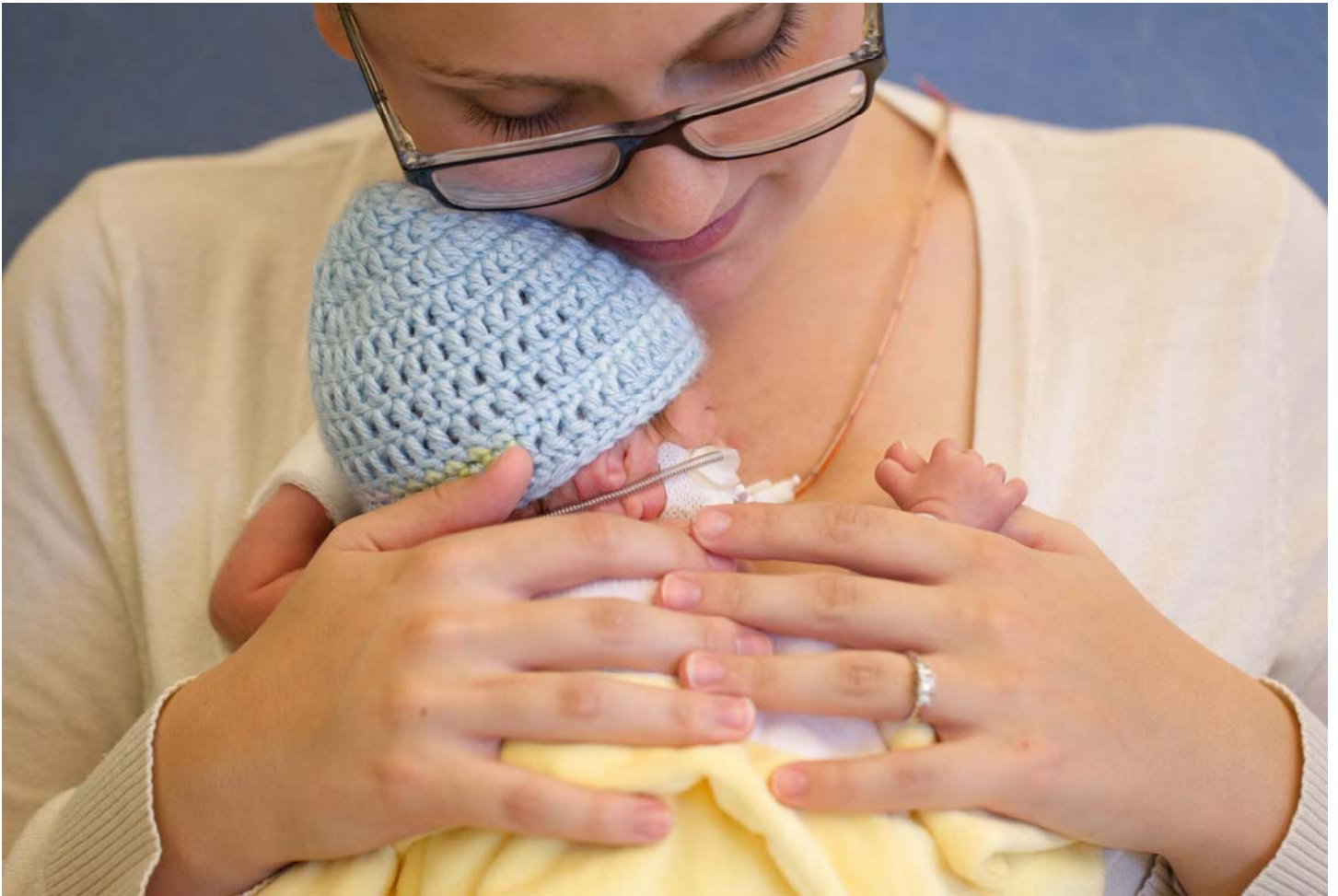


Improving Clinical Research in Maternal Child Health



Annual Report

FY 2017



Mobilize Stanford Discoveries and Expertise to Launch Healthier Lives

Strategic Goals

- Marshall all disciplines at Stanford to solve the health problems of expectant mothers and children
- Increase the number of future academic leaders who will improve the health of expectant mothers and children
- Accelerate innovative research to make transformational discoveries
- Enable the translation of our discoveries into action
- Play a leadership role locally, nationally and globally to promote the health and well-being of expectant mothers and children

