

JANUARY-JUNE 2010

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MESSAGE FROM THE CHAIR

Dear Colleagues,

I am thrilled to share with you the launch of our very first Newsletter!

Over the past several months, we have had tremendous momentum and success in every Division, and I am delighted to highlight many of our recent Divisional activities in the clinical, research, community, and educational arenas. As one of the largest departments within the School of Medicine, the Department of Pediatrics is comprised of 21 Divisions with over 200 full-time faculty, 54 residents, three chief residents, 60 MD & PhD post-doctoral fellows and approximately 275 staff employees. We anticipate revenues for FY2010-11 to be over \$48 million for research and approximately \$49 million for clinical.

In the busy fall months ahead, please join me in welcoming our new incoming interns, residents, fellows, as well as new faculty and administrators throughout the Department. I look forward to celebrating your successes and new initiatives as we continue to move toward our goals.

Best Regards,

Gabriel G. Haddad, MD

Professor of Pediatrics and Neuroscience
Chairman, Department of Pediatrics
University of California San Diego
Physician-in-Chief and Chief Scientific Officer
Rady Children's Hospital of San Diego

DEPARTMENTAL NEWS

Division of Allergy, Immunology and Rheumatology

CLINICAL

The Division continues to provide care for children with allergic, immunological, and autoimmune disorders throughout San Diego, Imperial, and Riverside Counties. Currently, 200 new outpatient consults are performed per month at 6 sites throughout the three Counties. Dr. Burns and the Kawasaki disease team have diagnosed and treated 60 new Kawasaki disease patients since January of this year. The Eosinophilic Disorders Clinic cares for children with eosinophilic Esophagitis (EE) and other eosinophilic GI disorders and has become the tertiary referral center for the western United States.

RESEARCH

There are presently 5 NIH supported researchers (Drs. Burns, Hoffman, Aceves, Tremoulet, and Franco). In the past year the Division has published 16 peer-reviewed papers in journals including *Journal of Infectious Diseases*, *Gastroenterology*, *Journal of Allergy and Clinical Immunology*, and *Nature Genetics*. Translational research by Dr. Hoffman has led to FDA approval for new therapy for cold induced auto-inflammatory syndrome, a disease for which he discovered the genetic defect. Drs. Aceves and Bastian with Dr. Dohil from the GI division published a successful phase 2 trial of the first topical drug, oral viscous budesonide, targeted specifically to the esophagus for treatment of EE. Dr. Horner has published influential work on the ontogeny of the allergic response and Dr. Burns' work continues to advance our understanding of the complex genetics of KD. Dr. Tremoulet has been appointed one of only 11 Harold Amos Medical Faculty Development Program Scholars nationwide. This coveted award provides more than \$400,000 over 4 years to support her KD research.

EDUCATION

The Division trains 1 fellow yearly in Allergy and Immunology in conjunction with the adult Division at UC San Diego. Dr. Ghandi, a recent trainee, published this year with Dr. Hoffman the first description of a new genetic disorder, Familial Atypical Cold Urticaria, in the *Journal of Allergy and Clinical Immunology*. Dr. Michelle Hernandez, now an assistant professor at UNC, published with Dr. Bastian a chapter for the text "The Molecular Pathology of Hematolymphoid Diseases." Two trainees from the KD program presented their research this year at the Society for Pediatric Research. Members of the Division have presented CME presentations and research at a number of national meetings including the AAAAI Annual Meeting, Society for Pediatric Research, Digestive Disease Week, and the American Academy of Dermatology Annual Meeting. With respect to national service, Dr. Burns is a member of the prestigious American Heart Association Rheumatic Fever, Endocarditis and Kawasaki Disease Committee, and Dr. Aceves is the current Chair of the Medical Advisory Board for the national advocacy and education organization APFED (American Partnership for Eosinophilic Disorders).

Division of Cardiology

CLINICAL

The Division of Pediatric Cardiology (Drs. Moore and El Said) instituted the first percutaneous valve program for patients with failing pulmonary valves and conduits in California this spring. Most patients have been teenagers or young adults with repaired Tetralogy of Fallot. To date, 8 percutaneous pulmonary valves have been implanted, with referrals for this procedure received from Los Angeles and Hawaii. This capability has already changed the algorithm for care of patients with Tetralogy of Fallot and similar diseases.

RESEARCH

In the area of valvar degeneration, Dr. Nigam's lab discovered and reported that several microRNAs were down regulated in the aortic valve leaflets of patients with calcific aortic valve stenosis and that these micro RNAs modulate calcification related gene expression. (*J Heart Valve Dis* 2010; 19:459-465). In the area of clinical research, Drs. El Said and Lamberti reported a new technique for pulmonary artery banding which allows adjustment of the band in the catheterization laboratory to accommodate patient growth. (*Ped Cardiol* 2010: in press) This should be a useful, practice-changing technique.

EDUCATION

Drs. Moore and Lamberti hosted a 3-day national educational symposium in January entitled: "Evolving Concepts in the Management of Complex Congenital Heart Disease." Division faculty - Drs. El Said, Printz, Perry, and Pastuszko were among the 21 nationally known cardiologists and surgeons who presented. There were over 200 who attended the symposium, and the event received excellent reviews. In addition, Dr. Moore was selected by the Society for Cardiovascular Angiography and Intervention (SCAI) to give the Mullins Lecture at this year's annual meeting. Dr. Moore's lecture was entitled "Stents: Past, Present and Future."

Division of Child Development and Community Health

CLINICAL

Clinical services in the Division of Child Development and Community Health include Developmental and Behavioral Pediatrics and School Health Consultation. From January through June 2010, Drs. Stein, Gahagan and Liu in Developmental-Behavioral Pediatrics provided comprehensive evaluations for 250 new patients in the Rady Children's Hospital consultation clinic, the First Five Clinic at South Bay Community Services, and the California Regional Center in San Diego. Dr. Taras provided consultation for safe integration of medically fragile children into school for 7 school districts in San Diego and Los Angeles counties.

RESEARCH

The Division has been awarded \$3.4 million dollars for a 2-year CDC-funded obesity prevention project led by Michelle Zive, M.S. In May, the Division was delighted to host its first Community Partners Event, themed "Come Grow with Us," aimed at creating future potential for collaborations with community and other local organizations.

