan) | $103,508  

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.

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.

John S. Bradley, MD
- 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 Bi-national 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

Kumud K Singh, PhD
- Instructor, Problem Based Learning Curriculum for First and Second year Medical Undergraduate Students (Clinical Foundations SOMC 224ABC
- Instructor, Pediatrics Pharmacogenetics and Pharmacogenomics (PHAR 235/ BIOM235)
- Organizer, Children Health Education and Research Seminars (CHERS)

Stephen A. Spector, MD
- Instructor, Medical Microbiology for second-year medical students
- Instructor, Medical Microbiology Laboratory
- Lecturer, Pediatric Infectious Diseases
- Lecturer, Infectious Disease Fellowship series
- 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
- ISP student advisor
- Lectures to International military scholars from Eastern Europe, former Soviet Union, Africa, Central Asia and Latin America

AWARDS, HONORS, AND MAJOR PRESENTATIONS

John S. Bradley, MD
CDC/IDSA/PIDS National Guidelines Writing Group for the Diagnosis, Treatment and Prevention of Influenza Chair, PIDS/IDSA Guidelines Writing Committee for Pediatric Community Acquired Pneumonia
Member, Foundation of the NIH Biomarkers Consortium for Clinical Trial Design
Member, National Biodefense Science Board for the US Dept of Health and Human Services
PIDS/IDSA Guidelines Writing Committee for Pediatric Bone and Joint Infections
Chris Cannavino, MD
Pediatric Residency Program Teaching Award, Attending of the Year 2008 and 2010

Alice Pong, MD
Chair, Pediatric Tuberculosis Task Force, San Diego County
Hospital Epidemiologist, RCHSD
Safety Officer, Children’s Specialists of San Diego
San Diego Magazine’s Top Doctors, 2012

Mark Sawyer, MD
Member, CDC Advisory Committee on Immunization Practices
Chair, California Immunization Committee
President, California Immunization Coalition
Board member, American Immunization Registry Association

Stephen A. Spector, MD
Best Doctors in America, 2007-present
Who’s Who in Medical Sciences Education
Inter-Agency Task Team (IATT) (including UNICEF, WHO, UNAIDS, USAID, OGAC) for Prevention of HIV Mother-to-Child Transmission
Paediatric Antiretroviral Working Group of the World Health Organization (WHO)
Pediatric HIV Public Private Partnership Task Force (OGAC)
Panelist member, Perinatal HIV guidelines, Department of Health & Human Services
Data Safety Monitoring Board-Collaborative Antiviral Study Group
Senior Advisor to the Office of the U.S. Global AIDS Coordinator

PUBLICATIONS


The Division of Neonatology provides state-of-the-art neonatal services at Rady Children’s Hospital-San Diego (RCHSD), UCSD Hillcrest Medical Center, and four additional NICUs throughout the greater San Diego area (141 NICU beds total). 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 faculty provides medical and neuro-developmental evaluations of high-risk NICU graduates. Faculty members in Newborn Medicine provide inpatient care to term newborns and transitional care for NICU patients at Hillcrest Medical Center.

LEFT TO RIGHT: Dawn Reeves, Amy Kimball, Jose Honold, Nabil Fatayerji, Gail Knight, Charles Sauer, Crystal Le, Dave Golembeski, Jane O’Donnell, Mark Speziale
The RCHSD/UCSD Division of Neonatology continues to grow and excel. U.S. News & World Report recently ranked the Division in the top 20 Neonatology Divisions in the United States. This ranking is the highest ever for the Division. Five new neonatologists have joined the Faculty: Lawrence (Lance) Prince, MD, PhD, Division Chief; Farhad Imam, MD, PhD, Assistant Professor of Pediatrics, Krishelle Marc-Aurele, MD, Assistant Professor of Pediatrics; Dawn Reeves, MD, Assistant Professor of Pediatrics; Richard Song, MD, Assistant Professor of Pediatrics. The merger of the RCHSD and UCSD Neonatology groups, addition of new faculty, expansion of the clinical enterprise, and exciting new research initiatives will ensure continued momentum.

**FACULTY**

- Lawrence (Lance) Prince, MD, PhD, Associate Professor of Pediatrics, Division Chief of Neonatology
- Lars Bode, PhD, Associate Professor of Pediatrics In-Residence
- Marva Evans, MD, Clinical Professor of Pediatrics
- Nabil Fatayerji, MD, Associate Clinical Professor of Pediatrics
- Donna M. Garey, MD, MPH, Assistant Clinical Professor of Pediatrics
- David Golembeski, MD, Clinical Professor of Pediatrics
- Gregory P. Heldt, MD, Professor of Pediatrics
- Jose Honold, MD, Associate Clinical Professor of Pediatrics
- Eustratia (Tia) Hubbard, MD, Associate Clinical Professor of Pediatrics
- Farhad Imam, MD, PhD, Assistant Professor of Pediatrics
- Jae Kim, MD, PhD, Associate Clinical Professor of Pediatrics
- Amy Kimball, MD, Associate Clinical Professor of Pediatrics
- Gail Knight, MD, Clinical Professor of Pediatrics
- Brian Lane, MD, Associate Clinical Professor of Pediatrics

**LEFT TO RIGHT:** Krishelle Marc-Aurele, Denise Suttner, Donna Garey, Brian Lane, Rich Song, Greg Heldt, Casey Wang, Lance Prince, Evan Synder, Farhad Iman, Paul Zlotnik
1. Expand the investigative mission of the Division, both through basic science and translational research. We will develop high impact collaborative research studies with students, fellows, and faculty across multiple disciplines within UCSD and neighboring research institutions.

2. Continue to be a national leader in clinical care quality and outcomes.

3. Integrate consistent best practices, quality improvement mechanisms, and innovation across all six UCSD/Rady NICU's.

4. Continue planning for the move of the regional Level III NICU from Hillcrest Medical Center to the Jacobs Medical Center in La Jolla.

Major Goals & Plans

1. Expand the investigative mission of the Division, both through basic science and translational research. We will develop high impact collaborative research studies with students, fellows, and faculty across multiple disciplines within UCSD and neighboring research institutions.

2. Continue to be a national leader in clinical care quality and outcomes.

3. Integrate consistent best practices, quality improvement mechanisms, and innovation across all six UCSD/Rady NICU's.

4. Continue planning for the move of the regional Level III NICU from Hillcrest Medical Center to the Jacobs Medical Center in La Jolla.

Dr. Crystal Le, this program continues to provide innovative intensive care for neonates at highest risk of neurodevelopmental impairment.

In addition, in 2013 a unique Cardiovascular Intensive Care Unit (CVICU) opened in a newly renovated space at RCHSD. Co-directed by Dr. Denise Suttner, this specialized unit cares for all pediatric and neonatal cardiac surgery patients. The CVICU is staffed by nurses from both the PICU and NICU and provides a full range of cardiac intensive care services, including advanced patient monitoring, lab testing, radiology exams and ECMO (extracorporeal membrane oxygenation). The new CVICU is ideally suited for heart transplant patients in the near future.

Construction continues on the new Level III NICU that will be housed within the Jacobs Medical Center on the La Jolla campus. Plans for this state of the art 52-bed NICU include private patient rooms and an innovative MRI scanner designed especially for neonates. Members of the Division have established new quality initiatives for extremely low gestational age neonates, ROP and IVH prevention, and are involved in multiple statewide quality improvement programs.

Rady Children's NICU at Scripps Hospital, La Jolla and Encinitas

The 14-bed NICU at Scripps Memorial Hospital, La Jolla and the 6-bed NICU at Scripps Memorial Hospital, Encinitas are licensed beds by RCHSD. These units have medical directorship provided by the Division of Neonatology. Faculty neonatologists provide onsite daily care, consultation, and 24-hour on call services.

Rady Children's NICU at Palomar Medical Center

The 12-bed NICU at Palomar Medical Center is a licensed RCHSD facility. The RCHSD/UCSD faculty at Palomar Medical Center provides neonatal intensive care coverage for both Palomar Medical Center and Pomerado Hospital. Division faculty members also provide the medical directorship to both NICUs.

Michelle Leff, MD, Assistant Clinical Professor of Pediatrics
Kriselle Leong Marc-Aurele, MD, Assistant Clinical Professor of Pediatrics
Sanjay Nigam, MD, Professor of Pediatrics
Jane O'Donnell, MD, Associate Clinical Professor of Pediatrics
Dawn Reeves, MD, Assistant Clinical Professor of Pediatrics
Charles Sauer, DO, Assistant Clinical Professor of Pediatrics
Evan Y. Snyder, MD, PhD, Professor, Director; Stem Cell and Regeneration Program, Sanford-Burnham Institute for Medical Research
Richard Song, MD, Assistant Clinical Professor of Pediatrics
Mark Speziale, MD, PhD, Clinical Professor of Pediatrics
Lisa Stellwagen, MD, Clinical Professor of Pediatrics
Denise Suttner, MD, Clinical Professor of Pediatrics
Casey Wang, MD, Assistant Clinical Professor of Pediatrics
Paul Zlotnik, MD, Clinical Professor of Pediatrics

POSTDOCTORAL FELLOWS
Doug Blank, MD
Jenny Shepherd, MD
Erin Studer, MD
Malathi Balasundaram, MD
Phil Cheng, MD
Linda Tran, DO
Ashraf Baeshu, MD
Chris Gibu, MD
Audra Wise, MD

CLINICAL ACTIVITIES INPATIENT/OUTPATIENT
The Division of Neonatology has continued to grow. Faculty members staff the new NICU at Rancho Springs Medical Center in Murrieta, expanding our mission to provide care for critically ill newborns throughout the region. The Neuro-NICU program has been established at both RCHSD and UCSD Hillcrest Medical Center. A joint venture involving both Neonatology and Pediatric Neurology and Co-Directed by
Rady Children’s NICU at Rancho Springs Medical Center
The Division of Neonatology also provides clinical coverage for the new RCHSD licensed 11-bed NICU at Rancho Springs Medical Center in Murrieta, California.

High-Risk Infant Follow-up
NICU graduates are closely followed after discharge by multidisciplinary teams of specially trained caregivers. These clinics provide detailed developmental assessments and help identify children requiring additional services. Drs. Donna Garey and Brian Lane direct these clinics at UCSD Hillcrest Medical Center and RCHSD.

Newborn Services/Family Maternity Care Center
Based at UCSD Hillcrest Medical Center, members of the faculty care for well and at-risk newborns in a family-centered care environment. Division faculty members have been instrumental in attaining Baby Friendly Hospital status and have developed the Supporting Premature Infant Nutrition (SPIN) Program and the Premature Infant Nutrition Clinic (PINC).

RESEARCH ACTIVITIES
The Division of Neonatology contains a very productive group of cellular, molecular, and translational investigators. Division members have recently published in high-impact journals including PNAS, J Biol Chem, PLoS One, and Glia. Research has been supported by both the NIH, foundation, and industry sources. Investigators have presented data at many National and International meetings and received multiple awards.

Division Faculty members studying the basic mechanisms of disease include Drs. Evan Snyder (neuronal stem cells and disease), Lars Bode (human mild oligosaccharides), Greg Heldt (development of synthetic surfactants), Farhad Imam (genetic response to hypoxia and stress), and Lance Prince (inflammation, immunity, and lung development).

New translational investigations include a Trial of Therapeutic Hypothermia during Transport (Dr. Jose Honold), a Review of Blood Culture Negative Sepsis in Neonates (Dr. Jane O’Donnell), Efficacy of Intravenous Levetiracetam in the Treatment of Neonatal Seizures (Dr. Richard Haas, Dr. Mary J. Harbert, Dr. Brian Lane, Dr. Jose Honold), and Evaluation of Video Laryngoscopy (Dr. Jae Kim).

Lawrence (Lance) Prince, MD, PhD
- Mechanisms linking lung inflammation and abnormal development in bronchopulmonary dysplasia.
- Developmental biology of lung macrophages.
- Development of novel imaging approaches for understanding neonatal lung disease.

Lars Bode, PhD
- Biosynthesis and physiological function of human milk oligosaccharides.
- Role of breast milk and unbound complex glycans in development of the intestinal innate immune response.
- Development of oligosaccharide based therapies to prevent infectious disease and necrotizing enterocolitis.

Donna M. Garey, MD, MPH
- Neuroimaging and neurodevelopmental follow up of patients enrolled in SUPPORT and additional multi-center trials.

David Golembeski, MD
- Board member for the National Children’s Study.
- Co-PI for the Boston University Birth Defects Monitoring Project.

Gregory P. Heldt, MD
- Development of synthetic and novel lung surfactants.
- Neural-activated synchronized ventilation and its applications in critically ill neonates.
- Basic molecular and cellular mechanisms of group-B streptococcal infections in neonates.

Jose Honold, MD
- Clinical innovation and interventions that improve outcome in critically ill neonates at highest risk of neurodevelopmental impairment.

Eustratia (Tia) Hubbard, MD
- Clinical investigations aimed at improving outcomes in late preterm infants and patients at risk of feeding difficulties.

Farhad Imam, MD, PhD
- Using novel approaches and experimental models to study the molecular and genetic responses to environmental stress.
- Testing the effects of cellular stress on embryogenesis, particularly heart and brain development, in zebrafish.

Jae Hong Kim, MD, PhD
- Understanding development of gastrointestinal motility in preterm infants.
- Developing novel noninvasive approaches to personalize critical care management in neonates.

Michelle Leff, MD
- Interactions between maternal diet, breast milk composition, and development of obesity and diabetes.

Krishelle Leong Marc-Aurele, MD
- Development of novel approaches for counseling families in the prenatal and postnatal setting as part of a multi-disciplinary palliative care model developed specifically for newborns.

Sanjay Nigam, MD
- Systems biology approaches to identify mechanisms of kidney branching morphogenesis.
- Developmental regulation and function of organic acid transporters and the elimination and metabolism of drugs and toxins.