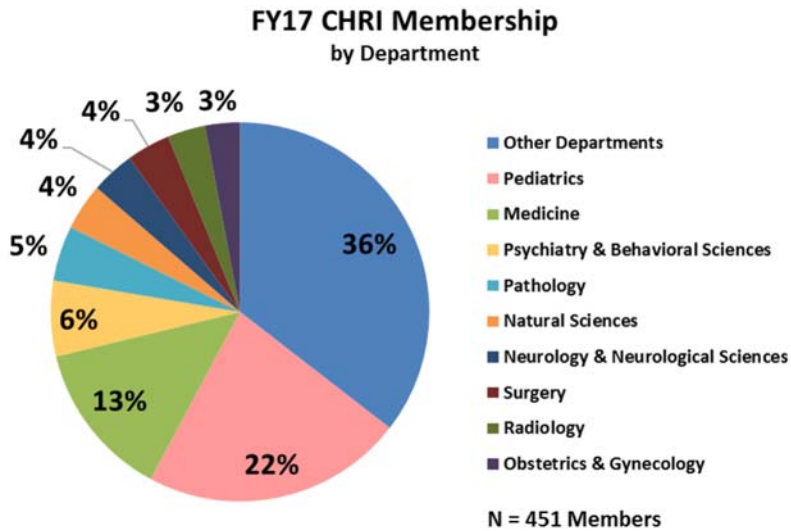
Highlights of FY17

- Awarded **86** new grants for maternal child health research across the University (**Total: \$7,984,392**)
- Formed partnership with Stanford Quantitative Sciences Unit—Available to CHRI Members & their mentees
- Launched new Master's Tuition Support Program
- Support of Spectrum Recruitment Enhancement Core (REC)
- Opened membership to Clinician Educators— CHRI community increased by **28.5% (451 Current Members)**
- Aided Stanford Investigators with the coordination of over **90** research projects

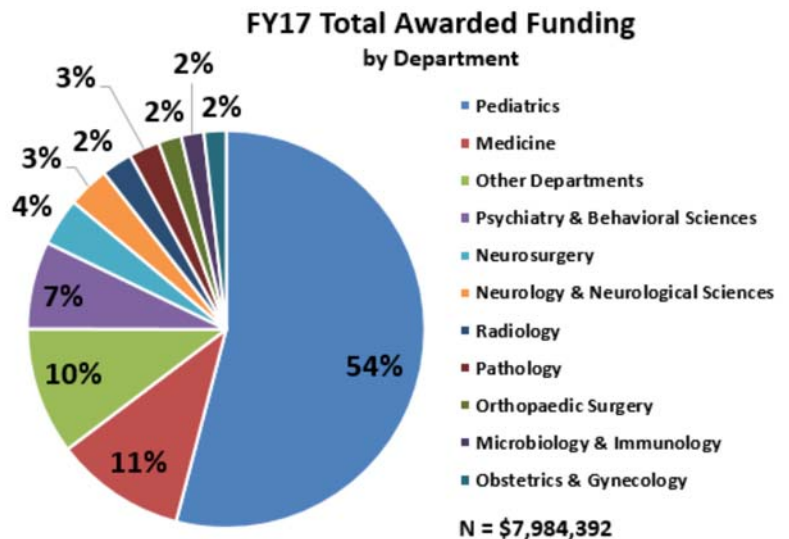
Learn More at chri.stanford.edu

About

Our Community



Funding Overview



Research Support Services

"I have previously found the obstacles to initiating clinical research at Stanford to be daunting, and have at times refrained from starting important early studies due to limitations on my time which precluded completing the IRB, contracting, and budgeting processes.