EDUCATION

The Division is excited to announce a newly-approved 3-year ACGME fellowship program and plan for its first fellow to start in 2011. Fellows will have the opportunity to experience Developmental-Behavioral Pediatric practice in different systems of care including UC San Diego, Rady Children's Hospital San Diego, Naval Medical Center, and Kaiser. María Luisa Zúñiga, Ph.D., received a Diversity Supplement to support qualitative research training for Dr. Fátima Muñoz in Mexico. Dr. Martin Stein recently published a supplement as Section Editor on "Challenging Cases in Developmental-Behavioral Pediatrics" that was disseminated in both Pediatrics and the Journal of Developmental and Behavioral Pediatrics. UC San Diego and Rady Children's Hospital were both noted on the cover, reaching over 60,000 pediatricians.

Division of Dermatology

CLINICAL

The Eczema and Inflammatory Skin Disease Center continues to be a world leader in research, patient care, and education of patients, families, and health care professionals. The Center was proud to receive the American Academy of Dermatology Gold Triangle Award for Education as Intervention: The Eczema Center at Rady Children's Hospital, and cited with another AAD Award for print media given to the Journal 'Skin and Aging' for the featured cover article about the Center's Allergic Contact Dermatitis program. Dr. Sheila Fallon-Friedlander was elected as President-Elect of the Society for Pediatric Dermatology.

RESEARCH

The Division was honored in receiving the First Prize Research Award at the Society for Pediatric Dermatology Annual meeting for the work of Drs. Catalina Matiz, Sharon Jacob, and colleagues, that explored the testing of children with eczematous dermatitis for specific contact allergy to products used on the skin or that the skin may come in contact with. Major articles on acne in pre-teens and teenage years were published based on the work of the Rady Dermatology Research Group, including a recent article in *Pediatrics* on treatment of acne in 8 to 12 year olds, the first article on therapy in this age group. The Birthmarks and Vascular Lesion Center is expanding its services, continuing to see children from throughout the world. New lasers are expanding the capabilities of its physicians, allowing improved treatment of blood vessel tumors such as hemangiomas and malformations, as well as non-vascular birthmarks. Dr. Wynn Tom presented interim results of her studies on the impact of systemic medications on the skin's immune system. Exciting research utilizing new 'fractionated' laser energy is being performed to improve burn scars, surgical scars and birthmarks. In association with Navy Medical Center dermatology laser physicians and UCSD, the Rady Children's Hospital Dermatology group is translating this technology, being used in a 'wounded warrior' program, to children, attempting to minimize the lifetime of problems that scars can cause both medically and psychosocially.

EDUCATION

The Eczema Center was recognized as a leader in developing web-based education, including video learning that is being used throughout the world. The Pediatric Dermatology Fellowship is the largest in the country, with 4 clinical and 1 research fellows engaged in advanced study and research of Pediatric and Adolescent Dermatology. Dr. Magdalene Dohil presented research

findings at the International Society of Atopic Dermatitis on how the Eczema School Programs, group-based teaching sessions generally held in the evening or on weekends, influenced the knowledge and care of atopic dermatitis. Dr. Lawrence Eichenfield was honored as the Pasquariello Lecturer at Children's Hospital of Philadelphia and as the Sidbury Lecturer at Duke University and Medical Center. Dr. Lawrence Eichenfield was a featured speaker and Session Co-Chairperson for the International Workshop on Atopic Dermatitis Therapy held in Toulouse, France.

Division of Dysmorphology/Teratology

CLINICAL

The Division's clinical activities are focused in two main areas - the evaluation of children with birth defects throughout San Diego County and Tijuana, Mexico, and counseling pregnant women through the California Teratogen Information Service regarding exposure to various drugs, chemical and environmental agents. Recently, the Division has established a system whereby physicians at UCSD can automatically refer pregnant women to its service through the EPIC system. In addition, the Division has partnered with a number of pharmaceutical companies to sponsor studies of the effect of drugs used for the treatment of autoimmune disease during pregnancy.

RESEARCH

The Division has received federal funding from the Bureau of Advanced Research and Development to study the safety of prenatal exposure to the H1N1 vaccine and from the Agency for Health Research and Quality to study the safety of prenatal exposure to a variety of medications used for the treatment of asthma. This is the beginning of a federally funded effort involving the Division's research program and the Slone Epidemiology Unit at Boston University to provide mandatory post-marketing surveillance to determine the safety of all newly marketed drugs during pregnancy. The study, published in May 2010 in *Arthritis and Rheumatism* entitled "Birth Outcomes in Women Who Have Taken Leflunomide During Pregnancy" is particularly important. The data presented provides reassuring risk assessment information for a drug that has previously been contraindicated during human pregnancy. This is the first example of a study for which the data can be used in the product label to reverse a pregnancy category X designation. Over the last six months initiated efforts by the Division were supported by the National Institute on Alcohol and Alcohol Abuse to establish studies to evaluate the prevalence of the fetal alcohol syndrome in South Korea and Poland. This has involved traveling to both countries examining children in various venues and educating physicians and other health professionals in those countries. Dr. Tina Chambers is the Principal Investigator of the National Children's Study in San Diego County. The study is a federally funded effort to examine the effect of environmental influences on the health and development of 100,000 children across the United States following them from birth to age 21, and will start in San Diego this fall.

EDUCATION

Dr. Chambers has developed an elective within the Skaggs School of Pharmacy on Human Teratology where pharmacy students rotate through the Division on a monthly basis. Over the last six months Dr. Jones has given the Meinhard Robinow lecture at the University of Virginia, has served as a visiting Professor at the University of Pittsburgh, and was a member of the faculty of a

course on Human Teratology at Harvard Medical School. Dr. Chambers has been an invited speaker at the Japanese Teratology Society 50th Anniversary Meeting and at the 6th International Conference on Sex Hormones, Pregnancy and Rheumatology in Lausanne, Switzerland.

Division of Emergency Medicine

CLINICAL

The Division of Emergency Medicine at Rady Children's Hospital continues to provide emergency services to the children of San Diego and surrounding counties. The Emergency Care Center has seen approximately 38,500 patients thus far, this year. The Division's patient volume continues to grow, with its off-site facilities in East County, Mid-City, and North County seeing 16,500 patients additionally, from January to July, 2010.