Dawn Reeves, MD
- Use of detailed echocardiographic data to predict nonsurgical closure of a patent ductus arteriosus in extremely preterm neonates.
<table>
<thead>
<tr>
<th>Grant/Contract #</th>
<th>Total Direct Dollars/ Duration of Grant</th>
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<td><strong>Lars Bode, PhD</strong></td>
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<td>Intestinal and Milk Glycan Expression in Restriction of Neonatal Infection</td>
<td>$67,214 July 2013-June 2018</td>
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<td>R01 AI10510 /NIH/NIAID</td>
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<td>Human Milk Screening</td>
<td>$232,569 Nov. 2011-Nov. 2014</td>
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<td>Abbott Nutrition</td>
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<td>Friesland Campina Domo</td>
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<td>UCSD Academic Senate Grant</td>
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<td><strong>Donna M. Garey, MD, MPH</strong></td>
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<td>High Risk Infant Follow-up Program Request for Health Care Services Application</td>
<td>$291,495 July 2011-June 2014</td>
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<td>11-001/California Department of</td>
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<td><strong>Farhad Imam, MD, PhD</strong></td>
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<td>Children's Hospital Real-time Visualization of Central Venous Catheter</td>
<td>$100,000 2010-2013</td>
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<td>Boston Technology Dev.</td>
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<td>Trans-Illumination Of Visible Light For Real-Time Catheter Visualization</td>
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<td>IR43CA162857-01A1/NIH/NCI SBIR</td>
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<td><strong>Jae Kim, MD, PhD</strong></td>
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<td>Evaluation of Video Laryngoscopy</td>
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<td>Scripps Center for Oceans and Human Health</td>
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<td>NIH NIEHS</td>
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<td>Premature Infant Nutrition Community Project</td>
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<td>UCSD CTRI</td>
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<td>A 5-Year, Extension, Follow-up, Blinded Outcomes Trial of Subjects</td>
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<td>Having Received Stannsoporfin or Placebo</td>
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<td>64,185-202/ Infacare Pharmaceutical</td>
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<td>Clinical benefits of a beside ultrasound device for visualizing peripheral and</td>
<td>$57,450 2010-2012</td>
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<td>central catheters in infants</td>
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<td>G.E. Healthcare</td>
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<td>Abbott Nutrition AK37 study: Effect Of A Extensively Hydrolyzed Casein Liquid</td>
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<td>Human Milk Fortifier For The Growth Of Very Low Birth WeightInfant</td>
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<td>ANEC Study</td>
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<td><strong>Lawrence (Lance) Prince, MD, PhD</strong></td>
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<td>Role of Fetal Lung Macrophages in Bronchopulmonary Institute Dysplasia</td>
<td>$307,128 July 2009-June 2014</td>
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<td>1R01HL097195/ National Heart, Lung, and Blood Institute</td>
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<td>Imaging Activated Macrophages in the Lungs 1R01HL116358-01/National Heart, Lung, and Blood Institute</td>
<td>$17,393 Sept. 2012-Aug. 2015</td>
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<td>FGF-10 Expression in a Fetal Mouse Lung Model of Bronchopulmonary Dysplasia IR01HL086324/ National Heart, Lung, and Blood Institute</td>
<td>$1,726,870 Apr. 2008-Feb. 2013</td>
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<td>Improving Prematurity-Related Respiratory Outcomes at Vanderbilt (IMPROV) IU01HL101456-01/National Heart, Lung, and Blood Institute</td>
<td>$2,406,780 May 2010-Apr. 2015</td>
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| **Evan Y. Snyder, MD, PhD**  
Collaborative Laboratory for Human Embryonic Stem Cell Research at Sanford-Burnham Medical Research Institute CL1-00511/California Institute for Regenerative Medicine | $3,457,086 Feb. 2008-Jan. 2015           |
| La Jolla Parkinson's Disease Center: A Developmental Health Science Perspective to Nitrosative/Oxidative Susceptibility 5 P01 ES016738/National Institute of Environment | $630,049 Sept. 2008-June 2013           |
| Establishing & characterizing hiPSCs from patients with neuropsychiatric disorders JJ-OPCO-WO#11/Johnson & Johnson | $245,700 July 2011-June 2013            |
| Establish a Stem Cell-based In Vitro Model of Bipolar Disorder to Study Basic Underlying Disease Mechanisms California Bipolar Foundation | $100,000 Jan. 2009-June 2013            |
| To establish hiPSCs from lithium-responsive bipolar patients & determine pathophysiological mechanisms & potential drug targets Viterbi Foundation | $500,000 July 2012-June 2014            |
| To Establish a Stem Cell-Based In Vitro Model of Bipolar Disorder to Study Basic Underlying Disease Mechanism Parkinson's Disease Association of San Diego | $26,000 May 2010-June 2013              |
| The Therapeutic Potential of Human Induced Pluripotent Stem Cells (iPSCs) in the Sandhoff Disease Mouse Model of Lysosomal Storage Disorders National Tay-Sachs & Allied Diseases Foundation | $250,000 Aug. 2011-July 2013            |
Evan Y. Snyder, MD, PhD

- Stem cell biology
- Discovery of novel molecular and cellular mechanisms that regulate stem cell pluripotency and neuronal differentiation.
- The use of induced pluripotent stem cells to investigate basic disease mechanisms and discover novel treatments specific for individual patients.

COLLABORATIVE INVESTIGATIONS

A randomized trial of therapeutic hypothermia during transport. (Drs. Honold, Wang, Evans, Suttner, Lane, O’Donnell, Kimball, and Speziale)

- Randomized multi-center clinical trial To compare temperature profiles during neonatal transport between device-regulated cooling and standard practice in newborns with HIE.

Efficacy of Intravenous Levetiracetam in Neonatal Seizures. A Phase 2 Study of Levetiracetam in the Treatment of Neonatal Seizures (Drs. Honold and Lane).

- Multicenter randomized A head to head blinded comparison of phenobarbital vs. levetiracetam in the control of neonatal seizures.

Impact of Music on Physiological Measures of Stress in Neonates in the Neonatal Intensive Care Unit. (Drs. Knight, Speziale, and Suttner).

- Pilot study designed to test the logistics of the musical exposure protocol and to gain the preliminary data needed to estimate the required sample size to measure an effect in salivary cortisol levels.

A Randomized, Placebo Controlled, Multi-Center Study of the Efficacy, Pharmacokinetics (PK) and Pharmacodynamics (PD) of Intravenous (IV) Acetaminophen for the Treatment of Acute Pain in Pediatric Patients. (Drs. Kimball, Evans, Suttner, Lane, and Speziale)

- To demonstrate the efficacy of IV acetaminophen plus standard of care rescue opioids for the relief of moderate to severe acute pain in neonates.

Retrospective Chart Review of Blood Culture Negative Sepsis in Neonates Greater than 37 Weeks Gestational Age. (Drs. O’Donnell and Wang).

- To determine if a subgroup of patients with a diagnosis of blood culture negative neonatal sepsis can be safely treated with a 7-day course of antibiotics versus the current recommendation for a 10-day course of antibiotics.

Inhaled Nitric Oxide for the Prevention of Bronchopulmonary Dysplasia (BPD) in Preterm Infants Requiring Mechanical Ventilation or Positive Support on Days 5-14 after Birth. (Drs. Kimball, Knight, Suttner, and Speziale).

- A multi-center, double blind, placebo-controlled, randomized clinical trial to evaluate efficacy, safety and the pharmacoeconomic impacts of inhaled nitric oxide in preterm infants.

Adult Outcomes Following Neonatal Extracorporeal Membrane Oxygenation. (Dr. Suttner).

- Survey of adult survivors of neonatal ECMO. Describe and compare the adult outcomes of neonatal ECMO survivors for age groups 18 – 24 versus 25 – 31+ years.

TEACHING ACTIVITIES

The Division of Neonatology continues to provide clinical training and investigational mentoring for 9 fellows in neonatal-perinatal medicine. In addition, medical students and pediatric housestaff receive both clinical training and didactic teaching at both RCHSD and the UCSD Hillcrest Medical Center. The Division of Neonatology annually co-sponsors the Fetus and Newborn: State of the Art Care Conference. The conference provides attendees with the latest innovations and therapies in neonatal care. Division members also mentor multiple postdoctoral fellows, PhD graduate students, and undergraduate students. Faculty members present over 100 invited lectures annually around the nation and the world.

AWARDS, HONORS, AND MAJOR PRESENTATIONS

Lars Bode, PhD

Awards

Norman Kretchmer Memorial Award in Nutrition and Development, American Society for Nutrition (ASN)

Ehrlich-Koldovsky Young Investigator Award for Research in Human Milk and Lactation, International Society for Research in Human Milk and Lactation (ISRHML)

Presentations

Invited Speaker, Use of Human Milk Oligosaccharides and Infant Formula. International Scientific Association for Probiotics and Prebiotics and the Sackler Institute for Nutrition Science at the New York Academy of Sciences, New York, NY

Invited Speaker, Human Milk Oligosaccharides: Every Baby Needs a Sugar Mama. 82nd Perinatal and Developmental Medicine Symposium, American Academy of Pediatrics, Aspen, CO

Invited Speaker, Human Milk Oligosaccharides in the Prevention of Necrotizing Enterocolitis. 82nd Perinatal and Developmental Medicine Symposium, American Academy of Pediatrics, Aspen, CO

Invited Speaker, Human Milk Oligosaccharides: Every Baby Needs a Sugar Mama. Keynote Speaker. 9th Annual Carbohydrate Symposium, Alberta Glycomics Centre, Banff, Canada

Invited Speaker, Human Milk Oligosaccharides: A Spoonful of Oligo-Sugar. Annual Dialogues in Neonatal-Perinatal Medicine Conference, Duke University Medical Center, Durham, NC

Invited Speaker, Human Milk Oligosaccharides: Antimicrobials in the context of amebiasis, mother-to-child transmission, and necrotizing enterocolitis. National Institutes of Health, Workshop on Bioactive Glycans in Human Milk, Bethesda, MD

Invited Speaker, Human Milk Oligosaccharides: Every Baby Needs a Sugar Mama. Digestive Disease Center Seminar, Baylor College of Medicine, Houston, TX
Invited Speaker, Human Milk Oligosaccharides: Every Baby Needs a Sugar Mama. Department Seminar, School of Biological Sciences, Washington State University; Pullman, WA
Invited Speaker, Human Milk Oligosaccharides: Every Baby Needs a Sugar Mama. Molecular Nutrition Department Seminar, Technical University Munich, Munich, Germany
Invited Speaker, The Role of Oligosaccharides in the Protection from NEC: Data from an Original Study. 16th Conference of the International Society for Research in Human Milk and Lactation, Trieste, Italy
Human Milk Oligosaccharides struc
Invited Speaker, Ture-function relationships in the context of infant disease. 16th Conference of the International Society for Research in Human Milk and Lactation, Trieste, Italy
Invited Speaker, Human Milk Oligosaccharides: Every Baby Needs a Sugar Mama. 7th International Breastfeeding and Lactation Symposium, Vienna, Austria

Donna M. Garey, MD, MPH
Presentations
A Day in the Life of a NICU Infant. 27th Annual Advances in the Practice of Pediatrics, Hyatt Regency Mission Bay, San Diego, CA

Jose Honold, MD
Presentations
BiNational Pediatric Conference. The Late Preterm. Tijuana, Mexico
XXVII Northwestern Pediatric/XXVIII Binational Pediatric Meeting. The EXIT Procedure. Ensenada, Mexico
Nestle’s Pediatric Symposium. The EXIT Procedure. Guadalajara, Mexico
Neosimposio 2012. Feeding Techniques & Use of Catheters. Morelia, Mexico
Neosimposio 2012. Obesity in Pregnancy: Implications for Mother and Baby. Morelia, Mexico

NeoSimposio 2012. Complex Cases of Neonatal Resuscitation. Morelia, Mexico
NeoSimposio 2012. Management of Infant with Congestive Heart Disease from Birth to the Operating Room. Morelia, Mexico
Fetus & Newborn Conference. Evaluation of the Infant with Suspected Congenital Heart Disease. San Francisco, CA
International Neonatal Meeting. Obesity During Pregnancy, Implications to the Mother and Neonate. Mazatlan, Mexico
XXVIII Congreso Nacional Neonatología. Myths and Realities of Neonatal Pain. Veracruz, Mexico
XXII Jornadas Medicas Del Hospital General. Pre-Operative Management of the Infant with Congenital Heart Disease. Mexicali, Mexico
XXII Jornadas Medicas Del Hospital General. Post-Operative Management of the Infant with Congenital Heart Disease. Mexicali, Mexico
XXIX BiNational Pediatric Conference. Transillumination for real-time visualization of invasive catheter placement in neonates: A radiation-sparing method. Invited Lecture, NIH-HNLBL, Bethesda, MD
Real-time visualization of invasive catheter placement/Plenary Talk, Launchpad Angels Investor Forum, Waltham, MA
Transillumination for real-time visualization of invasive catheter placement in neonates: A radiation-sparing method/Invited Lecture, CONAPEME Pediatric Conference, Monterrey, Mexico

Jae Kim, MD, PhD
Presentations
Richburg D, Kim JH. Real-time bowel ultrasound to characterize intestinal motility in the preterm neonate. American Academy of Pediatrics, Pediatric Academic Societies Meeting, Boston, MA
Stens O, Kim JH. Fat Loss In Human Milk Is Associated With Routine Handling Including Container Transfer And Syringe Storage. American Academy of Pediatrics, Pediatric Academic Societies Meeting, Washington, DC
Chan CS, Kim JH, Bode L. Immune Modulator, Galectin-3 Binding Protein,
Increased in Preterm Infants at Birth. 
American Academy of Pediatrics, 
Pediatric Academic Societies Meeting, 
Washington, DC 

Morelia, Mexico 

Morelia, Mexico 

Call to Action to Support Breastfeeding in 
the Central Valley. Supporting Prema- 
ture Infant Nutrition. Fresno, CA 

South Dakota Perinatal Conference, 
Feeding the Late Preterm Infant. 
Sioux Falls, SD 

South Dakota Perinatal Conference, 
Launching The Best Trajectory At Dis- 
charge. Sioux Falls, SD 

South Dakota Perinatal Conference, 
Donor Milk Banking. Sioux Falls, SD 

South Dakota Perinatal Conference, Gas- 
troesophageal Reflux: Bringing Up Baby. Sioux Falls, SD 

South Dakota Perinatal Conference, Sup- 
porting Premature Infant Nutrition. 
Sioux Falls, SD 

Neonatology Rounds. No NEC, Please. 
Loma Linda Hospital. Loma Linda, CA 

Workshop: Supporting Prema- 
ture Infant Nutrition (6 lectures) 
Minneapolis Nutrition Conference. 
Dheerpering Feeding Intolerance in the 
NICU, Detroit, MI 