I am delighted to let you know, that these services and resources have made a big difference in this process, and have greatly enhanced my ability to lead and participate in clinical trials. I am particularly impressed by the expertise you have developed in budgeting for trials, and in analyzing protocols to determine the time commitments of coordinators and investigators. Thank you for this important assistance."

David Rosenthal, MD Professor, Pediatric Cardiology

Recipients of CHRI Support

Faculty Scholars — \$100K / Year for 3-5 Years

Anupama Narla, MD—Assistant Professor of Pediatrics (Hematology/Oncology)

Tashia and John Morgridge Faculty Scholar in Pediatric Translational Medicine (2017-2022)

Study Title: *Molecular Targeting of Erythroid Progenitors and Ribosomes for the Treatment of Bone Marrow Failure Syndromes*

Lisa Chamberlain, MD, MPH—Associate Professor of Pediatrics

Arline and Pete Harman Faculty Scholar (2017-2020)

Study Title: *Pediatrics and Education: A Transdisciplinary Approach to Improving School Readiness*

Elif Seda Selamet Tierney, MD—Assistant Professor of Pediatrics (Pediatric Cardiology)

Stanford Child Health Research Institute Faculty Scholar (2017-2020)

Study Title: *Tele-Clinic Visits in Pediatric Marfan Patients using Parental Echo: The Future?*

Clinical (MD) Trainee — Up to 100% Salary & Benefit Support for 2 Years

Maria Chang, MD—Clinical Fellow, Pediatrics (Endocrinology & Diabetes)

Paul and Yuandi Ramsay Endowed Fellowship

Study Title: *Improving continuous glucose monitor adherence in publicly-insured youth with type 1 diabetes*

Coralee Del Valle Mojica, MD, MPH—Clinical Fellow, Pediatrics (Neonatal & Developmental Medicine)

Ernest and Amelia Gallo Endowed Postdoctoral Fellow

Study Title: *Host and pathogen risk factors in Adenovirus infection in Pediatric Solid Organ transplantation*

Neha Khumbat, MD—Clinical Fellow, Pediatrics (Neonatal & Developmental Medicine)

Ernest and Amelia Gallo Endowed Postdoctoral Fellow

Study Title: *Co-Syntropin stimulation test as a marker of death or major morbidity in premature infants.*

Rayhan Lal, MD—Clinical Fellow, Pediatrics (Endocrinology & Diabetes)

Stephen Bechtel Endowed Fellow

Study Title: *Longevity of MiniMed Pro-Set with Side-port*

Rebecca Richards, MD, PhD—Clinical Fellow, Pediatrics (Hematology/Oncology)

Tashia and John Morgridge Endowed Postdoctoral Fellow

Study Title: *Comparison of TCR- and CAR-based technology to improve rational design of T cell immunotherapy*

Rachel Ruiz, MD—Clinical Fellow, Pediatrics (Gastroenterology)

Tashia and John Morgridge Endowed Postdoctoral Fellow

Study Title: *Development and integration of a TEG protocol in pediatric liver transplant recipients*

Ken Sutha, MD, PhD—Clinical Fellow, Pediatrics (Nephrology)

Ernest and Amelia Gallo Endowed Postdoctoral Fellow

Study Title: *Kidney organoid culture for renal cancer modeling*

Jennifer Tsai, MD—Clinical Fellow, Pediatrics (Hematology/Oncology)

Ann T. And Robert M. Bass Endowed Fellow

Study Title: *Effect of aldehyde dehydrogenase activators on aldehyde levels and hematopoietic stem cell damage*

Peng Wu, MD, PhD—Clinical Fellow, Pediatrics (Hematology/Oncology)

