



2009-2019 MCHRI
FACT BOOK

Celebrating a Decade of Innovative Research and Scientific Discoveries in Maternal and Child Health



LETTER FROM THE DIRECTORS

MCHRI was made possible by the foundational support of visionary donors who recognized the Institute's potential to accelerate innovative maternal and child health research across Stanford University. This ten-year report provides countless compelling examples of the return on that investment. Our original donors' generosity and the continued generosity of our community ensure we led the way in groundbreaking discoveries and the development of the next generation of scientists dedicated to mothers and children.

Using targeted funding, both institutional and philanthropic, MCHRI's strategic goals are to:

- Focus Stanford's intellectual talent on solving the greatest health challenges facing expectant mothers and children
- Increase the number of future academic leaders dedicated to these problems
- Accelerate innovative research to make transformational discoveries
- Enable the translation of our discoveries into action, and
- Promote maternal and pediatric health and well-being, nationally and globally

MCHRI creates better lives for children and mothers by increasing high-risk, high-reward research, and speeding the most promising discoveries to patients. We make smart bets, using a rigorous review process to ensure investments go to the most promising people and projects. We invest in people, especially young investigators. The vast majority of scarce NIH funding goes to late-stage research and typically to older investigators. Our brilliant young scientists – some of our boldest thinkers – have the least access to resources to test their ideas. The bulk of MCHRI funding is increasingly targeted to early-career fellows, post-docs, and faculty to provide resources of time to think and funds to take risks.

As the innovation engine of Lucille Packard Children's Hospital Stanford, MCHRI is a powerful magnet that draws together the seven schools at Stanford University. We have made it a priority to catalyze cross-boundary research and to actively advocate for a maternal and child health perspective across all Centers and Institutes in the School of Medicine. We are proud that SPARK, the Byers Center for Biodesign, and the Center for Innovation in Global Health have strong portfolios of maternal and child health-related projects and discoveries. Through special grants only offered to faculty teams from multiple disciplines, we bring together top minds from medicine, biosciences, engineering, computer sciences, psychology, social policy, and other disciplines.

We look forward to the next decade of discoveries fueled by MCHRI. We hope you will join our community through education symposia, grant funding, or use of our clinical research infrastructure. Please share with us your reflections and stories as you read about the inspirational work and dedicated scientists described in this Fact Book.



MARY LEONARD, MD, MSCE
DIRECTOR

Arlene and Pete Harman Professor and Chair of the Department of Pediatrics, Stanford University School of Medicine; Adalyn Jay Physician in Chief, Lucile Packard Children's Hospital Stanford



DAVID K. STEVENSON, MD
CO-DIRECTOR

Harold K. Faber Professor of Pediatrics and Senior Associate Dean for Maternal and Child Health, Stanford University School of Medicine



ANTHONY ORO, MD, PHD
CO-DIRECTOR

Eugene and Gloria Bauer Professor of Dermatology, Stanford University School of Medicine

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ABOUT US



“At Stanford Medicine, we’ve embraced the concept of precision health and its objectives to predict, to prevent, and to cure precisely. Maternal and child health is at the foundation of precision health and research focused on pregnant women and children is informing adult health and our nation’s public health.”

DAVID K. STEVENSON, MD
MCHRI Co-Director
Speaking at 2018 Childx

The Stanford Maternal and Child Health Research Institute accelerates Stanford discoveries to improve the health of

pregnant women and children by fostering transdisciplinary research in the pre-clinical, clinical, and basic sciences. MCHRI works in partnership with the Stanford Children’s Health - Lucile Packard Children’s Hospital Stanford, the Lucile Packard Foundation for Children’s Health, and the Stanford School of Medicine.

As the research and innovation arm of the Stanford Children’s Hospital, MCHRI identifies, connects, and empowers the next generation of leaders and researchers who will advance groundbreaking discoveries that improve the health of expectant mothers and children, both locally and globally. MCHRI leads initiatives as well as invests in centers and institutes across Stanford to leverage existing expertise to accelerate discoveries in maternal and child health.

MCHRI offers a variety of education, resources, and funding mechanisms to support faculty and trainees throughout the School of Medicine and across the university. By growing a community of leading researchers, creating diverse educational opportunities for training and collaboration, and advancing cutting-edge research through rigorous peer-review, the institute is enabling medical discoveries, better care, and even cures.

MCHRI is led by Director Mary Leonard, MD, MSCE, Chair and Professor of the Department of Pediatrics at the School of Medicine and Physician-in-Chief at Lucile Packard Children’s Hospital Stanford, and Co-Directors, David K. Stevenson, MD, Professor of Pediatrics and Senior Associate Dean for Maternal and Child Health, and Anthony Oro, MD, PhD, Professor of Dermatology.