U of Alabama Neonatal Rounds. Sup- 
porting Premature Infant Nutrition. 
Birmingham, AL 

U of Alabama Neonatal Rounds. The Power 
of Human Milk. Birmingham, AL 

U of Alabama Pediatric Grand Rounds. 
Supporting Premature InfantNutrition. 
Birmingham, AL 

U of Alabama. Addressing The Nutritional 
Emergency of the Preterm Infant.Bir- 
mingham, AL 

U of Alabama. Making Sense of Infant 
Formulas, Fortifiers, and Additives. 
Birmingham, AL 

The Fetus and Newborn: State-of-the-Art 
Care. Probiotics and Prebiotics: Mak- 
ing Sense of the Bacterial Soup. Las 
Vegas, NV 

The Fetus and Newborn: State-of-the-Art 
Care. GERD: Keeping It Down.Las 
Vegas, NV 

The Fetus and Newborn: State-of-the-Art 
Care. Point of Care Ultrasound by the 
Neonatologist. Las Vegas, NV 

The Fetus and Newborn: State-of-the-Art 
Care. NEC: The Road to Zero. Las 
Vegas, NV 

NICS. SPIN Program. Houston, TX. Cali- 
fornia Association of Neonatology. Life 
after Fellowship. San Diego, CA 

California Association of Neonatology. 
Point of Care Ultrasound for Bowel 
Assessment and Beyond. San Diego, CA 

Abbott Nutrition Evening Lecture. 
Launching the Best Nutritional 
Discharge. Human Milk Banking 
Association of North America Confer- 
ence. SPIN Program. Las Vegas, NV 

NeoSimposio 2012. Prebiotics and Pro- 
biotics: Making Sense of the Bacterial 
Soup. Morelia, Mexico 

NeoSimposio 2012. Point of care ultrasound 
for the Neonatologist. Morelia, 
Mexico 

NeoSimposio 2012. NEC: The Road to 
Zero. Morelia, Mexico 

NeoSimposio 2012. GERD: Keeping It 
Down. Morelia, Mexico 

Neonatal Rounds. Uruapan, Mexico 

Neonatal Rounds. Guadalajara, Mexico 

San Diego Breastfeeding Coalition Confer- 
ence. Human Milk: An Immunologic 
Liquid Coat of Armor Nutrition and 
Care of the Preterm Infant: Current 
issues. SPIN Program. Rome, Italy 

Minnesota Nutrition Conference. Tri- 
als and Tribulations of Human Milk 
Fortification SWAN conference. 
Introducing Neonatologist Performed 
Ultrasound To The NICU. Temple, 
TX. SWAN conference. Strategies For 
Knocking Out NEC. Temple, TX 

Sherman Hospital. Workshop: Supporting 
Premature Infant Nutrition (6 lec- 
tures), Chicago, IL 

National Association of Neonatal Nurses. 
Soundbites of SupportingPremature 
Infant Nutrition. Palm Springs, CA 

The Fetus and Newborn: State-of-the-Art 
Care. Nutritional Trajectory atDis- 
charge. San Francisco, CA 

The Fetus and Newborn: State-of-the-Art 
Care. Integrating Emerging Technol- 
ogy into the NICU. San Francisco, CA 

The Fetus and Newborn: State-of-the-Art 
Care. NEC: The Road to Zero. San 
Francisco, CA 

Academic Day for Neonatologists of 
Southern California. Neonatal Nutri- 
tion: Top Ten Nutrition Gaps. 

Protein Choices and the Risk of Allergy in 
Early Infant Feeding. Nestle Sponsored 
Ad Hoc. Neonatal community. Oak- 
land, CA 

Protein Choices and the Risk of Allergy in 
Early Infant Feeding. Nestle Sponsored 
Ad Hoc. Neonatal community. San 
Francisco, CA 

Evidencia de Alimentacion del Prematuro 
a Largo Plazo. Tijuana, Mexico 

Protein Choices and the Risk of Allergy in 
Early Infant Feeding. Nestle Sponsored 
Ad Hoc. Greensboro, NC 

CHOC Pediatric Grand Rounds. Breast- 
feeding and Nutrition Fortification in 
the Preterm Infant. Orange County, CA 

Pediatric Grand Rounds. Cedars Sinai 
Hospital. Taking Human Milk Science 
to the NICU. Los Angeles, CA 

Michelle Leff, MD 

Awards 
UCSD National Center for Leadership in 
Academic Medicine 
National Center of Leadership in Aca- 
demic Medicine Selected Participant 

Krishelle Leong Marc-Aurele, MD 

Presentations 
Presenter, Self-Care Presentation. Post-
partum Health Alliance Perinatal Loss 
Conference 
Presenter, Perinatal Palliative Care. South- 
ern CA Chapter, National Association 
of Neonatal Nurses Conference 

Sanjay Nigam, MD 

Presentations 
Keynote speaker, 14th International Sym- 
posium on Purine and Pyrimidine 
Metabolism in Man, Tokyo, Japan 

Invited speaker, Gordon Research Confer- 
ence on Drug Metabolism, Holderness, 
New Hampshire 

Keynote Speaker, TERMIS (Tissue Engi- 
neering and Regenerative Medicine) 
Vienna, Austria 

Invited speaker, American Association 
of Pharmaceutical Scientists (AAPS) 
Workshop on Drug Transporters in 
ADME, Bethesda, MD 

Invited Speaker, Tissue Engineering ses- 
sion, Federation of American Societies 
for Experimental Biology Conference, 
Boston, MA
Lawrence (Lance) Prince, MD, PhD

Presentations
Invited Speaker, Neonatal Grand Rounds. Nationwide Children’s Hospital, Ohio State University College of Medicine, Inflammation and Arrested Lung Development in Bronchopulmonary Dysplasia. Columbus, OH
Invited Speaker, The Center for Developmental Lung Biology, Emory University School of Medicine, Macrophage Activation and Abnormal Fetal Lung Development. Potential Role in BPD. Atlanta, GA
Visiting Consultant, University of Wisconsin School of Medicine, Research Conference. Inflammatory Regulation of FGF-10 Expression in the Developing Lung. Pediatric Grand Rounds, Role of Inflammation in BPD Pathogenesis. Madison, WI
Invited Speaker, Program in Developmental Biology and Neonatal Medicine, Riley Children’s Hospital, Indiana University School of Medicine, Mechanisms Linking Inflammation and Arrested Lung Development in Bronchopulmonary Dysplasia. Indianapolis, IN
Visiting Professor, Department of Pediatrics, University of Texas Southwestern Medical Center, Molecular Mechanisms Linking Inflammation and Altered Lung Morphogenesis in Bronchopulmonary Dysplasia. Dallas, TX
Invited Speaker, Department of Pediatrics, University of Iowa Carver College of Medicine, Molecular Mechanisms Linking Inflammation and Arrested Lung Development in Bronchopulmonary Dysplasia. Iowa City, IA
Invited Speaker, Department of Pediatrics, Washington University School of Medicine, Mechanisms Linking Inflammation and Altered Lung Development. St. Louis, MO
Invited Speaker, Grand Rounds, Department of Pediatrics, University of Michigan Medical School, Mechanisms Linking Innate Immunity, Arrested Development, and Bronchopulmonary Dysplasia. Ann Arbor, MI

Presentations
Lawrence (Lance) Prince, MD, PhD
Invited Presentation, PAS Topic Symposium, Dysregulated Inflammation in the Preterm Infant – A Common Pathway for Disease Risk and Long-Term Neurodevelopmental Impairment. Development of Regulation of Inflammation in the Preterm Lung Implications for Bronchopulmonary Dysplasia. Washington, DC

Dawn Reeves, MD
Presentations
Presenter, Antegrade Pulmonary Artery Diastolic Velocity Is Associated with Spontaneous Closure of the Ductus Arteriosus In Extremely Low Birth Weight Infants. AAP South Central Conference on Perinatal Research, Austin, TX

Evan Snyder, MD, PhD, FAAP
Awards
Appointed Chairman, FDA Cellular, Tissue, & Gene Therapies Advisory Committee
John K. Barlow Memorial Lectureship, Massachusetts General Hospital, Dept. of Neurology, Harvard Medical School
16th Annual Peter Tizard Memorial Lectureship of the Neonatal Society of the United Kingdom
Non-Cardiac Topic-of-the-Year Speaker, 10th International Symposium on Stem Cell Therapy & Cardiovascular Innovation. Stem cells & spinal cord repair. Madrid, Spain
Co-Chair, 2013 World Stem Cell Summit

Presentations
Speaker, 23rd Annual Usha Mahajani Symposium On Molecular Medicine, Stem Cells in Cancer. The Salk Institute. Mapping the lineage relationships of glioblastoma suggests a stem cell origin influenced by non-autonomous factors & a neurogenic-to-gliogenic switch. La Jolla, CA

Moderator & Speaker, 7th Annual 2011 World Stem Cell Summit, Session: Stem Cell Translational Report: ALS, Parkinson’s & Other Neurological Diseases. Is there a role for stem cell biology in addressing neurodegenerative conditions? Pasadena, CA
Scientific Keynote Speaker, San Diego Superior Court Judges Retreat, The Biology of Stem Cells: Nature’s Tool Kit for Constructing & Maintaining the Body Can We Learn to Use It? Palm Springs, CA
Plenary Speaker, 4th Annual Meeting of the Australasian Society for Stem Cell Research, Stem Cells & Neurodegenerative Diseases: Prospects for Therapies. Leura, Blue Mountains, New South Wales, Australia
Lecturer, Santa Clara Valley Medical Center Department of Pediatrics, 6th Annual Perinatal/Neonatal Conference. Cross-Talk & Developmental Programs – A Key to the Potential Role of Stem Cell Biology in Perinatal Practice. San Jose, CA
Lecturer, Days of Molecular Medicine 2011 co-sponsored by Science Translational Medicine (American Association for the Advancement of Science [AAAS]) & the Karolinska Institute. Re-Engineering Regenerative Medicine, Cross-talk & developmental programs in stem cell biology – a key to translational neuroscience. Hong Kong, China
Lecturer, National Human Genome Research Institute & National Center for Translation & Therapeutics, NIH. Cross-talk & developmental programs in stem cell biology – a key to translational neuroscience. Rockville, MD
Chairman, Session on Clinical Trials for Chronic Stroke. 3rd Stem Cell Therapies as an Emerging Paradigm for Stroke (STEPS) Workshop on Enhancing the Development of Clinical Trials for Cell-Based Therapies in Stroke, Washington, DC
Panelist, 6th Annual Scientific Symposium Stem Cell Meeting on the Mesa, La Jolla, CA
Panelist, Session on Confronting the translational challenge – collaborative models to advance early-stage regenerative medicine programs, 1st Annual
Investor & Partnering Forum, Alliance for Regenerative Medicine, La Jolla, CA
Speaker, Winter Conference on Brain Research, Panel on Regulation & Function of Adult Neurogenesis. Mapping the lineage relationships of glioblastoma suggests a stem cell origin influenced by non-autonomous factors & a neurogenic-to-gliogenic switch. Snowbird, UT

Plenary Session Speaker & Poster Session Moderator, 64th American Academy of Neurology Annual Meeting. Integrated Neuroscience Session: Stem Cells, Stem Cells for Neurological Therapeutics. New Orleans, LA
Panelist, National Institute of Mental Health Workshop on Human Induced Pluripotent Stem Cells for Neuropsychiatric Diseases, Panel on Characterization, Washington, DC

Speaker & Session Chairman, 19th Annual Meeting of the American Society for Neural Therapy & Repair. Neural stem cells, acting through multiple mechanisms, extensively prolong life & preserve function in a mouse model of ALS: meta-analysis of consortium-wide studies. Clearwater, FL

Expert’s Lecture, 7th International Symposium on Neuroprotection & Neurorepair. What Embryogenesis Can Teach Us About Regeneration?: Cross-talk & Developmental Programs in Stem Cell Biology – A Key to Translational Neuroscience. Potsdam, Germany

Speaker, Massachusetts General Hospital (Harvard Medical School) Neonatology Research Seminar. Cross-Talk & Developmental Programs – A Key to the Potential Role of Stem Cell Biology in Perinatal Practice. Potsdam, Germany

Sharp Rehabilitation Center Spinal Cord Injury Support Group Research Lecture. Is there a role for stem cell biology in spinal cord injury? San Diego, CA


John K. Barlow Memorial Lecturer, Massachusetts General Hospital, Dept. of Neurology, Harvard Medical School, Cross-Talk & Developmental Programs in Stem Cell Biology – A Key to Translational Neuroscience. Boston, MA
16th annual Peter Tizard Memorial Lecturer, Neonatal Society of the United Kingdom, Cathedral Lodge. Cross-Talk & Developmental Programs – A Key to the Potential Role of Stem Cell Biology in Perinatal Medicine. Canterbury, UK
Invited guest, 4th Israeli Presidential Conference: “Facing Tomorrow”, under the auspices of the President of the State of Israel, Mr. Shimon Peres, Jerusalem

Lecturer, Cold Spring Harbor Labs Summer Course on "Brain Tumors"; Cold Spring Harbor Labs. The role of stem cell biology in the genesis & treatment of neoplasms of the CNS: What embryogenesis can teach us about oncogenesis. Banbury Campus, NY

Speaker, Hunter’s Hope Foundation 5th Annual Workshop on Krabbe Disease, Tamarrack Lodge. Fate of donor cells & impact on the brains of children transplanted for Krabbe Disease. Ellicottville, NY

Speaker, 1st International Conference on Stem Cells. Cross-talk & developmental programs – a key to translational stem cell biology. Chania, Crete, Greece

The Stem Cell Awareness Day Speaker, Loma Linda University, Integrated Biomedical Sciences Seminar Series & Inland Empire Stem Cell Consortium. Cross-talk & Developmental Programs – A Key to Translational Stem Cell Biology. Loma Linda, CA

Speaker, Ulsan National Institute of Science & Technology (UNIST) & Max Planck Institute for Molecular Biomedicine, UNIST 2nd International Symposium on Reprogramming & Stem Cells. Cross-talk & Developmental Programs – A Key to Translational Stem Cell Biology, Busan, South Korea

Visiting Faculty Lecturer, Cerebral Palsy: Review & Update 2012, Boston Children’s Hospital & Harvard Medical School. The promise of stem cell therapy, Boston, MA

Keynote Speaker, 18th Annual Vision Science Conference, UCLA Jules Stein Eye Institute, cross-talk & developmental programs – A key to translational stem cell biology. Lake Arrowhead, CA