Ernest and Amelia Gallo Endowed Postdoctoral Fellow

Study Title: *Investigating the developmental origin and role of Wnt signaling in hepatoblastoma*

Learn More at chri.stanford.edu

Recipients of CHRI Support

Postdoctoral—\$55K for 1 Year

Fall 2016

Barbara Baro, PhD—Postdoctoral Fellow, Pediatrics (Infectious Diseases)

Study Title: Discovering essential host factors for Plasmodium falciparum malaria

Lang Chen, PhD—Postdoctoral Fellow, Psychiatry & Behavioral Sciences

Study Title: Representation and connectivity abnormality underlying face processing deficit in children with ASD

Julia Co, PhD—Postdoctoral Fellow, Pediatrics (Infectious Diseases)

Study Title: Elucidating Salmonella enterica Typhi infection using a novel human intestinal organoid model

Marianne Goodwin, PhD—Postdoctoral Fellow, Pediatrics (Stem Cell Transplantation)

Study Title: Gene editing of the FOXP3 gene for the cure of IPEX syndrome

Marko Jakovljevic, PhD—Postdoctoral Fellow, Radiology (Pediatric Radiology)

Study Title: Functional Ultrasound Imaging in the Neonate Brain using Coherent Flow Power Doppler

Sooyeon Lee, PhD—Postdoctoral Fellow, Medicine (Endocrinology & Metabolism)

Study Title: The Role of Succinate Dehydrogenase subunit B (SDHB) in β -cell Biology and Diabetes

Jianfeng Li, PhD—Postdoctoral Fellow, Orthopedic Surgery

Study Title: Engineering 3D in vitro co-culture models for deciphering pediatric brain tumor-vascular interactions

Szu-Yuan Pu, PhD—Postdoctoral Fellow, Medicine (Infectious Diseases)

Study Title: Roles of BMP2K in cell signaling and dengue viral infection

Spring 2017

Denise Briggs, PhD—Postdoctoral Fellow, Neurosurgery

Study Title: AMPK-Kinase Activation: A Therapeutic Approach for Mitochondrial Disease

Graham Erwin, PhD—Postdoctoral Fellow, Biochemistry

Study Title: Engineering a better rotavirus vaccine

Xiaoyuan Han, PhD—Postdoctoral Fellow, Anesthesiology, Perioperative & Pain Medicine

Study Title: Identifying a predictive immune signature of preterm birth with mass cytometry

Emily Hembacher, PhD—Postdoctoral Fellow, Psychology

Study Title: The Role of Selective Social Referencing in Children's Language Development

Mathieu Le Gars, PhD—Postdoctoral Fellow, Medicine (Infectious Diseases)

Study Title: CD38 as a regulator of the NK cell immune response to influenza virus during pregnancy

Soah Lee, PhD—Postdoctoral Fellow, Cardiovascular Institute

Study Title: Defining the requirement of sarcomeric protein alignment in gap junction formation in pediatric HCM

Qing Liu, PhD—Postdoctoral Fellow, Genetics

Study Title: Mechanisms of drug-induced developmental toxicity during early cardiomyocyte differentiation

Feng Pan, PhD—Postdoctoral Fellow, Pathology

Study Title: Enhancer/Super-enhancer in the control of leukemia stem cell oncogenic potential in AML

Kathryn Taylor, PhD—Postdoctoral Fellow, Neurology & Neurological Sciences

Study Title: The role of activity-dependent BDNF in pediatric glioma proliferation

Belgin Yalcin, PhD—Postdoctoral Fellow, Neurology & Neurological Sciences

Study Title: Targeting Neuroligin-3 Secretion in the High-Grade Glioma Microenvironment

Recipients of CHRI Support

Pilot & New Idea Grants—\$35K for 1 Year

Fall 2016

Pilot

Daniel Abrams, PhD—Instructor, Psychiatry & Behavioral Sciences

Study Title: Longitudinal development of brain systems underlying voice processing in children with ASD