OUR STRATEGIC GOALS

MCHRI is on a mission to mobilize Stanford discoveries and expertise to launch healthier lives.

Focus Stanford's intellectual talent on solving the greatest health challenges facing expectant mothers and children

Increase the number of future academic leaders dedicated to these problems

Accelerate innovative research to make transformational discoveries

Enable the translation of our discoveries into action, and

Promote maternal and pediatric health and well-being, nationally and globally



MCHRI AT A GLANCE

Total amount awarded over the last ten years

\$55,650,293

600+ Members

Number of Stanford faculty and other affiliates who have joined MCHRI membership

Total number of awards given out between 2009 and 2019 for maternal and child health research

724 AWARDS

9

Number of MCHRI programs for Stanford researchers to apply for internal funding opportunities.

Annually provide clinical research support for

100+ STUDIES

10+

Number of MCHRI sponsored partner programs...and growing!

AREAS OF INSTITUTIONAL SUPPORT



FUNDING

Pilot Grants | Career Development Grants | Faculty Scholarships | MS Tuition Transdisciplinary Initiatives



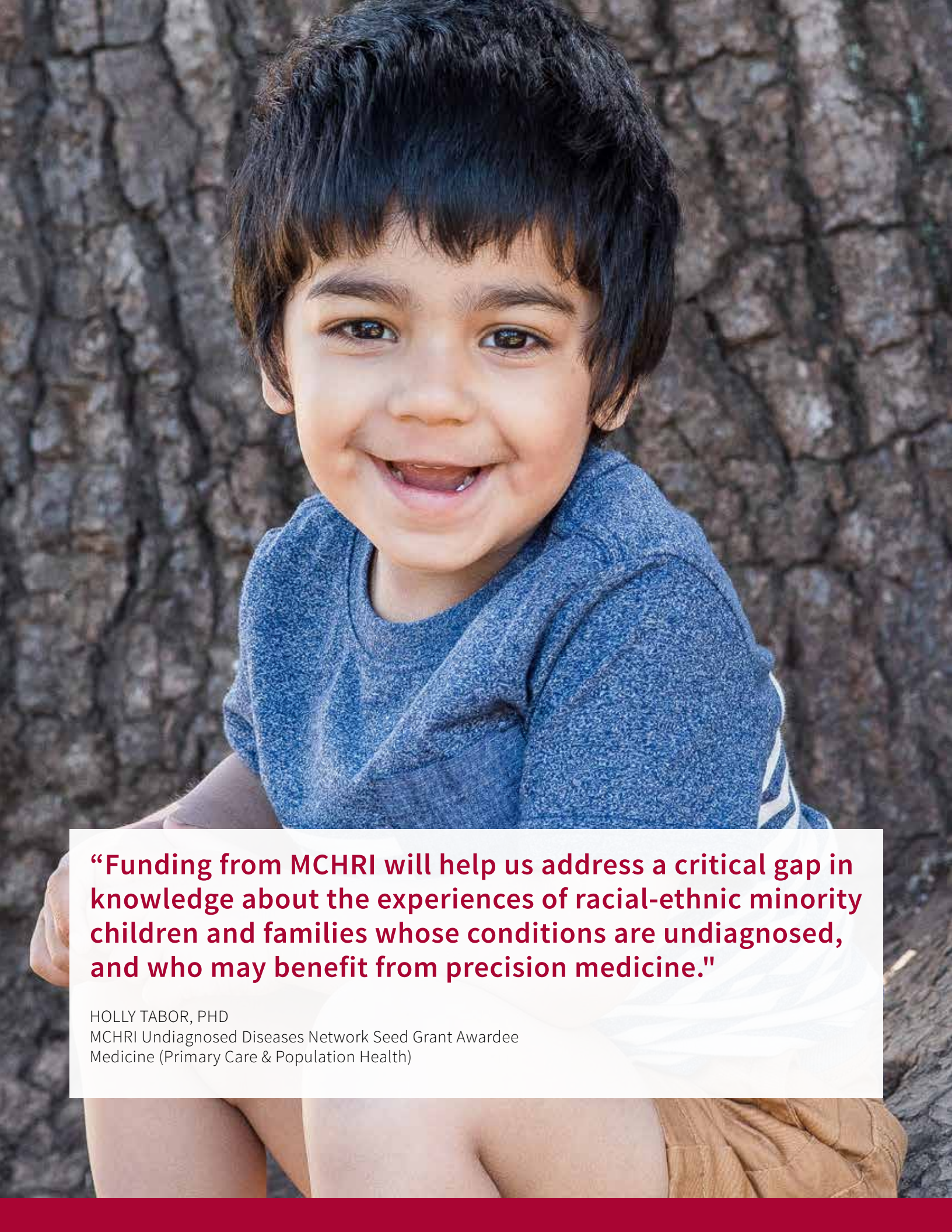
RESOURCES

Biostatistics & Data Management | Consultation | Recruitment Enhancement Core | Regulatory Support | Clinical Research Coordination



EDUCATION

Monthly Seminars | Workshops | Annual Research Symposium | Translational Medicine Courses



“Funding from MCHRI will help us address a critical gap in knowledge about the experiences of racial-ethnic minority children and families whose conditions are undiagnosed, and who may benefit from precision medicine.”