RESEARCH

The Division has been extremely active academically over the past few months. Division members have published several publications, including papers in *Human Immunology* and *Pediatric Emergency Care*.

EDUCATION

Jen Jacob, won the AAP Fellow Award for best case presentation and Nazli Ghafouri, a recent fellow graduate, had a research project accepted for a poster presentation at this fall's AAP meeting. In addition, Drs. Ishimine and Sharieff presented at Grand Rounds at EM residency programs in Pittsburg, UC Irvine and UC San Francisco, and Dr. Sharieff recently spoke at the American Academy of Emergency Physicians National Scientific Assembly.

Division of Endocrinology

CLINICAL

For the second consecutive year the Division was ranked in the top 30 Children's Hospitals Pediatric Endocrine and Diabetes programs by US News and World Report. The diabetes, endocrine and lipid clinics continue to grow in volume, with an expected likelihood of exceeding 7,000 outpatient visits this year. The Division has continued to add clinics at the Escondido, Murrietta and Encinitas satellites.

RESEARCH

In collaboration with the Pediatrics Diabetes Research Center, the Division successfully helped launch the First Annual PDRC Symposium. Dr. Jane Kim received a Diabetes and Endocrine Research Center (DERC) Grant for \$40,000 as a promising junior faculty in diabetes research. Division fellow, Dr. Audrey Briscoe, received a clinical research grant to study T-Cell responses in children with type 1 diabetes. This is a competitive 2-year grant from the Genentech Center. Dr. Sander recently published in *Developmental Cell*, and Dr. Ulupi Jhala received \$649,075 from JDRF to study epigenetic regulation of the PDX1 gene. Dr. Jhala's research was featured in June on the cover of *Biological Chemistry* in June: Mixed Lineage Kinase-3 Stabilizes and Functionally Cooperates with TRIBBL-3 to Compromise Mitochondrial Integrity in Cytokine-induced Death of Pancreatic Beta Cells. Rohan K. Humphrey, Christina J. Newcomb, Shu-Mei A. Yu, Ergeng Hao,

Doris Yu, Stan Krajewski, Keyong Du and Ulupi S. Jhala, *J. Biol. Chem.* 285:22426-22436, 2010.

EDUCATION

At the annual Endocrine Society Meeting which was held this summer in San Diego, Dr. Gottschalk presented a Meet the Professor Session on "Treatment of Diabetes in Children and Adolescents." Dr. Marinkovic presented "Growth patterns: Short, Tall and In-between" at Mercy Hospital Pediatric Grand Rounds. Dr. Gottschalk presented "Congenital Adrenal Hyperplasia Update" at UCSD Endocrine Grand Rounds.

Division of Gastroenterology

CLINICAL

Earlier this year Dr. Schwimmer was awarded the prestigious AGA Young Investigator Clinical Science Award. In a recent publication in *Gastroenterology*, Dr. Schwimmer reported the development of biologically-based thresholds for ALT in children and demonstrated that the values currently used at Children's Hospitals across the United States are set too high to reliably detect chronic liver disease. These new values are important to millions of children with unrecognized liver disease and will improve the safety of children in clinical trials.

RESEARCH

Dr. Kerri Boutelle, Associate Professor in Pediatrics and Psychiatry, and clinical psychologist in the Division of Gastroenterology and Nutrition, received a \$2 million 5-year grant from the NIH to study a parent-only treatment for childhood obesity. Dr. Lars Bode was elected to the Executive Council of the International Society for Research on Human Milk and Lactation (ISRHML) and will be the incoming Chair of the Research Interest Section on Lactation and Human Milk Research of the American Society for Nutrition. Dr. Paulina Ordonez was recently awarded a Recovery Act Competition RC1 Challenge Grant from the National Institutes of Health to use human embryonic stem cells (hESC) to study Niemann Pick type C, a rare but lethal and incurable childhood lysosomal storage disease. Therapies developed in the GI division (Dohil) have recently completed Phase II national studies and the results have been extremely promising. The initial treatment results of EE with OVB were recently published in *Gastroenterology* and are rapidly becoming a national standard for the treatment of this condition in children and adults.

EDUCATION

Dr. Elizabeth Yu, a second year fellow, was awarded a grant from the Pediatric Scientist development Program (through the NIH) to study cell specific contributions to PPAR α -mediated protection in NASH with Dr. Ron Evans.

Division of General Academic Pediatrics/Adolescent Medicine

CLINICAL

The General Academic Pediatrics and Adolescent Medicine Clinics offers comprehensive well, sick and chronic care for all children from infancy through adolescence, and averages 1,500 visits per month. Directed by Dr. Pickering, the Rady Children's Hospital Special Needs Clinic provides a medical home to medically fragile children from San Diego, Imperial and southern Riverside counties. The Clinic currently follows 300 medically fragile patients, and conducts approximately 60

visits per month. The Premature Infant Nutrition Clinic, directed by Dr. Boies, sees 25 patients per month.

RESEARCH

Dr. Boies' on-going Premature Infant Nutrition Clinic (PINC) project continues to actively collect information on the nutritional needs of premature breast-fed infants. In collaboration with the Division of Neonatology, Dr. Boies, along with a lactation consultant, evaluate breast-fed premature infants discharged from UCSD and other regional Neonatal Intensive Care Nurseries. Dr. Leff is involved with the National Children's Study, a multi-year research grant designed to collect longitudinal data on children to evaluate health outcomes.

EDUCATION

The General Academic Pediatrics /Adolescent Medicine Division is involved in medical education from the first year of medical school to post-fellowship years. This past year, Dr. Crow, has spearheaded the development of the continuity clinic curriculum, standardizing weekly pediatric topics to be discussed during that particular weekly resident continuity clinic. Dr. Boies revamped the fourth year medical student ambulatory pediatric sub-internship curriculum by adding a project requirement that enhances the students understanding of how the community is involved in child health.