Plenary Speaker & Symposium Speaker, International Society of Neuroimmunology (ISNI), 11th International Congress of Neuroimmunology; Symposium on Inflammation in Neurodegenerative Disorders, November 6, 2012, Boston, MA. The Two Faces of Inflammation with regard to Stem Cell Action in Neurological Disease; Plenary session on Stem Cells, Can transplanted stem cells cause cancer? Boston, MA

Plenary Speaker, 36th Annual Meeting of the Mexican Academy of Neurology, Stem Cells for Neurological Therapeutics – Part 1 (in vivo uses); Stem Cells for Neurological Therapeutics – Part 2 (drug discovery). Coral Beach, Cancun, Mexico

Panelist, Global Ataxia-Telangiectasia Neuroscience & Drug Discovery Forum, Stem Cell Therapies & Bone Marrow Transplantation, Washington DC

Speaker/Panelist, 8th Annual World Stem Cell Summit, Research Session: Stem Cells for Modeling Neurological Disorders: Stem cells as ‘reporter cells’ – both in vitro & in vivo – for neurological disorders. Translation/Regulatory Session: Global Survey of Cell-Based Therapies Policing the use of cell-based therapies world-wide. West Palm Beach, FL

Speaker, University of Miami, The Dept. of Neuroscience & The Miami Project to Cure Paralysis, Cross-talk & Developmental Programs – A Key to Translational Stem Cell Biology. Miami, FL

Faculty/Lecturer/Advisory Board, NIH-sponsored advanced course Frontiers in Stem Cells in Cancer course at Ponce School of Medicine & Health Sciences (NIH Diversity Research Education Grant) for promising physician-scientists & other scientists from predominately underrepresented communities in frontier technologies emerging regarding pluripotent stem cells for clinically relevant discoveries in cancer. Lecture: Cross talk in stem cell biology and developmental programs. Puerto Rico

Guest lecturer, Brazil Conference, Stem Cell Advances: Use of stem cells in perinatal anoxia. Rio De Janeiro and Sao Paulo, Brazil
• Instituto D’Or, Rio De Janeiro
• Hospital and Maternidade de Sao Luiz-Rede D’Or, Sao Paulo
Innovation, Stem cells & spinal cord repair. Madrid, Spain
Presenter, Self-Care Presentation. Postpartum Health Alliance Perinatal Loss Conference. Presenter, Perinatal Palliative Care. Southern CA Chapter, National Association of Neonatal Nurses Conference

Mark Speziale, MD, PhD
Board Member, California Association of Neonatologists (CAN)

Lisa Stellwagen, MD
Presentations
SPIN Program presentations, Santiago, Chile
SPIN Workshop, Detroit, MI
SPIN Program Workshop, Chicago, IL

Supporting Premature Infant Nutrition: The SPIN Program at UCSD. USLCA Webinar
Supporting Premature Infant Nutrition: The SPIN Program at UCSD. Contemporary Forums Pediatric Pharmacology, San Diego, CA

PUBLICATIONS
Lars Bode, PhD


Farhad Imam, MD, PhD

Jae Kim, MD, PhD


Sanjay Nigam, MD


McElroy SJ, Prince LS, Weitkamp JH, Reese J, Slaughter JC, Polk DB. Tumor necrosis factor receptor 1-dependent depletion of mucus in immature small

**Evan T. Snyder, MD, PhD**


**Lisa Stellwagen, MD**


**Denise Suttner, MD**

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. We were recognized as among the top 30 programs in Pediatric Nephrology in the U.S. News and World Report 3 years in a row: 29th in 2011; 17th in 2012; and 24th in 2013. Due to the significant increase in clinical volume, we have recruited two attending nephrologists. Dr. Caitlin Carter started a part-time position with us in January 2013. Dr. Lieuko Nguyen will be starting a full-time position in October 2013. Dr. Celina Cepeda is our new Fellow, starting July 2013.

The laboratory of Dr. Robert Mak is focused on the molecular mechanism involved in weight regulation abnormalities and cardiovascular complications of chronic kidney diseases as well as genetic regulation of weight and height in chronic kidney disease. Dr. Wilson Cheung is a research scientist who works in Dr. Mak’s laboratory. In addition, the Division is actively involved in clinical research in a variety of diseases and conditions. Drs. Mak and Benador are an integral part of a longitudinal cohort of children with chronic kidney disease (CKiD) which has been continuously funded by the NIH for more than 10 years. Dr. Mak serves on the steering committee and Dr. Benador is the Center PI of the CKiD study. 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.

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. Sujana Gunta, a pediatric nephrology fellow working in Dr. Mak’s laboratory, won national basic science research awards in 2012 from the American Society of Pediatric Nephrology and in 2013 from the Pediatric Academic Societies.
FACULTY
Nadine Benador, MD, Clinical Professor of Pediatrics, Director of Hemodialysis, Peritoneal Dialysis and Apheresis programs, RCHSD
Caitlin Carter, MD, Clinical Assistant Professor of Pediatrics.
Robert Mak, MD, PhD, Professor of Pediatrics and Division Chief, UCSD, RCHSD
Elizabeth Ingulli, MD, Associate Clinical Professor of Pediatrics, Director of Renal Transplantation, RCHSD
Vivian Reznik, MD, MPH, Professor of Pediatrics, Assistant Vice-Chancellor
Peter Yorgin, MD, Clinical Professor of Pediatrics, Clinical Director, RCHSD

POSTDOCTORAL FELLOWS
Sujana Gunta, MD
Noureddin Nourbakhsh, DO
Elliot Perens, MD, PhD

RECENT GRADUATES
James Tee, MD (6/08)
Sun-Young Ahn, MD (10/08)
Anna Mathew, MD (7/11)
Caitlin Carter, MD (12/12)

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 eight half-days of outpatient clinics weekly, each staffed by one to two faculty members. One clinic is primarily for the follow-up of patients after renal transplantation. In the other seven 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

LEFT TO RIGHT: Nadine Benador, Noureddin Nourbakhsh, Sujana Gunta, Robert Mak, Peter Yorgin, Celina Cepeda, Elizabeth Ingulli, Leiko Nguyen
has started a weekly CCS kidney team with a renal dietician and social worker every Thursday for the management of children with congenital abnormalities and chronic kidney disease. A monthly joint lupus clinic in conjunction with the Division of Rheumatology has also been started and is already fully booked. There are plans to initiate a second monthly lupus clinic. 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. The Division has taken over the acute dialysis services previously provided by UCSD Medical Center; and is 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 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 an 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 me-
lanocortin 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, ghrelin and inflammatory pathways; (3) Epidemiology of chronic kidney disease in children; (4) Genetic regulation of weight and height in children with chronic kidney disease. Dr. Mak is a co-Principal Investigator for a NIH funded national study of CKD in children, which follows over 800 patients. He also chairs the progression committee. This study has gone extremely well and the investigative team has been renewed for another five years, from 2013 to 2018.

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 interest in the newly emerging field of children with chronic renal disease who are beginning to transition to adulthood. 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 an invited speaker in national meetings.

EDUCATIONAL ACTIVITIES

Robert Mak, MD, PhD
- Chaired and hosted the 9th International Pediatric Nephrology Association Symposium on “Growth and Nutrition in Children with Chronic Kidney Disease” in San Diego, April, 2012
- Co-chaired the annual Western Society of Pediatric Nephrology Association meeting in San Diego, March, 2011
- Director of the Pediatric Nephrology Fellowship Program till 2012; successfully obtain continual accreditation of the program by the ACGME
- Director, Peds Course 434, Medical Student Pediatric Nephrology Rotation Program until 2012; Curriculum 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

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
- Director of the Pediatric Nephrology Fellowship Program from 2012
- Director, Peds Course 434, Medical Student Pediatric Nephrology Rotation Program from 2012; Curriculum revised 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

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

Peter Yorgin, MD
- Co-chaired the annual Western Society of Pediatric Nephrology Association meeting in San Diego
- 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

AWARDS, HONORS, AND MAJOR PRESENTATIONS

The Division was recognized as among the top 30 programs in Pediatric Nephrology in the U.S. News & World Report 3 years in a row: 29th in 2011; 17th in 2012; and 24th in 2013.

Robert Mak, MD, PhD
Editorial Board, Nature Reviews Nephrology 2009–present
Editorial Board, World Journal of Hypertension, 2010–present
Editorial Board, World Journal of Nephrology, 2010–present
Co-chair, Kidney Disease Progression Committee, NIH U01 on Chronic Kidney Disease in Children, 2003–2013
Who’s Who in America, 2011

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## Research Support

<table>
<thead>
<tr>
<th>Grant/Contract #</th>
<th>Total Direct Dollars/ Duration of Grant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nadine Benador, MD</td>
<td>Chronic Kidney Disease in Children Study (CKID) DK066143/ Children's Mercy Hospital</td>
</tr>
<tr>
<td>Robert Mak, MD, PhD</td>
<td>Therapeutic Benefit of Vitamin D on Cachexia, Cardiovascular Disease and Survival in CKD 20084569/ Abbott Laboratories</td>
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<td>Chronic renal insufficiency in NAPRTCS patients U01 DK-02-13/ NIH</td>
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<td>The impact of atrasentan on proteinuria, disease progression, cardiovascular complications and survival in a mouse model of diabetic nephropathy with chronic kidney disease 49452/ Abbott</td>
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<td>HRSA Hispanic Center of Excellence D34HP18954/PHS</td>
</tr>
</tbody>
</table>
Caitlin Carter, MD  

Robert Mak, MD, PhD  

Elizabeth Ingulli, MD  

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 Lesher, MD, Clinical Professor of Neurosciences
David Lieberman, MD, PhD, Assistant Adjunct 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
Ana Grijalvo-Perez, MD
Jeffrey J. Gold, MD PhD
Marisela Dy, MD
Neggy Rismanchi, MD, PhD

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, Murrieta, 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 UCSD Medical Center, Sharp Mary Birch Hospital, and Scripps Mercy Hospital in San Diego.

LEFT TO RIGHT: Carla Grosmann, David Lieberman, Kathy Romine, John Crawford, Marisela Dy, Doris Trauner, Mark Nespeca, Shifteh Sattar, Michael Zimbric, William Lewis, Sonya Wang, Jeffrey Gold, Jonathan Bui
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 Units 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, intractable epilepsy, headache, movement disorders, neonatal neurology follow-up, 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 cerebrovascular disease and behavioral neurology.

**John R. Crawford, MD**
Dr. Crawford is Director of the Pediatric Neuro-oncology program and 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), neuromodulation, and neuromuscular disorders.

**Joseph Gleeson, MD**
Dr. Gleeson’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.

**Robert Leshner, MD**
Dr. Leshner has wide-ranging expertise in neuromuscular diseases.

**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.

**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, primarily serving north county San Diego. She has an interest in neuromuscualr disorders and attends the muscle disease clinic at RCHSD. She also provides neurologic care for children who reside at the Helen Bernady Center for Medically Fragile Children.

**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.

**Sonya Wang, MD**
Dr. Wang is a pediatric epileptologist with special interest in epilepsy manifestations in children.

**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. He has an ongoing study to detect neurological injury in neonates and infants with accelerometers.

**John R. 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 Children’s Hospital, the University of Vermont Consortium, and the Children’s Oncology Group.

**Jennifer Friedman, MD** has several research interests including neuro-metabolic and genetic disorders that affect movement. She has particular interest in efforts to better understand and treat pediatric neurotransmitter disorders. Current research efforts involve using fMRI to better understand the brain mechanisms that underlie behavioral therapy for tics (CBIT), and the application of genome sequencing to undiagnosed neurologic disease. She also conducts research and training on disability awareness education.
The Division is in the process of recruiting an additional faculty member in clinical neurophysiology and expanding the epilepsy surgery program. We have also established a pediatric neurophysiology fellowship and accepted our first trainee. We plan to recruit at least one additional faculty member within the next year. Particular emphasis on recruitment of physician-scientists and clinician-teachers specializing in neurodevelopmental disorders is planned.

**Outpatient**
We continue to grow our outpatient clinics and have expanded the specialty clinics to include neonatal neurology follow-up clinic and neurocutaneous disorders clinic. We plan to provide specific clinics for intractable epilepsy, vagus nerve stimulator and ketogenic diet consultations. We hope to move to new space within the next year that will allow us to expand our services and see more patients.

**Inpatient**
Dedicated neonatal neurology and Pediatric Intensive Care Unit coverage and enhanced teaching in those areas is being implemented. Our epilepsy monitoring unit is being expanded and the epilepsy surgery program will also grow.
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<thead>
<tr>
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<th>Total Direct Dollars/Duration of Grant</th>
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<tr>
<td><strong>John R. Crawford, MD</strong></td>
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<tr>
<td>A Phase I Trial of LY2940690 in Pediatric Patients with Recurrent or Refractory</td>
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<td>Clinical Trial Protocol 14J-MC-HHBD/Eli Lilly</td>
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<td>Doublecortin in Neuronal Migration</td>
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<td>R01 NS41537/NINDS</td>
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<td>Molecular Characterization of Joubert Syndrome</td>
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<td>Developmental Mechanisms of Human Structural Brain Defects</td>
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<td>Platform for treatment from exome analysis in Autism</td>
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<td>North American Mitochondrial Disease Consortium Training Fellowship</td>
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<td>Phase 2 Study of Levetiracetam for Neonatal Seizures</td>
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<td><strong>MJ Harbert, MD</strong></td>
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<tr>
<td>Temporary Tattoo Electronics for Unobtrusive Detection of Newborn Seizures</td>
<td>$250,000</td>
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<td><strong>Sharon Nichols, PhD</strong></td>
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<td>5 R01 MH084794-04 / NIH</td>
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<td>Substance Use and Immunity in HIV+ infected Adolescents by Systems Biology</td>
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<td>VA IPA (Huang) / Department of Veterans Affairs</td>
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<td>5 R01 DA034497 (Woods Sub) / NIH/NIDA</td>
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<td><strong>Doris Trauner, MD</strong></td>
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<td>Center for the Study of the Neural Bases of Language and Learning</td>
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<td>NIH-NINDS/Children's Hospital Cincinnati/U01NS045911</td>
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<tr>
<td>Cognitive AED Outcomes in Pediatric Localization Related Epilepsy (COPE)</td>
<td>$56,228 June 2013-May 2016</td>
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<tr>
<td>Patient-Centered Outcomes Research Institute (PCORI) (to Emory University)</td>
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</table>
Joseph Gleeson, MD is focusing his research on understanding the genetic and molecular basis of pediatric disorders, with a particular focus on cerebellar and cortical malformations and on genetic causes of epilepsy.