HOLLY TABOR, PHD
MCHRI Undiagnosed Diseases Network Seed Grant Awardee
Medicine (Primary Care & Population Health)

TIMELINE OF MCHRI

The Lucile Packard Foundation for Children's Health raised endowed research fellowships and scholarships

Hugh O'Brodovich, MD, FRCP(C) appointed as the Department Chair of Pediatrics and the Inaugural Director of MCHRI

TOTAL AWARDED TO DATE: \$5M
Funding programs for Pilot Grants, Postdoctoral Support, Clinical (MD) Trainee Support, and Faculty Scholars Awards are initiated

2007 and Earlier

2008

2009



TOTAL AWARDED TO DATE: \$25M

Support for the Stanford March of Dimes Prematurity Research Center

Hosted Inaugural Childx Conference, April 2-3

Creation of Clinician Educator (CE) Grant Program

TOTAL AWARDED TO DATE: \$35M

Hosted Childx Conference, April 21-22

2014

2015

2016





2010

The Official Memorandum of Understanding signed, creating MCHRI



2011

TOTAL AWARDED TO DATE: \$10M

Official launch of MCHRI, September 1



2012

Formed partnerships with SPARK, Stanford Cancer Institute, Stanford Cardiovascular Institute, Stanford Institute for Immunity, Transplantation, and Infection, and Stanford Institute for Stem Cell Biology and Regenerative Medicine

Created Transdisciplinary Initiatives Program



2016

Mary Leonard, MD, MSCE appointed as the Department Chair of Pediatrics and the Director of MCHRI



2017

Formed partnerships between 2017 to 2018 with Global Child Health Program, Stanford Byers Center for Biodesign, Stanford Diabetes Research Center, and Suicide Prevention Through Outreach Grant Program

MCHRI Membership extended to Clinician Educators



2018

TOTAL AWARDED TO DATE: \$50M

Hosted Childx Conference, April 12-13

Formed the Education Committee and launched monthly seminar series

Hosted Inaugural MCHRI Symposium, November 16



LUCILLE SALTER PACKARD CHILDREN'S HOSPITAL

REFLECTIONS



HUGH O'BRODOVICH, MD, FRCP(C)
Arline and Pete Harman Professor
of Pediatrics (Emeritus), Stanford University
School of Medicine

Former MCHRI Director 2008-2016

The History of MCHRI

It was an honor to work with Phil Pizzo, Chris Dawes, other leaders, and our philanthropic community to create Stanford University's Child Health Research Institute and become its inaugural director. The Institute serves as a "spotlight" highlighting the need for relevant cutting-edge research, a "magnet" to attract academicians from Stanford University's seven Schools and innovators from Silicon Valley, and a "beacon" for our philanthropic community. Its goal is to discover new ways to enhance the health of expectant mothers and children everywhere.

The Institute nurtures and helps create the next generation of maternal- and child-health researchers through its mentorship programs, and fellowship and scholarship awards. To enhance health, it supports fundamental discovery, translational, clinical, and health policy research proposals ranging from pilot projects to transdisciplinary research involving multiple Schools at Stanford. This enables it to move from the bench to the bedside to the home and backyard.

We took an inclusive approach for Institute membership. There were only two criteria: be a faculty member in any of Stanford's seven schools and have a track record in, or commit to, the health of expectant mothers and children. Soon, we had Institute members across the entire University.

Scientific advances are incremental and require teamwork; the creation of the Institute was no different. It would not exist without the generosity of our donors. Some components were created during Christy Sandborg's leadership of the preceding Child Health Research Program (CHRP) whose mission was to improve the scientific quality and quantity of clinical research in children at Stanford. CHRP was a result of the Children's Health Initiative and the support of Harvey Cohen, my predecessor. Bonnie Whalen, Mary Chen and other staff facilitated the Institute's journey from a dream to a reality. Further advances are occurring under the leadership of my successor, Mary Leonard, including enhanced clinical research infrastructure and appropriate re-naming as the Stanford Maternal and Child Health Research Institute.

Expectant mothers and children can indeed look forward to an even brighter future!