Division of Genetics

CLINICAL

The Division of Genetics provides services for pediatric and adult patients with birth defects, inborn errors of metabolism and other genetic conditions. Special clinics provide multidisciplinary services or individuals with Down syndrome, Prader-Willi syndrome, as well as individuals with clefts and craniofacial conditions. The section on biochemical genetics and metabolism provides follow up evaluation for newborns identified as "at risk" through the newborn screening program offered by the State of California. Notably, Dr. Marilyn Jones was named one of San Diego's Top Doctors in 2010.

EDUCATION

The Division of Genetics is pleased to announce that it will commence with the training of Genetics Residents and Genetics Fellows as of July 2011. Dr. Jaime Barea will be joining the Division as a Genetics Fellow at Rady Children's Hospital on July 1st, 2011. The Division is in the process of reactivating its formerly accredited Genetics Fellowship Training Program at this time. The *Genetics in Medicine* course at UCSD headed by Dr. Gabriel Haddad and Dr. Al La Spada will continue for a third year this fall. Comprised of multiple lectures and case discussion classes, twenty genetics professors and physicians are involved with the teaching of this highly successful course which is required for all first-year medical students as part of their 'Foundation Block', as well as second-year pharmacy students.

RESEARCH

The February 5th issue of *Science* featured a policy forum paper from Dr. Theodore Friedman on the challenges of monitoring and preventing the use of performance-enhancing drugs among athletes. The June 24th issue of *Neuron* published a paper with Dr. Al La Spada as the senior author. This study, from the La Spada lab, reported on how cerebellar Purkinje cell neurons die in so-called 'pcd' mice lacking a certain protein - Nna1. The neuron death, which occurs in mice between just 3 to 6 weeks of age, results from mitochondrial abnormalities, potentially linking Nna1 functional pathways to neurological diseases involving mitochondrial dysfunction. Dr. Bruce Barshop was invited to speak at the Burnham Institute Rare Diseases Symposium on the topic, "Real Treatment for (Real) Rare Diseases", and to the Binational Neonatology Conference in Tijuana on the topic, "Seizures Due to Metabolic Disease". A new medical book entitled, *Inherited Metabolic Diseases: A Clinical Approach*, was co-edited by Division member Dr. William L. Nyhan, and was published by Springer-Verlag Berlin Heidelberg.

Division of Genome Information Sciences

CLINICAL

The Division of Genome Information Sciences, in collaboration with Dr. Ken Lyons Jones, was able to obtain samples from 3 families, each of which had a child diagnosed with Kabuki Syndrome. All four members of one family (father, mother, unaffected sibling, and proband) have had their complete genomes sequenced. These are the first patients at Rady Children's Hospital that have had their complete genomes sequenced.

RESEARCH

Researchers in the Genome Information Sciences Division have published four papers in the first half of 2010. These papers have largely involved genomic methods to improve identification of variant DNA bases and assemble genomes. The Division also oversaw the first UCSD Pediatrics RFA for Genomic Pilot Studies. Ten applications aimed at using genomic methods to understand the genetic basis of Pediatric diseases and disorders were received.

EDUCATION

Division Chief, Dr. Kelly Frazer, was an instructor in the *Genetics in Medicine* course for Medical and Pharmacy School Students (2009-2010). Dr. Frazer also lectured at the annual 2010 Continuing Medical Education Conference sponsored by the UCSD School of Medicine Shiley-Marcos Alzheimer's Disease Research Center. The majority of attendees at the meeting were physicians specializing in neuroscience, geriatrics, and family medicine.

Division of Hematology/Oncology

CLINICAL

The Hematology/Oncology Division has comprehensive, multidisciplinary clinics in the following areas: Hematopoietic Stem Cell Transplantation, Hemophilia and Thrombosis, Long Term Follow-up of Cancer Survivors, Neuro-Oncology, and Sickle Cell Disease. The inpatient and outpatient services will be moving into the new RCHSD acute care pavilion in October 2010, occupying the entire second floor. The combined inpatient and outpatient center will include a Stem Cell

Transplant Unit, HEPA filtered rooms, a large infusion center, a procedure room, an outpatient clinic, and an educational center that houses a kitchen where education regarding healthy cooking and eating will be combined with comprehensive teaching programs for patients and families about hematology and oncology disorders.

RESEARCH

The RCHSD/UCSD/St. Jude Children's Research Hospital Alliance has led to the development of ten joint clinical trials, which are currently open to accrual, recently completed, or soon to begin. Drs. Deborah Schiff and Donald Durden are leading that effort along with Dr. Raul Ribeiro from St. Jude. Dr. William Roberts is a founding member of the Neuroblastoma and Medulloblastoma Translational Research Consortium, a 10 institution collaboration focusing on early phase clinical trials. There are currently four Phase I and Phase II clinical trials from the consortium. Through the NCI RAID program, Dr. Durden has developed the first recombinant asparaginase for Phase I/II clinical trials in acute lymphoblastic leukemia and lymphoblastic lymphoma. Dr. John Crawford will be the PI of a clinical trial of a Toll like receptor 3 (TLR3) agonist polyICLC developed by Dr. Durden for patients with low grade glioma. Recently published in May 2010 PLoS One Journal, research from Durden's Lab suggests PTEN expression is a new biomarker that predicts survival in medulloblastoma. It will help in determining a patient's prognosis and suggests a new application of PI-3 kinase inhibitors to this disease.

EDUCATION

The Pediatric Hematology/Oncology Fellowship Program is in its second year, with two first-year fellows and two second-year fellows. The program recently received re-accreditation by the ACGME for four years. There is a dedicated PL2 Hematology/Oncology rotation where second-year pediatric residents are exposed to all aspects of hematology and oncology. Dr. Deborah Schiff served as an ISP mentor for Matthew Chin's study of obesity in patients with ALL and central nervous system leukemia, for Cassie Cline's study of a decision making tool for palliative care patients and their families, and for Annie Chen's study of toxicity associated with Dapsone metabolites. Dr. Donald Durden is serving as the research mentor for Dr. Lisa Hartman, a second-year pediatric hematology/oncology fellow. Their plans are underway for a Phase I clinical trial at RCHSD evaluating sorafenib + vinblastine for relapsed solid tumor patients. Dr. Hartman was awarded scholarship funding in a T32 training grant at the Moores UCSD Cancer Center. Dr. Durden submitted K12 Calebresi Oncology training grant to the NIH as the PI. This will support junior faculty scholars in the area of pediatric oncology research.