Carla Grosmann, MD is participating in a study of the clinical and molecular manifestations of neuromuscular and neurogenetic disorders of childhood.

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.

Michelle Sahagian, MD is a co-investigator for the Muscular Dystrophy Association U.S. Neuromuscular Disease Registry.

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.

Sonya Wang, MD studies epilepsy manifestations in children. She is also involved in a multicenter study evaluating the efficacy of levetiracetam in neonatal seizures.

**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.

An ACGME-approved neurophysiology fellowship is also available in conjunction with the adult neurophysiology training program at UCSD Medical Center.

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. Developmental-Behavioral Pediatrics Fellows spend one month on the child neurology outpatient service during the course of their training.

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 are then 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 Zimbric MD, Director, Fourth Year Medical Student Elective
John Crawford MD, Coordinator, Third Year Medical Student Rotations in Pediatric Neurology
David Lieberman MD, PhD, Faculty Coordinator, monthly case conferences
Richard Haas MD, Faculty Coordinator, Pediatric Neurology Journal Club
Mark Nespeca MD, Coordinator, monthly Pediatric Neurology lectures for Pediatric housestaff
Jonathan Bui MD, Coordinator, Course on Neuroimaging for 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
- Editorial Board of the Journal of Rare Disorders 2012-present

John Crawford MD, MS

- Rady Children’s Hospital CARES Award for Clinical Care, 2013
- Faculty Teaching Award Department of Neurosciences, UCSD, June 2013
- Neuropsychology Grand Rounds Rady Children's Hospital, University of California San Diego, Pediatric Brain Tumors, October 5, 2011
- Brain Tumors: 2nd Annual Collaborative Care Conference, University of California, San Diego, Moores Cancer Center January 21, 2012
- 3rd Annual Neuro-Oncology Family Day, Rady Children's Hospital A Team Work Approach in the Management of Childhood Brain Tumors May 19, 2012
- Sound Wave Symposium American Academy of Audiology Otoxicity Assessment in Children Receiving Cisplatin Chemotherapy, San Diego, CA, October 12, 2012
- 41st Annual Child Neurology Society Meeting Breakfast Seminar: Childhood Encephalitis: Neuroradiographic, Electrodiagnostic, and Laboratory Crossroads, (Speaker and Organizer), November 1, 2012
- Preuss Foundation Translational NeuroOncology Conference: Translational Pediatric NeuroOncology, San Diego, CA, February 21, 2013
- Moores Cancer Center/NF1 California Symposium: Ask the Doctor, San Diego, CA, June 29, 2013

Jennifer Friedman, MD

- VO Games Patient Presentation, First Place/Gold. 15th International Congress of Parkinson's Disease and Movement Disorders. Toronto, Canada, June 2011
- 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 Pediatric 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
- Dopa-Responsive Dystonia and Beyond – Disorders of Monoamine Neurotransmitter Metabolism, Oakland Children’s Grand Rounds, Oakland, CA, June 2012
- Volunteer of the Year Award – Del Mar Heights, Del Mar Union School District 2012

Joseph Gleeson, MD

Director, UCSD Rady's Undiagnosed Disease Center 2012
Dana Alliance for Brain Research Elected Member 2013
Association of American Physicians Elected Member 2013
Baylor Neuroscience Seminar, Houston, TX, March 27, 2012
Yale Neuroscience Seminar Series, New Haven, CT, May 30, 2012
Indo-US Symposium on Developing Brain, Manipal, India, October 27, 2012
Rockefeller U Seminar, New York, NY, January 11, 2013

Duke U Biochemistry Seminar, Durham, NC, May 19, 2013
Gordon Conf Human Genetic, Smithfield, RI, July 11, 2013

Carla Grosmann, MD

- Member, Muscular Dystrophy Association Executive Committee
- Member, Ethics and Peer Review Committee, American Association of Neuromuscular Disease and Electrodiagnostic Medicine (AANEM)
- Member, World Muscle Society (WMS) Local Organizing Committee for the 2013 annual WMS in Asilomar, CA
- Member, UCSD Transitional Care Committee

Richard Haas, MD

- America's Top Doctors, 2011-2013
- Editor, European Journal of Child Neurology
- Editorial Boards of the journal Mitochondrion and Journal of Rare Disorders

Robert Leshner, MD

- Best Doctors in America 2011-2013 (Child Neurology and Neuromuscular Diseases)
- Visiting Professor University of Nevada Las Vegas Medical Center February 2012
- Excellence In Teaching : UCSD Adult Neurology, June 2012
- Excellence In Teaching : UCSD Child Neurology, June 2013

David Lieberman, MD, PhD

- 7th World Congress on Rett Syndrome MeCP2 Regulates Bidirectional Homeostatic Plasticity in Cortical Neurons, June 25, 2012

Mark Nespeca, MD

- Best Doctors in America, 2011-2013
Doris Trauner, MD

- Elected to AOA Medical Honor Society, VCU/MCV School of Medicine, June 2013
- America’s Top Doctors, 2011-2013
- Best Doctors in America, top 1%, US News and World Report, 2013
- American Academy of Neurology Alliance Awards Committee, 2009-present
- Cure Cystinosis International Registry Medical Advisory Board, 2011-present
- NIH Cognition and Perception Study Section, ad hoc member, 2012
- NINDS ad hoc reviewer for NSDA Study Section, June 2012

- Invited Speaker, Plasticity in the developing brain: Evidence from studies of children with stroke. Stanford University Medical Center, Neurology Grand rounds, March 9, 2012
- Invited Speaker, Neurological issues in cystinosis. Cystinosis Research Foundation conference, Newport Beach CA, April 2012

- NICHD, ZNS1 SRB G(66) NeuroNEXT Special Emphasis Panel, June 28, 2013
- Invited Speaker, Neuro-behavioral issues in Williams Syndrome. Williams syndrome conference, Salk Institute, September 17, 2011
- Invited Speaker, Cognitive and neurological profiles in nephropathic cystinosis. ALANEPE (Pan American Nephrology Conference), Sao Paolo Brazil, October 27, 2011

• Invited Speaker, Muscle wasting in cystinosis. International Cystinosis Foundation meeting, Paris France, June 28-30, 2012
• Symposium Chair, Plasticity in the developing brain, Child Neurology Society meeting, Huntington Beach CA, November 3, 2012
• Invited Speaker, Language developing after perinatal stroke. UC Irvine Neurology Grand Rounds, December 7, 2012
• Invited speaker, Neurological Issues in cystinosis. Cystinosis Research Foundation Day of Hope, April 19, 2013
• Keynote Speaker, AOA Banquet and Induction Ceremony, VCU/MCV School of Medicine, Richmond VA, May 3, 2013
• Invited Speaker, Plasticity in the developing Brain. Kinloch Nelson MD Student Honors Day; VCU/MCV School of Medicine, Richmond, VA, May 3, 2013

Sonya Wang, MD
• Speaker, Professional Advisory Board of the Epstein Foundation

Michael Zimbric, MD
• Nominated for the 2013 Kaiser Excellence in Teaching Award by the 4th yearclass (2013 graduating class) of UCSD SOM

PUBLICATIONS
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trophies in Pediatric Neurology. Princip- 


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Ferriero; Mosby, Elsevier Philadelphia. 


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The Division of Pediatric Pharmacology & Drug Discovery comprises four integrated components that establish bridges between the UC San Diego (UCSD) Department of Pediatrics and the Skaggs School of Pharmacy and Pharmaceutical Sciences. Many Divisional faculty participate in the NIH/NICHD funded Research Program in Developmental Pharmacology (RPDP).

1) Basic and translational research programs in infection biology that provide new insights into the molecular basis of microbial pathogenesis and the function of host immunity, with a focus on exploiting these discoveries for new treatment strategies. Novel therapies are sought from genome-driven high throughput chemical biology screens, systems biology approaches, targeted neutralization of virulence phenotypes, pharmacologic augmentation of host innate immune functions, modulation of host inflammatory responses, reversal of antimicrobial resistance phenotypes and prophylactic vaccines.
(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 (PTN) in clinical pharmacology modeling and simulation activities and supports other multi-center center and collaborative research projects.

(3) 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.

(4) Clinical Research Programs focused on the pediatric population, including clinical trial design for evaluation of new therapeutic agents or studies to improved efficacy and reduced toxicity of known agents. Studies also explore the genetic and immunologic risk factors for pediatric syndromes including Kawasaki disease, explore the epidemiology and mechanisms of antibiotic resistance, and novel biomarkers for diagnosis and prognosis of pediatric clinical diseases.

FACULTY
Victor Nizet, MD, Division Chief, Professor of Pediatrics and Pharmacy
Edmund Capparelli, PharmD, Professor of Clinical Pediatrics and Clinical Pharmacy
Elizabeth Winzeler, PhD, Professor of Pediatrics
Brookie Best, PharmD, MAS, Associate Professor of Clinical Pharmacy & Pediatrics
Stephen Rossi, PhD, Project Scientist
George Sakoulas, MD, Associate Adjunct Professor of Pediatrics
Adriana Tremoulet, MD, Associate Adjunct Professor of Pediatrics
Katherine Akong-Moore, MD, PhD, Assistant Adjunct Professor of Pediatrics
Kelly Doran, PhD, Associate Adjunct Professor of Pediatrics
Mary Hensler, PhD, Assistant Research Scientist

LEFT TO RIGHT: Elizabeth Winzeler, Bernard Palsson, Mary Hensler, George Sakoulas, Edmund Capparelli, Jennifer Le, Steven Rossi, Adriana Tremoulet, Victor Nizet, Brookie Best
Yung-Chi Chang, PhD, Assistant Project Scientist
Syed Raza Ali, PhD, Assistant Project Scientist
Jason Cole, PhD, Visiting Assistant Project Scientist

PEDIATRIC FELLOWS
Bernice Aguilar, PhD
Ericka Anderson, PhD
Federico Beasley, PhD
Andrew Chang, PharmD, PhD
Joanna Cole-Masters, PharmD
Ross Corriden, PharmD
Erika Flannery, PhD
David Gonzalez, PhD
Anna Henningham, PhD
Justin Hoffman, PharmD, MS
Andrew Hollands, PhD
Monika Kumasawamy, MD
Christopher LaRock, PhD
Greg LaMonte, PhD
Ann En-Ju Lin, PhD
Stephan Meister, PhD
Ahn Nguyen, PharmD
Cheryl Okumura, PhD
Markus Roupé, PhD
Ismael Secundino-Velasquez, PhD
Kensuke Shoji, MD
Kimberly Sprague-Hall, PhD
Nina Van Sorge, PharmD, PhD
Melanie Wree, MD
Masaya Yamaguchi, DDS, PhD
Yuka Yamaguchi, DDS, PhD
Jack Yeung, PharmD

POSTDOCTORAL RESIDENTS
Angela Berry, PharmD, Pharmacy Resident
Karen Chen, PharmD, Pharmacy Resident
Jonathan Faldasz, PharmD, Pharmacy Resident
Nina Haste, PharmD, PhD, Pharmacy Resident
Alicia Hobby, PharmD, Pharmacy Resident
Stephanie Natale, PharmD, Pharmacy Resident
Paige Pancoast, PharmD, Pharmacy Resident
Jack Yeung, PharmD, Pharmacy Resident

GRADUATE STUDENTS
Khadija Amin, Pharmacy Student
Nicole Barshop, Medical Student
Taylor Bright, Biomedical Sciences PhD Program
Tamara Bhandari, Biomedical Sciences PhD Program
Julie Bagby, PharmD, Pharmacy Resident
Joseph Chen, Pharmacy Student
Tammy Choi, Pharmacy Student
Simon Döhrmann, PhD Student
Victoria Doroski, Biomedical Sciences PhD Program
Gregory Goldgof, Medical Sciences Training Program
Michael Hwang, Pharmacy Student
Nadia Keller, PhD Student
Kirsten Kuipers, Master of Science Student
Emma Liere, Master of Science Student
Leo Lin, Medical Scientist Training Program
Jennifer Lundergan, Master of Science Student
Micah Manary, Medical Sciences Training Program
Shelly McCormick, PharmD, Medical/Master of Science Student
Jin Miaoqi, Pharmacy Student
Brittney Miller, Biomedical Sciences PhD Program
Jason Munguia, Biomedical Sciences PhD Program
Morgan Pence, Biomedical Sciences PhD Program
Michael Rochon-Duck, MS, UCSD Medical Student
Yuichiro Sato, Master of Science Student
Ran Troost, Master of Science Student
Jeff Yin, Pharmacy Student

CLINICAL ACTIVITIES
The Division interacts closely with pediatrics 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. Adriana Tremoulet is the Medical Director of the Clinical Pharmacology Assay Laboratory. The consultative expertise of Drs. Edmund Capparelli and Brooke Best are provided on issues of therapeutic drug monitoring and HIV pharmacology locally and across the country. Dr. 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.

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 clearances. 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.

Edmund Capparelli, PharmD focuses his research on pharmacokinetic and pharmacodynamic modeling through the Division’s Pharmacometrics Unit while specializing in pediatric clinical pharmacology and population pharmacokinetic methods. He leads pharmacokinetic research activities within the NICHD Pediatric Trials Network (PTN) Pharmacometric Core, NIAID IMPAACT Network Specialized Pharmacology Laboratory and NICHD supported Center for Research in Pediatric and Developmental Pharmacology. His applied knowledge of pharmacometric methods and pediatrics linked with 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 Working Group; (2) Pediatric Antiretroviral Guidelines Working Group, US Department of Health and
Elizabeth Winzeler, PhD leads a research program developing innovative ways to treat and diagnose tropical diseases with a long-term interest in promoting development and reducing poverty. Most of her efforts are focused on malaria; a disease affecting 250-500 million people annually. She is developing genome-wide methods for discovering and tracking genes conferring resistance to drugs with antimalarial activity. For example, her group is studying the genomes of drug resistant and drug sensitive malaria parasites from the Peruvian Amazon with the goal of finding the genetic determinants of drug resistance. The laboratory is also involved in discovering how thousand of chemical inhibitors with antimalarial activity are working to kill the parasites with a goal of discovering chemically validated targets and chemical tool compounds. Additionally, they are playing a role in public-private partnerships to develop new drugs to treat malaria. Finally, she is using somatic cell and host genetics to investigate host pathogen interactions. The Winzeler laboratory efforts involve chemical and traditional genetics, genomics, high-content imaging, screening and a network of national and international collaborators interested in public health.