REFLECTIONS



PHILIP A. PIZZO, MD

Founding Director, Stanford Distinguished Careers Institute; Former Dean, Stanford University School of Medicine; David and Susan Heckerman Professor of Pediatrics and of Microbiology and Immunology

MCHRI's Impact within Stanford Medicine

To protect, enable and advance research that would benefit children, Chris Dawes, the CEO of the Lucile Packard Children's Hospital and I, Phil Pizzo, then dean of the School of Medicine, forged a ten-year Memorandum of Understanding in 2009 to “*provide a national spotlight on the need for child health research; to develop and future clinician-scientists who will create new strategies to main the health of, and find new cures for, the diseases of infants, children and youth; and to use a collaborative, multi-disciplinary approach to solving complex health issues facing children.*” In 2018 the scope of the Institute was appropriately broadened under the banner of the Maternal and Child Health Research Institute.

Over the past decade, the impact of CHRI and now MCHRI on Stanford and the global community has been remarkable. In 2019, MCHRI includes more than 600 members across the School of Medicine and Stanford University. The range of programs supported by MCHRI is impressive and includes Faculty Scholars, support for Clinical (MD) Trainees, Postdoctoral Support as well as support for Transdisciplinary Initiatives, and a number of seed grant and new ideas that have fostered new collaborations and leveraged applications for public and private funding. In addition, MCHRI has forged partnerships with a number of other Stanford programs that further interdisciplinary research. By any standard, MCHRI has indeed become a national model for supporting new and established investigators who conduct interdisciplinary research that is truly solving complex health issues facing mothers and children. Indeed establishing CHRI was an idea whose value has already been demonstrated and whose impact will endure deep into the future. CHRI and MCHRI are truly worthy of celebration.

REFLECTIONS



CHRISTOPHER DAWES, MBA
Former CEO and President, Lucile Packard
Children's Hospital Stanford;
Stanford Children's Health

MCHRI's Impact within Stanford Children's Health

MCHRI turned ten years old in 2019, what are your thoughts on its impact?

Dean Philip Pizzo and I created MCHRI to ensure that we collectively made investments in pediatric and maternal related research. Clinical care is very important; however, research is critical to advancing child and maternal health. We also wanted to attract faculty who would pursue pediatric and maternal research. To further the mission Lucile Packard Children's Hospital has made substantial investments in pediatric and maternal research, and as a result, we have attracted and retained outstanding research faculty. In addition, the Lucile Packard Foundation for Children's Health has also successfully raised hundreds of millions of dollars for pediatric and maternal research to support MCHRI.

Why is it important to have this kind of research initiative?

Lucile Packard Children's Hospital is an academic medical center. It is our obligation, being part of Stanford medicine, that we not only provide outstanding clinical care, but we also advance pediatric and maternal medicine and train primary and specialist providers. MCHRI has been critical to our success as an academic medical center.

How has it benefitted care at LPCH and how has the MCHRI supported LPCH's ascension to a top-rated children's hospital?

MCHRI has been the catalyst for pediatric and maternal research at Packard Children's and the School of Medicine. The best children's hospitals in the country provide not only outstanding clinical care but also support excellent research. MCHRI has certainly enabled Packard Children's to be nationally ranked and recognized.

What are your hopes for the MCHRI's future?

I would like to see MCHRI expand to support more research. It is also important to sustain the funding for MCHRI and over time raise an endowment.

Christopher G. Dawes passed away on June 29, 2019 after a courageous battle with amyotrophic lateral sclerosis (ALS). During his time, he helped build the hospital into a nationally renowned center for advanced children's care. He recognized the importance of research to Packard's academic mission and was a strong supporter of the Stanford Maternal and Child Health Research Institute. Chris was greatly beloved by the hospital community for his leadership, his warmth and humble nature, and his passionate advocacy for children's health.

REFLECTIONS



LLOYD B. MINOR, MD
Carl and Elizabeth Naumann Dean,
Stanford University School of Medicine

The Future of MCHRI's Impact within Stanford Medicine

For ten years, the Maternal and Child Health Research Institute (MCHRI) has worked tirelessly to improve the health and well-being of some of our most vulnerable patients: expectant mothers and children. Through the support of transdisciplinary research across Stanford University, funding for researchers, and the creation of diverse education opportunities, the institute has accelerated discoveries that benefit families in the Bay Area and around the world. Undoubtedly, the MCHRI's first decade will only serve as the foundation for further transformative discovery at Stanford Medicine and beyond.





REFLECTIONS



PAUL A. KING

President and CEO, Lucile Packard
Children's Hospital Stanford;
Stanford Children's Health

The Future of MCHRI's Impact within Stanford Children's

A strong research capability is a vital component to our three-part academic and clinical mission. We have and will continue to work closely with all of our partners across Stanford Medicine to support and enable researchers and clinician-scientists to identify how emerging science can be applied to patient care, while safely evaluating new approaches to predicting, preventing, and precisely curing disease.