Division of Hospital Medicine

CLINICAL

The Division provides clinical care for hospitalized children at the Rady Children's Hospital main campus as well as at Sharp Grossmont and Palomar. The service is quite busy, comprised of high acuity, complex and complicated patients at the main campus and lower acuity patients with a short length of stay at the community sites. Additionally, the Division provides pediatric consultative services for other sub-specialists, participates in ethics consults and is building a sedation practice for hospitalized children requiring moderate sedation for procedures. In addition to care of hospitalized children, the Division provides health care for abused and neglected children,

incarcerated youth, and severely emotionally disturbed children and youth treated in a residential setting. This past year, a palliative care consult service was developed and implemented by Dr. Ami Doshi.

RESEARCH

Papers currently submitted or in process cover a diverse range of topics including apparent life threatening events, bronchiolitis, Methicillin resistant *Staphylococcus aureus*, quality improvement, missed cases of child abuse and prenatal sex identification.

EDUCATION

The Division is active in teaching medical students, residents and fellows, with the majority of Division faculty members serving as resident advisors. The Hospital Medicine Fellowship, now in its 5th year, continues with 2 fellows currently. Dr. Stucky was instrumental in creating and disseminating national core competencies for hospitalists. Dr. Cannavino assumed the role as the Pediatric Clerkship Director for the third year medical students and received the UCSD Pediatric Residency Program Teaching Attending Award. Lastly, the family violence rotation was reviewed and revised, and a hospital medicine elective was developed for residents to allow a more in depth exploration of hospital medicine as a potential career.

Division of Pediatric Infectious Diseases

CLINICAL

The Division of Pediatric Infectious Diseases provides care at RCHSD as well as other hospitals in San Diego including UCSD Medical Center, Sharp Mary Birch and Kaiser Permanente. Division members have provided important clinical input into community-based programs including: the development and implementation of policies for improving immunizations at the local (AAP Chapter 3, San Diego Immunization Coalition, San Diego County Medical Society), state (California Immunization Coalition, California Immunization Committee), and federal level (ACIP, AAP Red Book Committee); the provision of care and development of policies for pediatric patients with tuberculosis through the San Diego County HHSA Tuberculosis clinic; and updating community physicians on emerging infectious diseases and their management including the recent outbreaks of H1N1 influenza and pertussis. The UCSD Mother-Child-Adolescent HIV Program in 2010 celebrated 15 years of successfully preventing transmission of HIV from an infected mother to her infant for all pregnant women in San Diego cared for in the program.

RESEARCH

With over \$6 million annually in grants and contracts, the Division continues to be leaders in pediatric infectious disease research. Division members published two exciting papers in the *Journal of Biological Chemistry* describing genetic variations present in the *Tat* protein of different HIV subtypes that confer important biological properties affecting HIV pathogenesis and disease. Additional research published in the *Journal of the International Association of Physicians in AIDS Care* found a high rate of HIV mother-to-child transmission in women identified in labor as HIV-infected at Tijuana General Hospital emphasizing the need to expand access to prenatal care and HIV screening in Mexico. Further research published and highlighted in the journal *AIDS* was the first

to describe specific host genetic variants in a population of HIV infected persons in Anhui China that altered the risk for development of HIV-related neurocognitive impairment. In January, Dr. Stephen Spector was the recipient of the Rady Children's Hospital Award for Excellence in Research.

EDUCATION

Division members continue to be active participants in the training of medical students, residents, fellows, graduate students and post-doctoral researchers. Faculty have contributed to the development of the new medical school curriculum scheduled to begin with the 2010 entering class and will continue participation in teaching as part of the new medical student program.

Division of Neonatology (Rady Children's Hospital, San Diego)

CLINICAL

The Division of Neonatology achieved national ranking in the *U.S. News and World Report* in the top 30 of Children's Hospitals for the 3rd year in a row. Recognized as an ECMO Center of Excellence, the Division of Neonatology has a full-time faculty of 13 board-certified neonatologists and 12 neonatal nurse practitioners/physicians assistants providing state-of-the-art neonatal services to NICU's within the RCHSD, Scripps, and Palomar/Pomerado Healthcare Systems (211 neonatal beds total). From January to June, 2010, there have been 1043 of neonatal admits total. In addition, the Division's physicians provide medical and neuro-developmental evaluations of high-risk infant graduates from the NICU's serviced by the Division.

RESEARCH

Faculty have published several articles this year, including the *Journal of Perinatology* and *The American Journal of Human Genetics*. The Division has also received IRB approvals for a Multi-center Trial for iNO use to Prevent Premature Chronic Lung Disease, as well as a study on the Impact of Music on Physiological Measures of Stress in Neonates in the Neonatal Intensive Care Unit. Faculty members have also published a chapter in International ELSO Registry on ECPR (Emergency Cardio Pulmonary Resuscitation), earlier this year.

EDUCATION

Division faculty have contributed to the 26th Annual Conference: The Fetus and the Newborn, to be hosted in Chicago, IL in October of this year. Dr. Michael Segall will be the conference co-chair, and many of the faculty members will be presenting. In collaboration with the Academic Division at UCSD, Hillcrest, Division faculty teach 9 Neonatal fellows who spend a significant portion of their 3-year fellowship at RCHSD NICU. Dr. Mark Speziale has presented more than ten talks at RCHSD, 10th Annual Conference for the Health Professional, 1st Annual Regional Congress of Northeast Neonatology, and the March of Dimes. Dr. Michael Segall presented at Neonatal Sepsis, ALS Lecture RCHSD, San Diego, CA, and on Neonatal Transfusion Medicine, Congreso Regional de Neonatologia Del Noreste, in Baja California, Mexico. Dr. Jose Honold presented in Tijuana, Mexico at the National Neonatal Medicine Conference. Dr. David Golembeski spoke at March of Dimes on Prematurity Awareness Day, in Chula Vista, CA.

Division of Neonatology (UC San Diego)

CLINICAL

At the present time there is significant discussion and planning towards the development of a new Neonatal Intensive Care Unit for the UCSD Medical Center. The Division has looked at plans, which will involve development of a new facility at the Thornton site (Jacobs Medical Center). The new unit will be approximately fifty beds and will be built in juxtaposition to the labor and delivery suites with the dedicated resuscitation rooms. The Division hopes that the new facility will be available for occupancy in 2015. The new unit will include plans for an in-unit MRI as well as in-unit operating room and we look forward to the development of this unit.