Tamar Green, MD—Instructor, Psychiatry & Behavioral Sciences

Study Title: Brain and Behavior in Noonan Syndrome

Ngan Huang, PhD—Assistant Professor of Cardiothoracic Surgery

Study Title: Bilayered Nanofibrillar Vascular Graft for Treatment of Congenital Heart Defect

Prasanna Jagannathan, MD—Assistant Professor of Medicine (Infectious Diseases)

Study Title: Impact of DHA-PQ chemoprevention in pregnancy on transfer of antimalarial antibodies to newborns

Jiangbin Ye, PhD—Assistant Professor of Radiation Oncology (Radiation Biology)

Study Title: Targeting one-carbon unit metabolism for neuroblastoma differentiation

New Idea

Valerie Baker, MD—Associate Professor of Obstetrics & Gynecology (Reproductive Endocrinology & Infertility)

Study Title: Vascular health of children conceived via in vitro fertilization

Anne Dubin, MD—Professor of Pediatrics (Cardiology)

Study Title: Stress inoculation through virtual reality in the pediatric electrophysiology laboratory

Sarah Heilshorn, PhD—Associate Professor of Materials Science and of Engineering

Study Title: Development of a Tissue-Engineered Small Intestine

Angelle Desiree LaBeaud, MD, MS—Professor of Pediatrics (Infectious Diseases)

Study Title: The Spectrum of Zika Disease in Grenada

Olivia Martinez, PhD—Professor of Surgery (Abdominal Transplantation)

Study Title: Evaluating for viral etiologies associated with liver failure of unknown etiology

Karen Parker, PhD—Associate Professor of Psychiatry & Behavioral Sciences

Study Title: Biomarker discovery in children with autism

Lee Sanders, MD, MPH—Associate Professor of Pediatrics

Study Title: School-System Consequences of Birth Outcomes: A Medical School-Education School-School District

Dennis Wall, PhD—Associate Professor of Pediatrics (Systems Medicine)

Study Title: The GapMap Project: A mobile surveillance system to map autism as well as gaps in autism services

Spring 2017

Pilot

Sandra Andorf, PhD—Instructor, Medicine (Pulmonary & Critical Care)

Study Title: Characterizing natural tolerance in milk and egg allergic children and their implications

Weidong Cai, PhD—Instructor, Psychiatry & Behavioral Science

Study Title: Linking behavioral variability, sustained attention and dynamic brain states in children with ADHD

Learn More at chri.stanford.edu

Recipients of CHRI Support

Pilot & New Idea Grants—\$35K for 1 Year (Cont'd.)

Spring 2017

Pilot

Elizabeth Egan, MD, PhD—Assistant Professor of Pediatrics (Infectious Diseases)

Study Title: Investigating the relationship between natural malaria resistance and genetic blood disorders

Bereketeab Haileselassie, MD—Instructor, Pediatrics (Critical Care)

Study Title: The Role and Regulation of Mitochondrial Redox Scavengers in Pediatric Sepsis

Sang Ging Ong, PhD—Instructor, Cardiovascular Institute

Study Title: iPSCs for studying transgenerational effects of maternal obesity on offspring cardiovascular health

New Idea

Julie Parsonnet, MD—Professor of Medicine and of Health Research & Policy

Study Title: The skin microbiome, atopic dermatitis and food allergy

Clinical Educator—\$25K for 1 Year

Despina Contopoulos-Ionnidis, MD—Clinical Associate Professor of Pediatrics (Infectious Diseases)

Study Title: Early Life Antibiotic Exposure and Childhood Obesity

Victoria Cosgrove, PhD—Clinical Assistant Professor of Psychiatry & Behavioral Sciences

Study Title: Who is bullied? An examination of biological and psychological correlates of adolescent peer victimization

Hayley Gans, MD—Clinical Associate Professor of Pediatrics (Infectious Diseases)