By supporting the Maternal and Child Health Research Institute (MCHRI) and creating advanced, technology-enabled solutions, we will increase our ability to detect, monitor, and treat child and maternal health issues. Over the course of a decade, MCHRI has provided more than \$55 million to Stanford investigators in both clinical and basic sciences. That substantial investment has had a profound impact on patients and their families, and it has provided a foundation for future advancements in medicine. To be a preeminent healthcare organization, we must continue to prioritize providing appropriate resources to support our academic mission, and the research institute is a key enabler of that strategy.

REFLECTIONS



CYNTHIA J. BRANDT, PHD
President and CEO, Lucile Packard
Foundation for Children's Health

Establishing a Philanthropic Case for Maternal and Child Health Research

The Lucile Packard Foundation for Children's Health and MCHRI are united around a shared purpose—to create better lives for children and mothers by increasing high-risk, high-reward research and speeding the most promising discoveries to patients.

At Stanford, there is no shortage of ideas, talent, or scientific possibility. Our potential impact is limitless! We simply cannot allow lack of funding to be a barrier to innovation.

Philanthropic funding is often the first step toward new discoveries. With donor support, the best and brightest minds can come together, take risks, and tackle the biggest problems in maternal and child health. Even small gifts applied at important leverage points can make a big difference, allowing new ideas to take root and grow.

To donors such as the Morgridges, Basses, and Taubes who have invested generously in this work—thank you for your vision and leadership!

We are thrilled to be partners in MCHRI's work, to tell these stories of impact to more and more people. Together we can accelerate the research that will improve and save lives.



“Philanthropy and unrestricted funds from departmental and institutional support, it’s not just important, it’s necessary for creative, innovative work.”

MICHELLE MONJE, MD, PHD
Anne T. and Robert M. Bass Endowed Faculty Scholar
Neurology & Neurological Sciences

GOVERNING BOARD

Jeff Chambers, MBA
Chair of MCHRI Governing Board and Chair of Board of Directors, Lucile Packard Children's Hospital Stanford

Paul A. King
President and CEO, Lucile Packard Children's Hospital Stanford; Stanford Children's Health

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

Cynthia J. Brandt, PhD
President and CEO, Lucile Packard Foundation for Children's Health

James Dunn, MD, PhD
Surgeon-in-Chief, Lucile Packard Children's Hospital Stanford; Professor of Surgery (Pediatric Surgery)

Mary Leonard, MD, MSCE
Director, Stanford Maternal & Child Health Research Institute; Professor and Chair of Pediatrics, Stanford School of Medicine; Physician-In-Chief, Lucile Packard Children's Hospital Stanford

David K. Stevenson, MD
Co-Director, Stanford Maternal & Child Health Research Institute; Senior Associate Dean for Maternal & Child Health, Stanford School of Medicine; Professor of Pediatrics (Neonatal & Developmental Medicine)

Anthony Oro, MD, PhD
Co-Director, Stanford Maternal & Child Health Research Institute; Professor of Dermatology

Past Members

Christopher Dawes, MBA
Former CEO and President of Lucile Packard Children's Hospital Stanford; Stanford Children's Health

David Alexander, MD
Former CEO and President of Lucile Packard Foundation for Children's Health

EXECUTIVE COMMITTEE

Leadership

Mary Leonard, MD, MSCE
Director, Stanford Maternal & Child Health Research Institute; Physician-In-Chief, Lucile Packard Children's Hospital Stanford; Professor and Chair of Pediatrics, Stanford School of Medicine

David K. Stevenson, MD
Co-Director, Stanford Maternal & Child Health Research Institute; Senior Associate Dean for Maternal & Child Health, Stanford School of Medicine; Professor of Pediatrics (Neonatal & Developmental Medicine)

Anthony Oro, MD, PhD
Co-Director, Stanford Maternal & Child Health Research Institute; Professor of Dermatology

Mary M. Chen, MS, MBA
Administrative Director, Stanford Maternal & Child Health Research Institute; Assistant Dean of Maternal & Child Health Research

Members

David Cornfield, MD
Professor of Pediatrics (Pulmonary Medicine)

James Dunn, MD, PhD
Surgeon-in-Chief, Lucile Packard Children's Hospital Stanford; Professor of Surgery (Pediatric Surgery)

Michelle Monje, MD, PhD
Associate Professor of Neurology & Neurological Sciences

Thomas Robinson, MD, MPH
Professor of Pediatrics (General Pediatrics) and of Medicine

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

Karl Sylvester, MD
Associate Dean, Maternal & Child Health Research, Stanford School of Medicine; Professor of Surgery (Pediatric Surgery)