RESEARCH

The Division continues to be the lead center and Dr. Neil Finer, Director of the Division of Neonatology, is the lead investigator for the NICHD Neonatal Research Network SUPPORT trial. The Division has recruited 1316 infants and have published two initial manuscripts describing both the interventions. The SUPPORT trial is the largest study of its kind to evaluate different pulse oximetry ranges for the preterm infant. Faculty members were instrumental in designing the oximeters utilized in the trial and have been intimately involved with all aspects of the trial design and conduct. In addition, another publication related to the SUPPORT trial was completed. The first author was Wade Rich, the Research Coordinator, describing the antenatal consent process and the limitations of such approach on the actual recruited population. Rich W, Auten K, Gantz M, Hale E, Hensman A, Newman N, Finer NN. Antenatal consent in a trial of immediate neonatal management: Problems, costs and representative enrollment. *Pediatrics* 2010;126:e215-e221 (published online June 2010). Furthermore, the Division has reapplied this June to become members of the NICHD Neonatal Research Network.

EDUCATION

Graduating fellow, Dr. Anup Katheria, who is now junior faculty, was given the Fellow of the Year Award by the pediatric residents. In the past 6 months, members of the Division were active at the Pediatric Academic Societies' Conference and have been invited participants at educational symposiums in the United Kingdom, Ireland, and Russia.

Division of Pediatric Nephrology

CLINICAL

In an effort to achieve a short response time with better cost efficiency, the Dialysis Apheresis Resource Team (DART) at Rady Children's Hospital (who currently provide outpatient hemodialysis) has begun to provide this service for acute dialysis. This is jointly directed by Dr. Peter Yorgin and Dr. Nadine Benador. Planning for the expansion of the outpatient hemodialysis area has begun. The Division's attending-staffed outpatient clinics here at Rady Children's and at Kaiser have expanded by two additional half-day sessions per week to improve access and reduce wait time for referrals. Two half-day clinics have been converted to CCS team clinics. A joint monthly nephrology and urology (stone) clinic has been added. Two continuity clinics for the

nephrology fellows have been added. The 24 hour ambulatory blood pressure program has been expanded.

RESEARCH

Dr. Robert Mak's laboratory recently showed that Vitamin D Receptor Activation suppressed inflammation and reversed cachexia in a mouse model of chronic kidney disease leading to improvement in survival. The new data is the highest-scored abstract in its category chosen for oral presentation at the International Pediatric Nephrology Association Congress in New York City in September 2010. Dr. Mak is also invited to lecture at the same congress on the discovery of a novel central mechanism of renal osteodystrophy via melanocortin signaling.

EDUCATION

Dr. Reznik had 6 presentations at national meetings on leadership and faculty development. Dr. Yorgin had 3 presentations at national meetings on dialysis and anemia. Dr. Ingulli was invited to lecture on transplant rejection and was on the ASPN program committee for the upcoming PAS meeting. Dr. Nadine Benador presented an abstract at the National Dialysis Meeting. Dr. Mak had 3 invited national presentations on the subject of chronic kidney disease.

Division of Pediatric Neurology

CLINICAL

A new Autism/Developmental Disorders Clinic was initiated in March 2010, with participation by Drs. Bui, Lieberman and Trauner. The clinic meets on Friday afternoons. The pediatric neuro-oncology service headed by Dr. Crawford is very busy, with 7 active clinical trial protocols ongoing.

RESEARCH

Dr. Gleeson's publication in *Nature Genetics* (2010) generated widespread interest and several news articles covered his research.

EDUCATION

Dr. Nespeca received the Rady Children's Hospital San Diego award for Excellence in Teaching. Dr. Crawford was an invited speaker for the 16th Annual Conference of Pediatric Hematology-Oncology. Dr. Trauner recently published a book chapter and several articles, and was an invited speaker to the Weil-Cornell Pediatric Neurology Division and the International Child Neurology Congress in Cairo, Egypt.

Division of Pharmacology & Drug Discovery

RESEARCH

Division members have contributed 36 new manuscripts in the peer-reviewed literature from Jan-Jun 2010, including work published in the New England Journal of Medicine, PNAS, Journal of Experimental Medicine, and Nature Reviews Immunology. Dr. Capparelli led the pharmacokinetics core for the landmark NEJM study describing the optimal therapeutic approach to childhood absence epilepsy. During January-June 2010, the Division received new grants from the NIH (\$750,000 annually) and Department of Defense (\$225,000 annually) to study innovative approaches to boost white blood cell function in the treatment and prevention of bacterial infections.

Dr. Tremoulet received a prestigious \$430,000 Harold Amos Medical Faculty Development Program Scholar Award from the Robert Wood Johnson Foundation for her research to discover biomarkers for Kawasaki Disease. Dr. Nizet was elected to the Association of American Physicians.

EDUCATION

Division faculty member Brookie Best, PharmD, jointly appointed with the UCSD Skaggs School of Pharmacy and Pharmaceutical Sciences, designed an innovative Predoctoral Research Training Program in Maternal and Pediatric Pharmacology that was funded for 5 years by the Eunice Kennedy Shriver National Institute of Child Health & Human Development and commenced this summer.

Division of Respiratory Medicine

CLINICAL

The Division of Respiratory Medicine achieved national ranking in the *U.S. News and World Report* ranking of Children's Hospitals for the 2nd year in a row. Drs. Hagood, Haddad, and Pian were recognized as Best Doctors. Dr. Lim has been selected among "Most Influential Doctors" by Qforma/USA Today. Dr. Pian, the Cystic Fibrosis (CF) Center Director, will be honored as a Health Hero at the CF Foundation Gala in September. The Division continues to offer comprehensive consultation and management for children with respiratory disorders in both inpatient and outpatient settings and at satellite offices in Encinitas, Escondido and Murrieta.