Study Title: Risk Factors for Cytomegalovirus and Epstein Barr Virus Infections in Pediatric Solid Organ Transplant Patients

Scott Sutherland, MD—Clinical Associate Professor of Pediatrics (Nephrology)

Study Title: Using Kinetic GFR to Identify AKI Events and Progression

Joyce Teng, MD, PhD—Clinical Associate Professor of Dermatology (Pediatric Dermatology)

Study Title: Investigating Genetic Mutations Associated with Lymphatic Malformation

Master's Tuition—Full Tuition & Fees Coverage

Victor Cueto, MD—Clinical Fellow, Pediatrics

MS in Epidemiology and Clinical Research

Neha Khumbat, MD—Clinical Fellow, Pediatrics (Neonatal & Developmental Medicine)

MS in Epidemiology and Clinical Research

Vidya Pai, MD—Clinical Fellow, Pediatrics (Neonatal & Developmental Medicine)

MS in Epidemiology and Clinical Research

Daniel Tawfik, MD—Clinical Fellow, Pediatrics (Critical Care)

MS in Health Services Research

Eureka Certificate in Translational Medicine—Full Tuition & Fees Coverage

Natalia Gomez-Ospina, MD, PhD—Instructor, Pediatrics (Medical Genetics)

Meena Kadapakkam, MD—Clinical Fellow, Pediatrics (Hematology/Oncology)

Melissa Mavers, MD, PhD—Instructor, Pediatrics (Stem Cell Transplantation)

Recipients of CHRI Support

Transdisciplinary Initiatives Program (TIP) - \$100K / Year for 2 Years

PI: Helen Blau, PhD—Professor of Medicine (Microbiology & Immunology)

Co-PI: Sarah Heilshorn, PhD—Associate Professor of Materials Science and of Engineering

Study Title: Role of mechanical stress in telomere shortening in Duchene Muscular Dystrophy cardiomyopathy

PI: Alison Marsden, PhD—Associate Professor of Pediatrics (Cardiology) and of Bioengineering

Co-PI: Doff McElhinney, MD—Professor of Cardiothoracic Surgery

Co-PI: John Eaton, PhD—Professor of Mechanical Engineering

Study Title: Integrated in vitro and in silico models of pulmonary valve dysfunction in children with Tetralogy of Fallot

PI: Fernando Mendoza, MD—Professor of Pediatrics

Co-PI: Jens Hainmueller, PhD—Professor of Political Science and of Political Economy

Co-PI: David Laitin, PhD—Professor of Political Science

Co-PI: Tomás Jiménez, PhD—Associate Professor of Sociology

Co-PI: Duncan Lawrence, PhD—Executive Director of the Stanford Immigration Policy Lab

Study Title: The Health and Well-Being of Children in Immigrant Families

PI: Vinod Menon, PhD—Professor of Psychiatry and of Neurology & Neurological Sciences

Co-PI: James Gross, PhD—Professor of Psychology

Study Title: Neurodevelopmental origins and predictors of childhood and adolescent anxiety: a big-data machine learning approach

Other Awards

Diabetes Research Center—\$20K / Year for 2 Years

Sun Kim, MD, MS—Professor of Medicine (Endocrinology & Metabolism)

David Maahs, MD, PhD—Professor of Pediatrics (Endocrinology & Diabetes)

Cardiovascular Institute (CVI)—\$12.5K for 1 Year

Katharine Edwards, PhD—Clinical Assistant Professor of Medicine (Cardiovascular Institute)

Study Title: Angiographic and Psychosocial Evaluation of Peripartum vs. Non-Peripartum Spontaneous Coronary Artery Dissection: A Collaborative Study

Tracey McLaughlin, MD—Assistant Professor of Medicine (Endocrinology & Metabolism)

Study Title: Predicting Cardiovascular Benefits of Anti-diabetic Drugs

Ashby Morrison, PhD—Assistant Professor of Medicine (Biology)