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

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

Past Members

Hugh O’Brodivich, MD, FRCP(C), Former Director

Atul J. Butte, MD, PhD

Michael Cleary, MS, MD

Jennifer R. Cochran, PhD

Karen Cook, MA, PhD

Christopher H. Contag, PhD

Mark Krasnow, PhD

Michael Longaker, MD

Matthew P. Scott, PhD

Brian A. Wandell, PhD

Paul H. Wise, MD, MPH

EDUCATION COMMITTEE

Anthony Oro, MD, PhD
Chair of the Education Committee
Co-Director, Stanford Maternal & Child Health Research Institute; Professor of Dermatology

Natalia Gomez-Ospina, MD, PhD
Assistant Professor of Pediatrics (Medical Genetics)

Michelle Monje, MD, PhD
Associate Professor of Neurology & Neurological Sciences

Thomas Robinson, MD, MPH
Professor of Pediatrics (General Pediatrics) and of Medicine

Manpreet K. Singh, MD, MS
Associate Professor of Psychiatry & Behavioral Sciences (Child & Adolescent Psychiatry)

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

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

Meena Kadapakkam, MD
Instructor in Pediatrics (Hematology & Oncology)

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

Trung Pham, MD, PhD
Instructor in Pediatrics (Infectious Diseases)



SCIENTIFIC REVIEWERS

Reviewers represent a key strength of the Institute: a dedicated community of expert reviewers who enable the Institute to invest in the most promising science and investigators.



The Stanford Maternal and Child Health Research Institute welcomes members and former award recipients to participate as scientific reviewers for each of the MCHRI funding programs.

Reviewers play a critical role in helping MCHRI adjudicate its funding programs, including evaluating proposals, providing written critiques, and contributing to broader panel discussions for each cycle. The Bridge, Faculty Scholar, Instructor K-Award, Master's Tuition, and Transdisciplinary Initiatives Programs are all reviewed by members of the MCHRI Executive Committee and ad hoc expert reviewers.

As a token of appreciation for their service, scientific reviewers are provided with an annual honorarium for their efforts and commitment to renewable 3-year terms. We are also grateful to countless ad hoc reviewers, past and present, who generously volunteer their expertise and valuable time.

Faculty Scholar Program**Harvey Cohen, MD, Co-Chair****David K. Stevenson, MD, Co-Chair****Clinical (MD) Trainee Program****Daniel Bernstein, MD, Co-Chair****Gerald Grant, MD, Co-Chair**

Cristina Alvira, MD

Tandy Aye, MD

Cynthia Campen, MD

Maurice Druzin, MD

Elizabeth Egan, MD, PhD

Gregory Enns, MD

Hayley Gans, MD

David Maahs, MD, PhD

Carlos Milla, MD

Julie Parsonnet, MD

Kate Shaw, MD

Kenneth Weinberg, MD

Darrell Wilson, MD

Courtney Wusthoff, MD

Clinician Educator Program**Bertil Glader, MD, PhD, Co-Chair****Deirdre Lyell, MD, Co-Chair**

Suzan Carmichael, MS, PhD

Kay Daniels, MD

Grace Gengoux, PhD

Henry Lee, MS, MD

Annette Nasr, PhD

Lauren Schneider, PsyD

Pilot Program**Paul Grimm, MD, Co-Chair****Gary Shaw, PhD, Co-Chair**

Beth Beadle, MD, PhD

Yair Blumenfeld, MD

Paul Bollyky, MD, PhD

C. Andrew Bonham, MD

Gary Darmstadt, MD

Anne Dubin, MD

Michael Eisenberg, MD

Adam Frymoyer, MD

Brice Gaudilliere, MD, PhD

Bonnie Halpern-Felsher, PhD

Lynne C. Huffman, MD

Matthew Lungren, MD

Fernando Mendoza, MD

Richard Reimer, MD

David Rosenthal, MD

Douglas Sidell, MD

Julia Simard, ScD

Laura Simons, PhD

Postdoctoral Support Program**Jeffrey Feinstein, MS, MD, Panel Chair****Julien Sage, PhD, Panel Chair****Kathleen Sakamoto, MD, PhD, Panel Chair****Hsi-Yang Wu, MD, Panel Chair**

Justin Annes, MD, PhD

Rosa Bacchetta, MD

Nidhi Bhutani, PhD

Jeremy Dahl, PhD

Kara Davis, DO

Vinicio de Jesus Perez, MD

Luis de Lecea, PhD

Kevin Grimes, MD, MBA

David S. Hong, MD

Joshua Knowles, PhD

Ross Metzger, PhD

Stephen Montgomery, PhD

Michael Moseley, PhD

Anupama Narla, MD

Giles Plant, PhD

Guillem Pratx, MS, PhD

James Priest, MD

Sushma Reddy, MD

Edda Spiekerkoetter, MD

Daniel Spielman, PhD

Avnesh Thakor, MS, MD, PhD

Katja Weinacht, MD, PhD

Virginia Winn, MD, PhD

Sean Wu, MD, PhD

James Zehnder, MD

Reviewer list as of May 2019

We are grateful to all of our current and past reviewers. Thank you for your invaluable service to the maternal and child health research community.