RESEARCH

Dr. Haddad has been awarded a \$10 million Program Project Grant from the NIH (Heart, Lung and Blood Institute). He will lead a collaborative team of investigators from UCSD and the Sanford-Burnham Medical Research Institute, to study the impact of low oxygen on cells and tissue in the heart, lung, and brain. Dr. Paul Quinton was selected as the recipient of the prestigious Hans H. Ussing Lecture Award from the American Physiological Society in April. Drs. Hagood, Haddad, Ryu and Finn (Adult Pulmonary and Critical Care Medicine) have been awarded a Health Sciences Academic Senate Award for shared equipment, which has allowed purchase of a FlexiVent small animal ventilator to improve phenotyping of models of lung disease.

EDUCATION

Dr. Kathryn Akong has completed an outstanding first year in ACGME-accredited Respiratory Medicine Fellowship program. Dr. Mindy Ross will begin her first year of fellowship, and Dr. Mateja Cernelc-Kohan will begin in July 2011. Dr. Pian, the Division's Fellowship Program Director, has been selected as a Practice of Medicine (POM) Small Group Leader for 2010-11 by the UCSD School of Medicine. Post-doc Jessie Yang presented her work at the CFRI conference in Redwood City in July. Dr. Quinton gave a lecture at the University Austral, in Buenos Aires, Argentina, this August.

AWARDS & RECOGNITION

Tremoulet Named Harold Amos Scholar Adriana Tremoulet, MD, assistant adjunct professor in the Department of Pediatrics, has been selected as a 2010–2014 Harold Amos Medical Faculty Development Program Scholar. Among thousands nationwide, 11 Harold Amos scholars were chosen this year based on their academic achievement, their commitment to academic research careers and their potential to achieve senior rank in academic medicine.



Schwimmer First to Receive AGA/GRG Young Investigator Clinical Science Award, UC San Diego Dr. Jeffrey Schwimmer, Associate Professor of Clinical Pediatrics, Director of Weight and Wellness, and Director of the Fatty Liver Clinic at Rady Children's Hospital-San Diego, was awarded the 2010 Young Investigator Award in Clinical Science from the American Gastroenterological Association.



Dr. Reznik Inducted into San Diego County's Women's Hall of Fame, 2010 UC San Diego Associate Dean for Faculty Affairs, Dr. Vivian Reznik was inducted into the San Diego County Women's Hall of Fame last week on March 27th, 2010. One of six influential women to be awarded into San Diego's Women's Hall of Fame this year, Dr. Reznik was recognized for her work as a pioneer in faculty development for young people aspiring for careers in academic medicine as clinician and researchers.



Drs. Kenneth Lyons Jones & Victor Nizet elected to Association of American Physicians (AAP) March 8, 2010, San Diego, CA - The Association of American Physicians (AAP) has elected two physician-scientists from the Department of Pediatrics Faculty: Kenneth Lyons Jones, M.D. Chief of Dysmorphology/Teratology, and Victor Nizet, M.D., Chief of Pharmacology and Drug Discovery, to become AAP members. Each year, the Council of the Association elects approximately 60 new members to be announced at the AAP national meeting annually.



FEATURED MILLION-DOLLAR AWARDEES' LIST

Honoring Awardees of \$1 Million+ Grants, January-July 2010



SCIENCE - U.S. Agencies Award \$12.5 million; Chambers Leads National Effort to Reduce Risks of Birth Defects Christina Chambers, Ph.D., M.P.H, Director of the Organization of Teratology Information Specialists (OTIS) Collaborative Research Center, partnered with Boston University to create a Network to track the impact of drugs and vaccines used in pregnancy on birth defect outcomes.



Haddad Receives \$10 Million NIH Program Project Grant to lead Hypoxia Tolerance Research Study Dr. Gabriel G. Haddad, Chair, Department of Pediatrics, UC San Diego, and Physician-in-Chief, Rady Children's Hospital, has been awarded a \$10 million Program Project Grant from the NIH (Heart, Lung and Blood Institute). Dr. Haddad will lead a team of investigators from UCSD and the Sanford-Burnham Medical Research Institute, to study the impact of low oxygen on cells and tissue in the heart, lung, and brain.



\$3.4 Million Awarded to Division of Child Development and Community Health for Obesity Prevention Michelle Zive, M.S., R.D., a Principal Investigator in the Division of Child Development and Community Health, partnered with the County of San Diego, to participate in the U.S. Department of Health and Human Services (HHS) Communities Putting Prevention to Work.

FACULTY WITH \$1 MILLION+ IN GRANT SUPPORT IN ONE BUDGET PERIOD

CHAMBERS, CHRISTINA, Ph.D., M.P.H *Dysmorphology/Teratology*

FRIEDMANN, THEODORE, M.D., Ph.D. *Genetics*

HADDAD, GABRIEL G., M.D. *Respiratory Medicine*

LA SPADA, ALBERT R., M.D., Ph.D. *Genetics*

NIGAM, SANJAY K., M.D. *Nephrology*

NIZET, VICTOR F., M.D. *Pharmacology and Drug Discovery*

SANDER, MAIKE, M.D. *Endocrinology/Diabetes*

SAWYER, MARK H. M.D. *Infectious Diseases*

SPECTOR, STEPHEN A., M.D. *Infectious Diseases*

UPCOMING EVENTS

SEPTEMBER 25, 2010, 9 AM-12 PM : Kawasaki Disease Parent Symposium

Price Center Theatre, UC San Diego

This Symposium will be hosted by the Kawasaki Disease Research Center, Department of Pediatrics. All are invited to attend. Come to learn about Kawasaki Disease, hear research updates and treatment status by KD Experts, as well as follow-ups on KD patients.