Adriana Tremoulet, MD, 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.

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 (IMPACT), the California Collaborative Treatment Group (CCTG) and the UCSD HIV Neurobehavioral Research Program (HNRP).

George Sakoulas, MD 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.

Kelly Doran, PhD has a joint appointment in the Division and is also an Associate 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 spearheads a collaborative research project that explore marine natural product libraries to discover novel antibiotics with activity against drug-resistant pathogens such as methicillin-resistant Staphylococcus aureus (MRSA), as well as novel strategies to boost host phagocytic cell killing of drug-resistant pathogens.

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.

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 delivered lectures and led workshops in Clinical Pharmacology and helped organize and lead the Children’s Health and Education Research Symposium (CHERS) for UC San Diego Pediatric Post-docs. He also taught pharmacokinetic-pharmacodynamic modeling to the NICHD T32 fellows through a live lecture and webinar series and population pharmacokinetic modeling seminar series to post-docs in the UC San Diego – Pfizer Clinical Pharmacology Fellowship Program.

Elizabeth Winzeler, PhD has leadership roles in the educational mission of the UCSD Genetic Training Program and the Institute of Genomic Medicine. She lectures on a variety of topics in the UCSD School of Medicine curriculum and its PhD graduate programs.
<table>
<thead>
<tr>
<th>Grant/Contract #</th>
<th>Total Direct Dollars/Duration of Grant</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Victor Nizet, MD</strong>&lt;br&gt;Bettering Innate Immunity via HIF to Treat Antibiotic-Resistant Infections 1 R01 AI093451 (PI)/NIH (NIAID)</td>
<td>$2,465,000 Apr. 2011-Mar. 2016</td>
</tr>
<tr>
<td>Project 2: Microbial Glycan Mimicry and Glycosidases in Inflammatory Responses HL107150 (Proj Leader)/NIH (NHLBI)</td>
<td>$1,890,000 July 2011-May 2018</td>
</tr>
<tr>
<td>GAS Switch from Colonizing Bacterium to Invasive Pathogen R01 AI077780-04 (PI)/NIH (NIAID)</td>
<td>$1,430,000 Sept. 2008-Aug. 2014</td>
</tr>
<tr>
<td>Optimizing Phagocyte Activity Against Antibiotic Resistant Pathogens U54 AI057153 (Project Leader)/NIH (NIAID)</td>
<td>$800,000 Mar. 2012-Feb. 2014</td>
</tr>
<tr>
<td><strong>Elizabeth Winzeler, PhD</strong>&lt;br&gt;Defining the targets of broad intervention antimalarial agents R01AI103058 (PI)/NIH/NIAID</td>
<td>$2,048,124 Aug. 2013-July 2017</td>
</tr>
<tr>
<td>To develop more high-throughput and reproducible methods for determining the transmission-blocking activity of malaria drugs OPP1040406 (PI) / Gates Foundation</td>
<td>$1,463,767 Mar. 2012-Dec. 2014</td>
</tr>
<tr>
<td>Discovery of chemically validated malaria liver stage targets R01AI090141 (PI)/NIH/NIAID</td>
<td>$1,000,000 May 2011-Apr. 2015</td>
</tr>
<tr>
<td>Malaria Liver Stage Assays for Drug Discovery MMV12/0094, (PI)/ Medicines for Malaria Venture</td>
<td>$911,807 May 2012-Dec. 2014</td>
</tr>
<tr>
<td><strong>Edmund Caparelli, PhD</strong>&lt;br&gt;Developmental and Translational Pharmacology of Pediatric Antimicrobial Therapy U54 HD071600 (PI)/NICHD</td>
<td>$3,734,148 Sept. 2011-June 2016</td>
</tr>
<tr>
<td><strong>Kelly Doran, PhD</strong>&lt;br&gt;Blood-Brain Barrier Failure during Bacterial Meningitis R01 NS051247-05 (PI) / NIH/NINDS</td>
<td>$1,009,090 July 2006-May 2016</td>
</tr>
<tr>
<td>Characterization of a novel peptide to treat bacterial infection Joint Venture Prog (PI) / CSUPERB</td>
<td>$25,000 July 2011-Dec. 2013</td>
</tr>
<tr>
<td>Institutional Research &amp; Academic Career Development Award 10289805-009 (PI subcontract)/ UCSD (NIH)</td>
<td>$393,988 Aug. 2012-July 2016</td>
</tr>
</tbody>
</table>
Invited Speaker, Annual Conference of the Society for Glycobiology, Seattle, WA, November 2011
Invited Speaker, Seattle Children’s Research Institute, November 2011
Invited Speaker, Infection & Immunity Symposium, Utrecht University, Netherlands, November 2011
Invited Speaker, La Jolla Institute of Allergy & Immunology, January 2012
Invited Speaker, University of Toronto/ Hospital for Sick Children Research Institute, February 2012
Invited Speaker, Reed College Department of Biology, Portland, OR, March, 2012.
Invited Speaker, 20th Mexican Congress of Immunology, Merida, Mexico, April, 2012
Featured Speaker, 4th Annual UCSD SOM Dean’s Symposium, April 2012
Invited Speaker, MedImmune Visiting Scientist Series, Gaithersburg, MD, May, 2012
Invited Speaker, Department of Microbial Pathogenesis, Karolinska Institute, Stockholm, May 2012
Invited Speaker, 15th Annual San Diego MedChem Symposium, July 2012
Grand Rounds Speaker, Department of Pediatrics, University of Oklahoma, July 2012
Invited Speaker and Session Chair, 52nd ICAAC, San Francisco, CA, September 2012
Invited Speaker, Max Plank Institute for Infection Biology, Berlin, Germany, September 2012
Invited Speaker, University of Texas-San Antonio Health Sciences Center, November 2012
Invited Speaker, California State University – Long Beach, December 2012
Invited Speaker, Genome Research Institute Oregon State University, January 2013
Visiting Professor, Niigata University Medical School, Niigata, Japan, January 2013
Invited Speaker, Japanese National Institute of Infectious Diseases, Tokyo, Japan, January 2013
Invited Speaker, Department of Microbiology, University of Melbourne, Australia, February 2013
Invited Speaker, 3rd Lorne Infection & Immunity Conference, Victoria, Australia, February 2013
Invited Speaker and Session Chair, Bio2013 International Convention, Chicago, IL, April 2013
Invited Speaker, Broad Institute of MIT and Harvard, Boston, MA, April 2013.
Grand Rounds Speaker, Dept. Medicine, University of Tennessee, Memphis, TN, May 2013
Invited Speaker, J. Craig Venter Institute Seminar Series, San Diego, CA, May 2013
Invited Speaker and Plenary Session Convener, ASM Annual Meeting, May 2013
Invited Speaker, HA 2013: International Society for Hyaluronan Sciences, Oklahoma City, June 2013
Invited Speaker, Gordon Conference on Staphylococcal Diseases, Waterville Valley, NH, July 2013
Invited Speaker, Department of Immunology, Montana State University, Bozeman MT, September 2013
Keynote Speaker, BacPath 2013, Tangalooma Island, Australia, September 2013

Edmund Capparelli, PharmD
Invited Lecture, Pediatric Grand Rounds, Tygerberg Children’s Hospital Cape Town, S.A., January, 2012
Invited Lecture, DMID Investigator Meeting, Bethesda MD, May, 2012
Invited Lecture, NICHD T-32 Training Conf, Bethesda, MD September 2012
Invited Speaker, American College of Clinical Pharmacology Meeting, San Diego, CA September, 2012
Invited Speaker, George Washington University Rare Diseases Symposium, Washington DC, April 2013
Invited Speaker, Contemporary Forums in Neonatal Pharmacology, La Jolla, CA June, 2013
Elizabeth Winzeler, PhD
Speaker, The Science Behind Malaria Control and Eradication, Lucca (Barga), Italy, July-August 2011
Speaker, Malaria 2012: Drugs, Vaccines and Pathogenesis, NY Academy of Sciences, April 2012
Speaker, UCSD & Rady Children’s St. Jude Symposium, San Diego, CA, September 2012
Speaker, LS Skaggs Biomedical Research Symposium, Aurora, CO, 2012
Invited Speaker, Annual AIDS Clinical Trials Group Scientific Retreat, Atlanta, GA, 2013
Invited Speaker, 2013 IDAC Spring Symposium, Newport Beach, CA, 2013

PUBLICATIONS


Adriana Tremoulet, MD
Hartwell Foundation Award, 2011
Invited Speaker, Niigata University, Niigata, Japan, February 2012
Invited Speaker, The 10th International Kawasaki Disease Symposium, Kyoto, Japan, February 2012
Invited Speaker, Society of Hospitalist Medicine, San Diego, CA, April 2012
Invited Speaker, Sociedad Mexicana de Pediatría, Mexico City, Mexico, April 2012

Brookie Best, PharmD, MAS
Biotech Demystified Executive Education Program, Rady School of Management, June 2011, 2012
Reach MD XM 160 Radio Talk Show, Diabetes Discourse- Diabetes Radio Program.
Research article nominated for 2011 JMCP Award of Excellence, Journal of Managed Care Pharmacy
"Best of Posters" Oral Presentation, 14th Intl Workshop Clinical Pharmacology of HIV Therapy, 2013
Professor of the Year Excellence in Teaching Award, Class of 2016, SSPPS, 2013
Invited Speaker, Education & Research Institute, Inc. (PERI). Arlington, VA, 2011
Invited Speaker, IMPAACT Network and HPTN Joint Annual Meeting, Washington DC, 2012
Invited Speaker, American College of Clinical Pharmacology Annual Meeting, San Diego, CA, 2012
Invited Speaker, LS Skaggs Biomedical Research Symposium, Aurora, CO, 2012
Invited Speaker, Annual AIDS Clinical Trials Group Scientific Retreat, Atlanta, GA, 2013
Invited Speaker, 2013 IDAC Spring Symposium, Newport Beach, CA, 2013

PUBLICATIONS


Best BM, Letendre SL, Koopmans P, Rossi SS, Clifford DB, Collier AC, Gelman BB, Marra CM, McArthur JC, McCutchan JA, Morgello S, Simpson DM, Capparelli EV, Ellis RJ, Grant I, for the CHARTER Study Group. Low CSF concentrations of the nucleotide...


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A Streptococcus protects against C3b-mediated neutrophil killing. *J Innate Immun*, 2013 (online early).


Okumura CY, Anderson EA, Dörhmann S, Tran DN, Olson J, von Pawel-Rammin- gen U, Nizet V. IgG protease Mac/IdeS is not essential for phagocyte resistance or mouse virulence of M1T1 group A Streptococcus. *mbio*, 2013 (online early).


Sanderson-Smith ML, Zhang Y, Ly D, Donahue D, Hollands A, Nizet V, Ploplis VA, Walker MJ, Castellino FJ. A role for the urokinase plasminogen activator (uPA) in invasive group A


The Rehabilitation Medicine Division provides inpatient rehabilitation services for children and adolescents who have a variety of physical and cognitive issues. The physicians also oversee or are an integral part of various outpatient clinics in which rehabilitation medicine is a core component.

**Inpatient Rehabilitation**

Inpatient services are provided for patients with a wide range of conditions or injuries, including post-traumatic head injuries, neurological disorders, spinal cord injuries, chronic pulmonary diseases, infectious diseases, cardiovascular disorders, brain tumors, and acute disabilities.

The goal of the program is to improve physical and cognitive function so that the child can return to his home, school and daily activities.

All patients are evaluated and treated by our interdisciplinary team, which includes a social worker, case manager, child life specialist, special education teacher, dietitian, registered nurse, and physical, occupational and speech therapists. The team meets daily to evaluate the ongoing needs of patients and their families, assuring that all physical, cognitive and social needs are met.

**Inpatient Rehabilitation Services Include:**

- Physical therapy: evaluation for ambulation, orthoses and adaptive equipment
- Occupational therapy: assessment of activities of daily living, dysphagia evaluation
- Speech therapy: cognitive and speech evaluations
- Education: academic and IEP evaluation
- Social services: evaluation of patient/family psychosocial dynamics and treatment compliance
- Case management: treatment authorization, evaluation of discharge needs, coordination of outpatient therapies
- Child life services: psychosocial support along with diversional and educational activities
Outpatient Clinics Care Includes:
- Acquired Brain Injury Clinic
- Brachial Plexus Clinic
- Cerebral Palsy Clinic
- Chronic Pain Clinic
- Electrodiagnostics Clinic
- Limb Deficiency Clinic
- Muscle Disease Clinic
- Neuro-Oncology Comprehensive Clinic
- Pediatric Rehabilitation Clinic
- Plagiocephaly Clinic
- Spinal Cord Injury Clinic
- Spinal Defects Clinic
- Torticollis Clinic
- Spasticity Clinic

FACULTY
Andrew J. Skalsky, MD, Assistant Clinical Professor of Pediatrics
Joan Le, MD Associate Physician
Wendy Lin Pierce, MD, Associate Physician

LEFT TO RIGHT:
Wendy Pierce, Andrew Skalsky, Joan Le
Andrew Skalsky, MD
• Develop pediatric concussion program
• Develop rehabilitation day program
• Organize San Diego AccessAbilities Expo
• Grow the Division to meet the community need

Joan Le, MD
• Oversee adult transition programs for cerebral palsy, spina bifida, and intrathecal baclofen pump program
• Grow the pediatric limb deficiency clinic to meet community needs

Wendy Lin Pierce, MD
• Develop cerebral palsy teen support group
• Pursue CCS center of care for cerebral palsy
• Establish complex wheelchair seating clinic
CLINICAL ACTIVITIES
Andrew Skalsky, MD
• Director of Inpatient Rehabilitation Unit
• Director of the Chronic Pain Program
• Co-Director of the MDA muscle disease clinic
• Electrodiagnostic clinic
• Involved in several multi-disciplinary clinics treating conditions such as spina bifida, cerebral palsy, muscular dystrophy, traumatic brain injury, and spinal cord injury