UNIQUELY STANFORD

FACULTY SCHOLAR PROGRAM



The Faculty Scholar Program provides long-term, substantial funding to talented faculty committed to improving the health of mothers and children. The program is designed to support mid- to late-Assistant or early Associate Professors appointed as Non-Tenure Line, Research, University Tenure Line or Medical Center Line Faculty.

The program funds \$100,000 per year for three to five years. The award supports the faculty's remuneration and benefits, as well as additional support for research and other costs that are significant and meritorious scholarship/research activities related to innovation in maternal or child health.

"It is an incredible honor to receive funding support from MCHRI. My lab has been focused on finding a cure for a rare pediatric disease called Lowe syndrome; this Faculty Scholar Award will allow us to translate our basic discoveries into clinical treatments for children."

YANG SUN, MD, PHD

Laurie Kraus Lacob Faculty Scholar in Pediatric Translational Medicine (2018-2023)

Ophthalmology

PROGRAM INSIGHTS

In the early 2000s, it was recognized by the leadership of the academic pediatric and obstetric programs that there was a need to enhance the academic productivity and opportunities for faculty devoted to children's and mothers' health. There was a pressing need to support talented junior and mid-career faculty through endowed scholar positions, which would help relieve some part of their clinical responsibilities so they can focus on establishing research programs.

Together with the development personnel at the Lucile Packard Foundation for Children's Health, the leadership of the hospital approached "Pete" and Arline Harman with a request to support a Faculty Scholar Endowment of 2 million dollars. Having already endowed a fellowship in the neurosciences and a professorship for the Chair of the Department of Pediatrics, the Harmans were asked to "complete their portfolio" by endowing this Faculty Scholar position, and they graciously agreed to provide this support.

A request for applications for the Faculty Scholar program was sent to faculty practicing at Lucile Packard Children's Hospital Stanford. A committee consisting of the Chairs of Pediatrics, Surgery, and Pathology evaluated the proposals and awarded the first Harman Faculty Scholars in 2001. Since its inception, this program has sparked incredible awareness within our community of the need for funding in pediatric and maternal investigators

Thanks to the generous gifts from community leaders dedicated to mothers' and children's health – including Tashia and John Morgridge, Anne T. and Robert M. Bass, and Arline and Pete Harman – more than 35 faculty scholarships have been given out to rising faculty stars over the last ten years. Each scholarship is designed to support \$100,000 each year for up to three to five years.



HARVEY COHEN, MD, CO-CHAIR
Deborah E. Addicott – John A. Kriewall
and Betsy A. Haehl Family Professor in
Pediatrics; the Katie and Paul Dougherty
Medical Director of Palliative Care



DAVID K. STEVENSON, MD, CO-CHAIR
Harold K. Faber Professor of Pediatrics
and Senior Associate Dean for Maternal
and Child Health, Stanford University
School of Medicine

ENDOWMENTS

Thanks to the generous gifts from community leaders, we celebrate a remarkable and growing community of talented scientists who are making an impact on maternal and child health research.

Tashia and John Morgridge Endowed Faculty Scholar Fund in Pediatric Translational Medicine

Bechtel Faculty Scholar Fund in Pediatric Translational Medicine

Anne T. and Robert M. Bass Endowed Faculty Scholar Fund in Pediatric Cancer and Blood Diseases

Akiko Yamazaki and Jerry Yang Faculty Scholar Fund in Pediatric Translational Medicine

Arline and Pete Harman Faculty Scholar Fund

Woods Family Faculty Scholar Fund in Pediatric Translational Medicine

Laurie Kraus Lacob Faculty Scholar Fund in Pediatric Translational Medicine

Lucile Packard Foundation for Children's Health Faculty Scholar Fund

AT A GLANCE FACULTY SCHOLARS



DAVID CAMARILLO, PHD
Tashia and John Morgridge Faculty Scholar (2015-2020)



MICHELLE MONJE, MD, PHD
Anne T. and Robert M. Bass Faculty Scholar (2014-2018)



DEIRDRE LYELL, MD
Arline and Pete Harman Faculty Scholar (2011-2014)



MATTHEW PORTEUS, MD, PHD
Laurie Kraus Lacob Faculty Scholar (2011-2016)



A. DESIREE LABEAUD, MD, MS
Bechtel Faculty Scholar (2015-2020)



MANPREET SINGH, MD
Akiko Yamazaki and Jerry Yang Faculty Scholar (2013-2018)



TUSHAR DESAI, MD, MPH
Woods Family Faculty Scholar (2016-2021)



DERRICK WAN, MD
Lucile Packard Foundation for Children's Health Faculty Scholar (2013-2018)

For a full listing of MCHRI Faculty Scholars, visit our website at mchri.stanford.edu.