Study Title: Role of mechanical stress in telomere shortening in Duchene Muscular Dystrophy cardiomyopathy

Virginia Winn, MD—Associate Professor of Obstetrics & Gynecology (Reproductive Biology)

Study Title: Epigenetic Regulation of Cardiac Development

Institute for Immunity, Transplantation and Infection (ITI)—\$25K-\$50K for 1.5 Years

Eliver Ghosn, PhD—Instructor, Genetics

Study Title: Regenerative potential of human fetal versus adult HSC transplantation: B lymphocytes and macrophages heterogeneity

Angelle Desiree LaBeaud, MD, MS—Professor of Pediatrics (Infectious Diseases)

Study Title: Characterizing the Effects of Antenatal Parasitic Infection on Fetal Immune System Development

Nicole Paulk, PhD—Instructor, Pediatrics (Human Gene Therapy)

Study Title: Sexually dimorphic viral-host interactions in pediatric liver diseases

Recipients of CHRI Support

Other Awards (cont'd.)

Institute for Stem Cell Biology and Regenerative Medicine—\$50K for 1 Year

Kyle Loh, PhD—Instructor, Institute for Stem Cell Biology and Regenerative Medicine

Study Title: Expandable region-specific human radial glia: a new tool to study brain development and neurodevelopmental disorders in children

SPARK—\$500K per Year (Amount Varies per Project)

Jeffrey Axelrod, MD, PhD—Professor of Pathology

Study Title: Inhaled repurposed small molecule for treating cystic fibrosis

Rosa Bacchetta, MD—Associate Professor of Pediatrics (Stem Cell Transplantation)—**(x2)**

Study Title: Gene corrected autologous HSCs for treating IPEX syndrome

Study Title: Epigenetic screening for primary immune deficiencies and dysregulation

Julie Baker, PhD—Professor of Genetics

Study Title: Non-invasive diagnostic for placenta accreta

Helen Blau, PhD—Professor of Microbiology & Immunology

Study Title: Targeted delivery of drugs to treat muscle atrophy

Edward Bertaccini, MD—Professor of Anesthesiology, Perioperative & Pain Medicine

Study Title: New class of lower risk anesthetic agents

Robson Capasso, MD—Associate Professor of Otolaryngology—Head and Neck Surgery

Study Title: HB-EGF to prevent post-tonsillectomy hemorrhage

Jennifer Frankovich, MD—Clinical Associate Professor of Pediatrics (Rheumatology)

Study Title: Defining immune mechanisms of Pediatric Acute Onset Neuropsychiatric Syndrome (PANS)

Michelle Monje, MD, PhD—Assistant Professor of Neurology & Neurological Sciences

Study Title: CAR-T therapy for diffuse intrinsic pontine glioma

Matthew Porteus, MD, PhD—Associate Professor of Pediatrics (Stem Cell Transplantation)

Study Title: Gene corrected airway stem cells to treat cystic fibrosis

UHA PCHA Learning Health System Collaborative—\$150K / Year for 3 Years

Kenneth Mahaffey, MD—Professor of Cardiovascular Medicine

C. Jason Wang, MD, PhD—Associate Professor of Pediatrics

Leadership

Governing Board

Jeff Chambers—Chair of Governing Board & Chair of Directors, LPCH

David Alexander, MD—CEO, Lucile Packard Foundation for Children’s Health

Christopher Dawes, MBA—CEO, LPCH

James Dunn, MD, PhD—Surgeon in Chief, LPCH, Professor of Surgery (Pediatric Surgery)

Mary Leonard, MD, MSCE—Director of CHRI, Chair of Pediatrics, Physician in Chief, LPCH

John Lillie—Board of Directors, LPCH

Lloyd B. Minor, MD—Dean, Stanford School of Medicine, Professor of Otolaryngology—Head & Neck Surgery

David K. Stevenson, MD—Co-Director, CHRI, Professor of Pediatrics (Neonatal & Developmental Medicine)