Wendy Lin Pierce, MD
• Conducts several clinics per week caring for children with spasticity and other motor difficulties
• Holds weekly botulinum toxin injection clinic
• Conducts multi-disciplinary spina bifida clinic
• Directs multi-disciplinary acquired brain injury clinic
• Conducts multi-disciplinary spinal cord injury clinic
• Directs multi-disciplinary plagiocephaly clinic

Joan Le, MD
• Directs multi-disciplinary spina bifida clinic
• Directs multi-disciplinary limb deficiency clinic
• Directs adult transition clinics for cerebral palsy and spina bifida
• Participates in multi-disciplinary acquired brain injury clinic

RESEARCH ACTIVITIES
Andrew Skalsky, MD
• Neuromuscular disease registry clinical trial
• Botulinum toxin clinical trial

TEACHING ACTIVITIES
Andrew Skalsky, MD
• Teaches rehab didactic series to the medical student, residents, and fellows.
• Medical student ambulatory rotation blocks
• Teaches and mentors medical students interested in pursuing rehabilitation medicine as a career

Wendy Lin Pierce, MD
• Medical student ambulatory rotation blocks
• Teaches rehab didactic series to the medical student, residents, and fellows

Joan Le, MD
• Teaches 3rd year medical students ambulatory clinical skills
• Teaches rehab didactic series to the medical student, residents, and fellows

MAJOR PRESENTATIONS
Andrew Skalsky, MD
• American Association of Neuromuscular & Electrodiagnostic Medicine (AANEM) 59th Annual Meeting, San Antonio, TX, October 13-16, 2013
• Pediatric Nursing: Care of the Hospitalized Child Conference, Anaheim, CA, April 10-13, 2013
• American Association of Neuromuscular & Electrodiagnostic Medicine (AANEM) 58th Annual Meeting, Orlando, FL, October 3-6, 2012
• 2nd Annual Rady Children’s Hospital 360 Sports Medicine Conference, San Diego, CA, July 28th, 2012
• 26th Annual Advances in the Practice of Pediatrics, San Diego, CA, March 23, 2012

PUBLICATIONS
Andrew Skalsky, MD


Wendy Lin Pierce, MD

Joan Le, MD
The goal of the Pediatric Residency Program at 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 both graduating classes in 2011-2013 pursued fellowship training, and the remaining graduates found terrific careers in primary care in the San Diego community. The last two years of intern recruitment were extremely successful, attracting medical students from major medical schools across the country.

LEFT TO RIGHT: Amanda Terry, Jillian Wall, Christopher Cannavino, Sherry Huang, Allison Reinhardt, Kate Scott, Joanne Albrecht
FACULTY
Sherry C. Huang, MD, Program Director
Christopher Cannavino, MD, Associate Program Director

ADMINISTRATION
Allison Reinhardt, Residency Program Administrator
Joanne Albrecht, Residency Program Assistant

CHIEF RESIDENTS
2011-2012
Megan Browning, MD
Monique Mayo, MD
Tina Udaka, MD

2012-2013
Amira Baker, MD
Erin O'Leary, MD

Class of 2012
Amira Baker, MD, UCLA Fellowship in Global Health
Jacob Gregerson, MD, Primary Care, San Diego
Lauren Hackett, MD, Primary Care, Orange County
Megan Klenow, MD, Primary Care, Portland Oregon
Mindy Li, MD, Genetics Fellowship, Children's Hospital of Pennsylvania
Kevin O'Leary, MD, Primary Care, San Diego
Daphne Say, MD, GI Fellowship, UCSD
Kimberly Sprague, MD, ID Fellowship, UCSD
Erin O'Leary, MD, Primary Care, San Diego
Bruce Tran, MDC, Critical Care Fellowship, UCSD
Elizabeth Waters, MD, Primary Care, San Diego
Irene Wong, MD, Primary Care, San Francisco
Nicole Yamada, MD, Neonatology Fellowship, Stanford University

Med Peds Class of 2012
Ben Dillon, MD, Med/Peds Primary Care, San Diego
Ben Johnson, MD, Internal Medicine, UCSD

Ricardo Indacochea, MD, Primary Care, San Diego, Associate Program Director, UCSD Med/Peds
Hannah Walford, MD, Allergy Immunology Fellowship, UCSD

Class of 2013
Jeanne Carroll, MD, Neonatology Fellowship, Boston Children's Hospital
Catherine Lacey, MD, GI Fellowship, UCSD
Whitney Law, MD, Critical Care Fellowship, UCSD
Sarah Lindback, MD, Primary Care, San Diego
Kimberly Montez, MD, Community Based Fellowship, Harvard University
Melissa Morelos, MD, Primary Care, San Diego
Eric Reed, MD, Primary Care, San Diego
Callie Rzasa, MD, Cardiology Fellowship, Boston Children's Hospital
Mary Kate Scott, MD, Chief Resident
Angell Shieh, MD, PhD, Primary Care, San Diego
Richard Silva, MD, Primary Care, San Diego
Dan Sisti, MD, Anesthesiology Resident, UCSD
Amanda Terry, MD, Chief Resident
Jillian Wall, MD, Chief Resident

Med Peds Class of 2013
Eric Chow, MD, Med/Peds Primary Care, Oahu
Katie O'Sullivan, MD, Combined Med/Peds Endocrine Fellowship, University of Chicago
Scott Francioni, MD, Primary Care, New Orleans, Louisiana
Brian Williams, MD, Pediatric Hospital Fellowship, UCSD

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 2015
Jane, Bugea, MD
Gordon Cheng, MD
Mackenzie Coffin, MD
Elizabeth Duong, MD
Michelle Edmunds, MD
Jennifer Giboney, MD
Lourdes Herrera, MD
Nancy Ho, MD
Tina Kantharia, MD
Julie Johnson-Rolphes, MD
Begem Lee, MD
Daniel Lichtmann, MD
Rachel Moore, MD, PhD
Terri Tsang, MD

Med Peds Class of 2015
Lawrence Ma, MD
Diana Moke, MD
Perrie Pardee, MD
Vanessa Raabe, MD

Class of 2016
Amanda Bogart, MD
Dillon Chen, MD, PhD
(Combined Child Neurology)
Amy Grimm, MD
Damian Ng, MD
Irene Odom, MD
Sheri Plaisted, MD
Stephanie Schroter, MD
Vanessa Scott, MD
Nikolai Shalygin, MD
Ruth Siew, MD
Lauren Steele, MD
Helen Wang, MD
Michele Wang, MD
Yvette Wang, MD
Yan Zhan, MD

Med Peds Class of 2016
Constance Chace, MD
Mai Doung, MD
Nicole Ayson, MD
Christine Rukasin, MD

Med Peds Class of 2017
Vishar Amin, MD
Caitlin Dockweiler, MD
Meghan Garcia, MD
Mazen Odish, MD
This coming year, the program will continue to offer annual competitive research grants for resident research projects.

We have developed four individual training tracks to enhance the individual residents' career choices in community and primary care pediatrics, subspecialty pediatrics, academic pediatrics, and hospital based subspecialty pediatrics. The tracks were developed based on ABP and ACGME requirements to enhance the educational experience for each resident.

We have developed a pediatric physician-scientist development series to enhance resident education in basic science and currently have two residents in this series.

We will work with the SOM and our EM department to improve on-site training in simulation medicine.
RESIDENCY PROGRAM
AT RACY 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.

The 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.

UCSD residents participate in a variety of programs for continued intellectual growth. Multiple didactic opportunities are incorporated into the curriculum to enhance resident development and training. The 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.

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 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 RCHSD during part of the rotation. Additionally, the second year resident rotates one month in the Pediatric Intensive Care Unit (PICU) 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.
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.

**PUBLICATIONS**

Horikawa YT, Patel HH, and Roth DM. Cardiac specific Caveolin-3 overexpression creates a trained athlete like phenotype. *J Pharmacol Exp Ther*, in preparation (abstract also in preparation for 2012 AHA conference).


Horikawa, YT et al. Signaling epicenters: The role of caveolae and caveolins in volatile anesthetic induced cardiac protection. *Curr Pharm Des*, 2013 accepted and in press.


**Abstracts:**


Song R, Carroll J, Snyder EV. Toward Personalized Medicine: From Umbilical Cords in the Delivery Room to Induced Pluripotent Stem Cells in the Lab. PAS Poster Session, Washington DC, May 2013

Renuart AJ. Microbiology of Urinary Tract Infections in Gaborone, Botswana. PAS Poster Session, Washington DC, May 2013

The Division of Respiratory Medicine is dedicated to improving all aspects of respiratory health affecting infants, children, and young adults. The Division has maintained a national ranking in Pulmonology in the U.S. News and World Report survey of children’s hospitals since 2009, with improved scores each year. 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, and receive referrals from throughout the U.S. and other countries. The Divisional research programs range from fundamental basic investigations regarding the effect of disordered respiration, hypoxia and hypercapnia on cell function and cell fate in brain, heart and lung, to cutting-
edge basic research in pulmonary fibrosis and cystic fibrosis, and novel clinical research studies 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 well-regarded Pulmonology Fellowship program which has received full five-year accreditation on its first external review, and programs specific to students, housestaff, fellows and the San Diego practice community. Drs. Lesser and Hagood have developed a monthly Western states Pediatric Pulmonary Teleconference case discussion series which now includes over 14 Respiratory Medicine programs in several Western states and Canadian Provinces, to improve care of complex patients, and provide education and networking for subspecialty residents and junior faculty in Respiratory Medicine throughout the region.

FACULTY/STAFF
James S. Hagood, MD, Division Chief and Professor of Pediatrics
Kathryn Akong, MD, PhD, Assistant Adjunct Professor of Pediatrics
Priti Azad, PhD, Assistant Project Scientist
Robert M. Douglas, PhD, Assistant Adjunct Professor of Pediatrics
Xiang Gu, PhD, Associate Project Scientist
Gabriel G. Haddad, MD, Chair, Dept. of Pediatrics; Distinguished Professor, Depts. of Pediatrics and Neurosciences; Physician-in-Chief and Chief Scientific Officer, RCHSD
He Huang, PhD, Associate Project Scientist

LEFT TO RIGHT: Jessie Yang, AK Shamsuddin, Paul Quinton, Daniel Lesser, Meerana Lim, James Hagood, Julie Ryu, Sung Park, Mark Plan
Major Goals & Plans

The overall goals of the Division of Respiratory Medicine are to provide world-class excellence in patient care, education, research and advocacy for childhood respiratory diseases, to expand the frontiers of knowledge from the molecular to the health systems levels, and to train the next generations of leaders in this field.

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.

In the next few years, the goals for the Division will be as follows:
1. Recruitment of a Sleep Program Director, to develop a recognized, accredited clinical program and to begin to develop a solid academic program in collaboration with the adult program at UCSD.
2. Recruitment of a lung biology researcher with research interests complementary to those of existing faculty, and continuing to nurture promising researchers and physician-scientists in our existing laboratories.
3. Recruit additional clinically-oriented faculty as needed to improve patient access, expand clinical areas of expertise, and increase our presence in satellite clinical locations.
4. Develop respiratory-oriented multidisciplinary service lines for complex, chronic conditions.

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
Diseases, infant apnea, pulmonary tuberculous fibrosis, diffuse and interstitial lung diseases, chronic cough, congenital asthma, bronchiectasis, bronchopulmonary dysplasia, chronic cough, congenital anomalies of the respiratory tract, cystic fibrosis, diffuse and interstitial lung diseases, infant apnea, pulmonary tuberculosis, recurrent pneumonia, obstructive sleep apnea, stridor, wheezing, and others.

Services include:
- Medical & nursing services
- Pulmonary function tests
- Exercise testing
- Nutritional support
- Polysomnography
- Inpatient and home care
- Artificial airway care
- 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, respiratory nurse practitioners, a research nurse, and a clinical coordinator.

Drs. Akong, Hagood, Lesser, Lim, Park, Pian, Ross and Ryu care for outpatients referred by community or hospital-based physicians during multiple outpatient pulmonary clinics and cystic fibrosis clinics at RCHSD. Satellite clinics in Murrieta are conducted on an additional monthly basis. The Division conducts approximately 3,600 outpatient visits per year. The inpatient pulmonary service is among the busiest at RCHSD, with a daily census ranging from 10 to 30 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 Hagood, MD, the Division Chief, studies the molecular regulation of fibroblast phenotypes in pulmonary fibrotic disease and lung alveolarization. He also studies the roles and regulation of θγ-1, a critical modulator of cellular phenotype, and epigenetic/epigenomic alterations in lung development and disease, and targeted therapy for diffuse lung diseases.

Gabriel 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.

Kathryn Akong, MD, PhD, completed fellowship training in June, 2011, and joined the faculty as Assistant Professor. She collaborates closely with Dr. Victor Nizet (Pharmacology and Drug Discovery), with whom she studies the role of neutrophil extracellular traps in lung host defense against infection.

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 well as cell culture model systems.

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.

He Huang, PhD systematically screens for genes that are critical or necessary for recovery from oxygen deprivation in genetic models.

Daniel Lesser, MD, is involved in clinical research investigating the role of sleep disorders in metabolic disease.