To Register for the Event, go here:

http://www.kdfoundation.org/index.php?option=com_chronocontact&chronofromname=KDParentSymposiumSept2010

SEPTEMBER 25, 2010, 5:30-10:00 PM: Kawasaki Disease Benefit Gala, La Costa Resort and Spa, Carlsbad, CA

Join us for an unforgettable evening of music and dancing with American Idol's *Justin Guarini* as Master of Ceremonies, award winning cinematographer, *Jimmy Garcia*, as keynote speaker and *The Jones Revival* as our rockin' dance band. A spectacular dinner will be followed by a presentation of our KD community and a stunning array of live auction items as we raise funds for an incredible cause: an endowed KD research chair at UCSD and a KD diagnostic test! To order tickets or be a sponsor please contact our coordinators: comischell@aol.com 858 205 3113 or alillian@san.rr.com 858 245 3379. For more information visit the website at: www.KDFoundation.org



OCTOBER 10, 2010: Opening of Acute Care Pavilion, Rady Children's Hospital, San Diego



On track to receive patients on October 10, the new 279,000-square-foot Rady Children's Hospital Acute Care Pavilion will house a much-needed surgical center, 84 medical-surgical beds, a neonatal intensive care unit (NICU), and a cancer center. It also will also provide 16 operating rooms with associated support departments, a 28-bed hematology and oncology unit, and a 10-bed bone marrow transplant intensive care unit.

OCTOBER 29, 2010, 8:30-4:00 PM: Pediatric Translational Research Symposium, "Building Bridges to Child Health," Rady Children's Hospital San Diego.

Collaboratively hosted by UC San Diego, Rady Children's Hospital, the Sanford-Burnham Institute, and the Salk Institute, this symposium is open to all clinical and basic scientists, physician scientists, post-docs, residents, and medical students. Topics include: Stem Cell Therapies, Pediatric Oncology, Inflammation, Immunity and Vaccines.



Event Details:

**Medical Office Building (MOB), Rm 113,
Rady Children's Hospital Campus
Friday, October 29th, at 8:30-4:00pm.**



**DECEMBER 11, 2010: Pediatrics Department Faculty Retreat
Institute of the Americas, UC San Diego Campus**

Open to all Pediatrics Faculty, this will be a very important event as we will discuss the future and vision of the Department, collaboratively review current programs, and outline a department-wide roadmap.

NEW GRANTS JANUARY-JUNE 2010

Barshop, Bruce: \$140,841

Proteomic Based Identification of Cysteinylylated Protein in Cystinotic Cells
Awarded by: Cystinosis Research Foundation

Bradley, John: \$ 55,406

An observational Study of the clinical and Virologic manifestation of novel and seasonal influenza
Awarded by: University of Alabama-Birmingham

Chambers, Christina: \$3,650,651

Prospective Surveillance of Pregnant Women Exposed to 2009 A/H1N1 or Seasonal Vaccines, Antivirals or Infected with Influenza
Awarded by: HEALTH AND HUMAN SERVICES OFFICE OF THE SECRETARY

Eichenfield, Lawrence \$133,500

Cross-Sectional Evaluation of Biological Markers of Cardiovascular Disease in Children and Adolescents with Psoriasis
Awarded by: AMGEN

Franco, Alessandra: \$ 386, 250

Impact of TNFa blockade on immune function in acute Kawasaki Disease

Awarded by: NIH

Friedmann, Theodore: \$760,040

Lesch Nyhan Disease: A Model for Complex Genetic, Proteomic and Metabolic Pathway

Awarded by: NIH

Haddad, Gabriel G. : \$10,000,000

Program Project Grant to Lead Hypoxia Tolerance Research Study

Awarded by: NIH (Heart, Lung and Blood Institute)

Haste, Nina: \$12,600

New Antibiotics Against Drug-Resistant Pathogens from Marine Natural Products

Awarded by: NIH

Jantscher-Krenn, Evelyn : \$56,000

Effect of Human Milk Oligosaccharides on Intestinal Glycosaminoglycan Expression as a Potential Mechanism

Awarded by: Max Kade Foundation

Kazemi-Esfarjani, Parsa: \$26,250

Contribution of the polyglutamine-expanded androgen receptor toxicity in the skeletal muscle

Awarded by: Kennedy's Disease Associations

Itkin-Ansari, Pamela: \$138,244

Development of the Theracyte Cellular Encapsulation System for Delivery of hESC-derived Pancreatic Islets and Progenitors

Awarded by: NOVOCELL, INC.

Jhala, Ulupi Satyendra: \$249,437

Mixed Lineage Kinases as Drug Targets in Type 1 Diabetes

Awarded by: JUVENILE DIABETES FOUNDATION

La Spada, Albert: \$337,969

The PPAR-delta Pathway in Neural Function and Huntington's Disease Neuropathology

Awarded by: NIH NATIONAL INSTITUTE OF NEUROLOGICAL DISORDERS AND STROKE (NINDS)

La Spada, Albert: \$99,988

Is the PPAR-Delta Signaling Pathway a Therapeutic Target in HD?

Awarded by: HIGH Q FOUNDATION, INC.

Ladd, Paula: \$35,000

Deconstructing the transcriptional dysregulation of Spinocerebellar ataxia type 7 retinal degeneration

Awarded by: National Ataxia Foundation

Mak, Robert: \$150,000

Energy Homeostasis and Muscle Wasting in Nephropathic Cystinosis

Awarded by: CYSTINOSIS RESEARCH FOUNDATION (IRVINE, CA)

Montgomery, Anthony: \$110,000

Human Stem Cell-Derived Sertoli Cells for Islet Transplantation

Awarded by: JUVENILE DIABETES RESEARCH FOUNDATION

Roberts, William : \$15,000

A Phase 1 Trial of TPI 287 as a Single agent

Awarded by: University of Vermont

Sander, Maik:\$339,999

Beta Cell Stem Cells as Targets for Regenerative Therapies

Awarded by: JUVENILE DIABETES FOUNDATION

Sawyer, Mark: \$124,428

Partnerships to Address IZ Training: Vaccine Safety Communication Materials

Awarded by: AMERICAN ACADEMY OF PEDIATRICS

Shao, Jianhua: \$148,350

Transcriptional Regulation of Adiponectin Gene Expression

Awarded by: AMERICAN DIABETES ASSOCIATION

Shao, Jianhua: \$209,495

Adiponectin and Regulation of Triglyceride Metabolism

Awarded by: NIH NATIONAL INSTITUTE OF DIABETES AND DIGESTIVE AND KIDNEY DISEASES

Tremoulet, Adrianna : \$105,000

Biomarker Panels for Diagnosis of Kawasaki Disease and Prediction of Treatment Response

Robert Wood Johnson Foundation

Zive, Michelle: \$3,400,000

Communities Putting Prevention to Work (CPPW) initiative.

Awarded by: U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES



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