Executive Committee

Mary Leonard, MD, MSCE—Director of CHRI, Chair of Pediatrics, Physician in Chief, LPCH

Anthony Oro, MD, PhD—Co-Director, CHRI, Professor of Dermatology

David K. Stevenson, MD—Co-Director, CHRI, Professor of Pediatrics (Neonatal & Developmental Medicine)

Mary Chen, MS, MBA—Administrative Director of CHRI, Assistant Dean, Maternal & Child Health Research

Executive Committee Members

David Cornfield, MD—Professor of Pediatrics (Pulmonary Medicine) and of Surgery

James Dunn, MD, PhD—Surgeon in Chief, LPCH, Professor of Surgery (Pediatric Surgery)

Michael Longaker, MD—Professor of Surgery (Plastic & Reconstructive Surgery) and of Materials Science & Engineering

Michelle Monje, MD, PhD—Assistant Professor of Neurology & Neurological Sciences and of Pediatrics

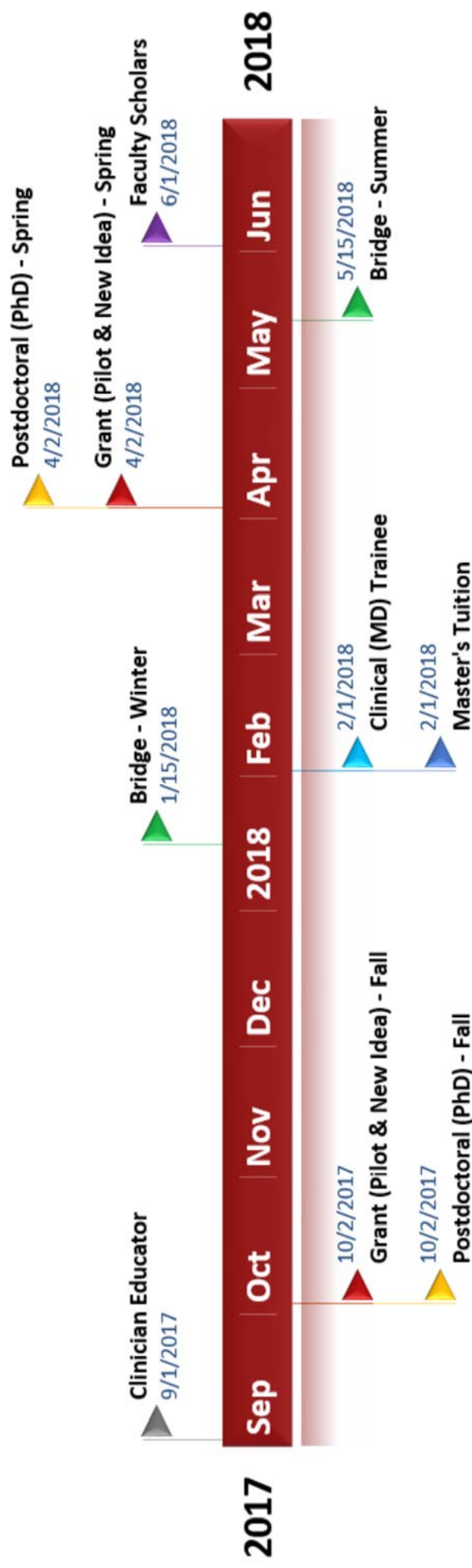
Thomas Robinson, MD, MPH—Professor of Pediatrics and of Medicine

Kathleen Sakamoto, MD, PhD—Professor of Pediatrics (Hematology/Oncology)

Virginia Winn, MD, PhD—Associate Professor of Obstetrics & Gynecology (Reproductive Biology)

Fan Yang, PhD—Professor of Orthopaedic Surgery and of Bioengineering

CHRI Funding Timeline



Contact Information: chri.stanford.edu - chri_admin@stanford.edu - (650) 724-6891