Mark 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.
## Research Support

<table>
<thead>
<tr>
<th>Grant/Contract #</th>
<th>Total Direct Dollars/Duration of Grant</th>
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| **Kathryn Akong, MD, PhD**  
Targeting HIF in Chronic Respiratory Infections  
KL-2 | $300,000  
July 2012-present |
| **Gabriel G. Haddad, MD**  
Molecular Mechanisms of Hypoxia Tolerance and Susceptibility  
1 P01 HL098053-01A1/NIH (NHLBI) | $7,577,932  
July 2010-June 2015 |
| **James Hagood, MD**  
Extracellular Vesicles Alter Cell Phenotype in Pulmonary Fibrosis  
Pulmonary Fibrosis Foundation | $42,500  
July 2012-June 2014 |
| Targeting the Apoptosis-Resistant Pulmonary Myofibroblast  
1 R01 HL11169-01A1/NIH/NHLBI | $1,283,000  
July 2012-June 2017 |
| Regulation of Fibroblast Phenotype in Lung Fibrosis  
1 R01 HL082818-01/NIH/NHLBI | $741,224  
Aug. 2007-July 2014 |
| Childhood Interstitial & Diffuse Lung Disease Scientific Conference  
NIH/NHLBI (Hagood) | $23,000  
| **Malla Reddy Madireddi, PhD**  
HCO3 Conducive function of CFTR: Implications to oral health & cystic fibrosis  
NIH | $600,000  
May 2009-May 2012 |
| Molecular pathophysiology of cystic fibrosis  
Univ. of Missouri-Columbia - DK055835 | $75,890  
Aug. 2007-July 2013 |
| **Mindy Ross, MD**  
Training Grant for Research Training in Biomedical Informatics  
(Pi: Lucila Ohno-Machado, MD, PhD)  
T15 LM011271-01 NIH/NLM/National Library of Medicine (NLM) | $54,000  
2012-Current |
| **A.K.M. Shamsuddin, PhD**  
HCO3- transport in native small airway epithelia  
Pilot and Feasibility Grant/Cystic Fibrosis Foundation (CFF) | $12,000  
April 2011 – March 2013 |
| **Jin Xue, MD, PhD**  
Role of Secreted Phosphoprotein 1 in Cardiac Hypertrophy and Fibrosis  
Emerald Foundation Young Investigator Award | $225,000  
Dec. 2010-Dec. 2013 |
| **Ning Yang, MD, PhD**  
Can Bicarbonate Help Mucus Release in Cystic Fibrosis  
Fellowship- Ning Yang/Cystic Fibrosis Foundation | $120,000  
| **Dan Zhou, PhD**  
Notch Mechanisms Underlying Hypoxia Tolerance  
American Heart Association | $280,000  
July 2008-June 2012 |
Paul Quinton, PhD investigates the effects of the genetic defects in fluid and electrolyte transport in cystic fibrosis on pathophysiology in the airways, intestine, and sweat glands in cystic fibrosis and related diseases.

Mindy Ross, MD, MBA completed fellowship training in June 2013 and is currently on a training grant scholar for research in clinical informatics, focusing on electronic health record and asthma management optimization.

Julie Ryu, MD studies innovative methodologies including remote monitoring of asthma management and bronchoscopy as a potential tool to diagnose asthma in children.

A.K.M. Shamsuddin, PhD studies β-adrenergic sweat stimulation, sweat diagnostic testing and electrolyte transport across normal and cystic fibrosis sweat gland and native small and large airway (pigs and humans) epithelia.

Simon Wong, PhD studies novel therapeutic modalities and therapeutic targeting in animal models of lung fibrosis, as well as possible therapeutic roles of microvesicles in lung fibrosis.

Jin Xue, MD, PhD studies the genetic and molecular basis of sodium hydrogen exchanger isomorph 1 (NHE1)-mediated cardiac injury.

Hang Yao, PhD studies the cellular and molecular mechanisms of penumbral cell death in focal cerebral ischemia.

Ning Yang, MD, PhD investigates the role of HCO3- in normal mucus formation/release and how to correct the abnormal mucus in cystic fibrosis in the intestine and other associated organs.

Huiwen Zhao, PhD, studies mechanisms of hypoxia adaptation using induced pluripotent stem cells-derived neurons obtained from patients with chronic mountain sickness.

Dan Zhou, PhD studies the genetic and molecular mechanisms underlying hypoxia and hyperoxia adaptation and tolerance.

**POST-DOCTORAL FELLows**

**Research Activities**

**Mateja Cernelc-Kohan, MD**
Postdoctoral Research Project: Role of extracellular microvesicles in Pulmonary Fibrosis

**Matthew Pamenter, PhD**
Postdoctoral Research Project: Understanding the role of innate immunity in ischemic neurodegeneration in the penumbral region

**Tsering Stobdan, PhD**
Postdoctoral Research Project: Hypoxic/high altitude genetic adaptation

**TEACHING AND TRAINING ACTIVITIES**

**Priti Azad, PhD**
- Mentored undergraduate internship student Daya Raman for two quarters (Winter and Spring 2011)
- Mentored Fellow and undergraduate and graduate interns (2012-present)

**Robert Douglas, PhD**
- Mentors trainees
- Presenter at local Research in Progress and Journal Club meetings
- Mentors one undergraduate student

**Abigail Garcia, MD**
- Presenter at monthly Pediatric GI Core Lecture Series for residents and students
- Presenter at local Research in Progress and Journal Club meetings

**James S. Hagood, MD**
- Participates in teaching rounds with fellows, pediatric residents and students
- Mentors/advises postdoctoral fellows and junior faculty
- Mentor, advisor, thesis committee member for graduate students
- Mentors undergraduate student 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
- Co-Directs Child Health Research Seminars (departmental faculty research forum)

**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 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)
- Teaches bi-weekly Journal Club
- Weekly hospital rounds and bi-weekly pulmonary rounds
- Organizes the medical students/pharmacy students (year 1) course (with Albert La Spada) in medical genetics/genomics and teaches in it

**He Huang, PhD**
- Presenter at local Research in Progress and Journal Club meetings
- Mentors one undergraduate student

**Daniel Lesser, MD**
- Assistant Director, Pediatric Pulmonary Training Program
- 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

**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
- Speaker for community pediatricians in a variety of settings

Mark S. Pian, MD
- Director, Pediatric Pulmonary Training Program
- Course director, Pediatric Sub-internship
- Faculty, Principles to Practice, School of Medicine Core Course
- Faculty, Practice of Medicine, 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

Paul M. Quinton, PhD
- Teaches human physiology of respiration and renal function to first-year medical students at UC Riverside
- Instructs students and scholars in his laboratory at UCSD
- Co-Directs Child Health Research Seminars (departmental faculty research forum)

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

Mindy Ross, MD
- Presenter at monthly Pediatric Pulmonary Case Conferences for residents and students and participant/presenter at lung physiology monthly meetings
- Instructs residents about palliative care with mock-scenarios (comfort codes)

Julie Ryu, MD
- Clinical Director, Division of Respiratory Medicine
- Participates in Clinical Leadership. Administrative/Management, Program Development and Education
- Supervises pediatric residents during inpatient and outpatient clinical activities
- Faculty Advisor for 2 pediatric residents
- Mentor, advisor, thesis committee member for graduate students
- Presenter, bimonthly case conferences with medical students and interns
- 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

Simon Wong, MD
- Provides research training for post-doctoral fellows, graduate students, undergraduate students and junior faculty in advanced in vivo lung models
- Supervises undergraduate students in laboratory rotations
- Presenter in laboratory seminars and journal club

Jin Xue, MD, PhD
- Presenter in the lab, Pediatrics department, collaborative groups at UCSD, Journal Club meetings, as well as in national and international conferences
- Mentor of one master student, one medical student and two undergraduate students
- Scientific consultation/research advice to two visiting scholars

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

Ning Yang, MD, PhD
- Mentored an undergraduate summer student
- Assist in fellow's research in Dr. Paul Quinton's lab

Dan Zhou, PhD
- Mentors two postdoctoral fellows
- Advises three graduate students' doctoral dissertations (thesis committee member)
- Presenter at local Research in Progress and Journal Club meetings

POST-DOCTORAL TRAINEES TEACHING AND TRAINING ACTIVITIES

Mateja Cernelc-Kohan, MD
Organizing Pulmonary Clinical Case Imaging and Pathology Conferences, RCHSD, September 2011-June 2012, Western States Ped Pulm Case Study, Video Conferences; Case presentation “Radiation Pneumonitis in a Child with Wilms Syndrome”, January 18, 2012

AWARDS, HONORS, AND MAJOR PRESENTATIONS

James S. Hagood, MD
Who’s Who in Medicine and Healthcare, 2011-present
Scientific Advisory Committee, Children's Interstitial Lung Disease (chiLD) Foundation, 2007-Present
Ad hoc Member, Lung Injury Repair and Remodeling Study Section, NIH/Center for Scientific Review
Visiting Professor, University of Southern California, Los Angeles, CA, 2011
Organized international chiLD Research Conference, supported through an NIH R13 grant, June 2012
Gabriel G. Haddad, MD

- Visiting Professor, Georgia Institute of Technology and Emory University, Atlanta, GA, 2012
- Invited Speaker for Grand Rounds, Kapiolani Medical Center for Women and Children, University of Hawai‘i, 2012
- Invited Panelist, NIH/NHLBI Idiopathic Pulmonary Fibrosis Strategic Planning Workshop, November, 2012
- Invited Speaker for Congress of Pneumology and Thoracic Surgery Merida, Mexico, April 2013

Invited Speaker, Topics and Advances in Internal Medicine, San Diego, CA, March 2012
Invited Speaker, Experimental Biology Meeting Symposium: Hypoxia Inducible Factors (HIFs) in Health and Disease, San Diego, CA, April 2012
Invited Speaker, Tulane Hypertension & Renal Center of Excellence, Tulane University, Department of Pediatrics, May 2012
Invited Speaker, 10th International Conference on Pathways, Networks, and Systems Medicine Conference, Ixia, Rhodes, Greece, June 2012
Invited Speaker, BMS Orientation, UCSD, La Jolla, CA, September 2012

Invited Speaker, The 2012 International Conference Stillbirth, SIDS and Infant Survival, Baltimore, MD, October 2012
Invited Speaker, Munich Lung Conference 2012, Munich Germany, October 2012
Invited Speaker, Medicine Ground Rounds, UCSD, La Jolla, CA November 2012
Invited Speaker, UCLA Pediatrics Grand Rounds, UCLA, Los Angeles, CA December 2012
Invited Speaker, Neuromodulation in CNS: Bench to Bedside, Beirut, Lebanon, January 2013
Invited Speaker, Evolutionary adaptation to hypoxia at high altitude: of Drosophila and people. Joe Warshaw Memorial Lecture, AMSPDC, Atlanta, March 1, 2013

- Invited Speaker, Georgia Institute of Technology and Emory University, Atlanta, GA, 2012
- Invited Speaker, Section of Physiology ReInvited speaker - Translational Preconditioning Conference, Miami, FL, December 2011
- Invited Speaker, Western Society for Pediatric Research, Carmel, CA, January 2012
- Invited Speaker, Peter Lutz Memorial Symposium, Florida Atlantic University, Boca Raton, FL, January, 2012
- Invited Speaker, Basic and Translational Research Seminar, Children’s Hospital Colorado Research Institute, Aurora, CO, March 2012
- Invited Speaker, Topics and Advances in Internal Medicine, San Diego, CA, March 2012
- Invited Speaker, Experimental Biology Meeting Symposium: Hypoxia Inducible Factors (HIFs) in Health and Disease, San Diego, CA, April 2012
- Invited Speaker, Tulane Hypertension & Renal Center of Excellence, Tulane University, Department of Pediatrics, May 2012
- Invited Speaker, 10th International Conference on Pathways, Networks, and Systems Medicine Conference, Ixia, Rhodes, Greece, June 2012
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- Invited Speaker, Evolutionary adaptation to hypoxia at high altitude: of Drosophila and people. Joe Warshaw Memorial Lecture, AMSPDC, Atlanta, March 1, 2013
Daniel Lesser, MD

Meerana Lim, MD
Castle Connolly Top Doctor, 2012, 2013

Mark S. Pian, MD
America’s Best Doctors, 2009-present
Member, Steering Committee, CF Foundation Therapeutic Development Network
Member, Protocol Review Committee, CF Foundation Therapeutic Development Network
Secretary-Treasurer Pediatric Pulmonary Program Directors Association
Physician Excellence Award, For Excellence in Teaching, RCHSD, 2011
Kaiser Excellence in Teaching Award (nominated), UCSD School of Medicine Class of 2011
Invited Speaker, Pediatric Palliative Care Studies. North American Cystic Fibrosis Conference, Orlando, FL, 2012
Gold Humanism Award (nominated), UCSD School of Medicine, 2013
Spirit of CFF Award for Innovation, Cystic Fibrosis Foundation San Diego Chapter, 2013

Paul M. Quinton, PhD
Rady Children’s Hospital Research Award, 2011
Invited Lecture, Exploding Mucins with HCO3- Mucins in Health and Disease. 11th International Workshop on Carcinoma-associated Mucins, Robinson College, Cambridge, UK, July 12, 2011

Mindy Ross, MD, MBA
Invited speaker, Pediatric Grand Rounds Scripps Mercy, San Diego, CA, January 24, 2013
Invited speaker, Summer Pediatric Grand Rounds, Rady Children’s Hospital, San Diego, CA, August 16, 2013
ATS Fellows Travel Scholarship

A.K.M. Shamsuddin, PhD
Recipient of Cystic Fibrosis Foundation (CFF), Pilot and Feasibility Grant as a P.I. for the project “HCO3- Mucins in Health and Disease.” 2011 – 2013

Ning Yang, MD, PhD
Jon I. Isenberg Endowed Fellowship, 2011
Elizabeth Nash Memorial Fellowship Award, 2011
Yang N, Quinton PM. Can bicarbonate help mucus release in CF. Elizabeth Nash Memorial Fellowship Colloquia, Oakland, CA, November 2011
Yang N, Quinton PM. CFTR-dependent HCO3- secretion decreases the viscosity of mucus in wt mouse distal small intestine. 25th Annual North American Cystic Fibrosis Conference, Anaheim, CA, November 2011
Yang N, Quinton PM. Role of Bicarbonate in intestinal mucus secretion. 25th Annual North American Cystic Fibrosis Conference, Anaheim, CA, November 2011
Yang N, Quinton PM. Can we correct defective CFTR-induced abnormal mucus in Cystic Fibrosis? National Cystic Fibrosis Family Education Conference, Redwood City, CA, July 2012

Yang N, Quinton PM. Can we correct defective CFTR-induced abnormal mucus in Cystic Fibrosis? Elizabeth Nash Memorial Fellowship Colloquia Oakland, CA, February 2012

Dan Zhou, PhD
Invited Speaker, Mechanisms Underlying Hypoxia Adaptation. Beijing Genomics Institute, Chinese Academy of Sciences, Beijing, China, September 2011
Invited Speaker, Ultrastructural Modifications in the Mitochondria of Hypoxia-Adapted Drosophila melanogaster. EB2012 Meeting. San Diego, April 2012

POST-DOCTORAL FELLOWS
AWARDS, HONORS, AND MAJOR PRESENTATIONS
Mateja Cernelc-Kohan, MD
Postdoctoral support from T32 multidisciplinary training grant, “Training in Respiratory Biology: Innovate, Integrate, and Translate”

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
Azad P, Ryu J, Haddad GG, Distinct role of Hsp70 in drosophila hemocytes during


**FLIP BOOK TO READ**

**THE DEPARTMENT OF CHILDREN’S SURGERY BIENNIAL REPORT**