FACULTY SCHOLAR PROGRAM HIGHLIGHTS



Total Amount Awarded
\$18,020,000

43

Total Number of Awards

202%

Extramural ROI per MCHRI dollar awarded



193

Total Number of Publications

52%

Promoted to next academic rank



87%

Funded by NIH or other government awards

Areas of Scientific Research Excellence



Heart



Transplant



Cancer



Pregnancy and Newborn



Pulmonary and Cystic Fibrosis



Brain and Behavior



Global Child Health



Immigration



Advocacy



INNOVATIVE AND TRANSFORMATIVE SCIENCE

Michelle Monje, MD, PhD, is an associate professor of neurology and neurological sciences at Stanford School of Medicine. She directs a lab that studies a rare but deadly brain tumor - diffuse intrinsic pontine glioma (DIPG) - that affects 300 to 400 school-aged children each year. With support from the Anne T. and Robert M. Bass Endowed Faculty Scholar Award (2014-2018), this incentivized Dr. Monje to explore innovative projects to find potential treatments for this aggressive cancer.

THE SCIENCE AND TREATMENT OF CONCUSSION

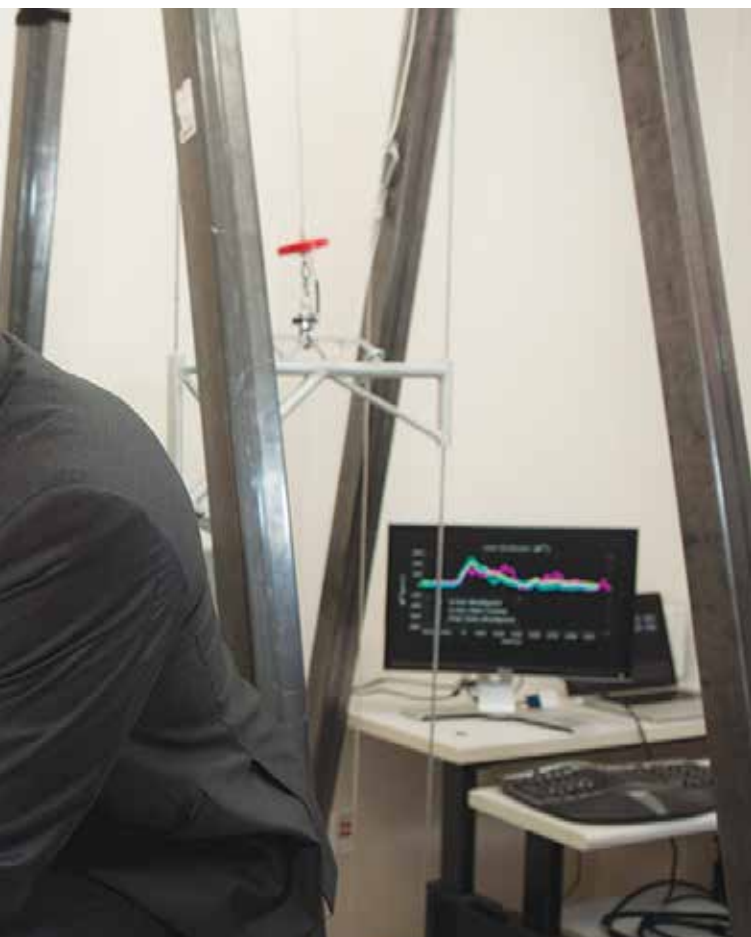
David Camarillo, PhD, is an assistant professor of bioengineering at the Stanford Schools of Engineering and of Medicine. He specializes in the science and treatment of head injuries and is exploring ways to improve the accuracy of diagnosing concussions by using biomechanical and plasma biomarkers. The Tashia and John Morgridge Endowed Faculty Scholar Award (2015-2020) provides support for Dr. Camarillo's work in developing a mouthguard technology that studies the strain rate in the brain as a result of concussion among youth.





LEADING A LARGE MULTICENTER STUDY

Susan Hintz, MD, MS Epi, is a professor of pediatrics in the Division of Neonatal and Developmental Medicine at Stanford School of Medicine. Her Arline and Peter Harman Endowed Faculty Scholar Award (2009-2015) enabled her to work closely with research teams and families over the last decade on the Neuroimaging and Neurodevelopmental Outcomes (NEURO) study of extremely preterm infants.



“Without the support of the MCHRI and the Arline and Pete Harman Faculty Scholar Fund, I would have been unable to lead this very time-intensive and challenging multicenter study on neuroimaging and neurodevelopmental outcomes of extremely preterm infants.”

SUSAN HINTZ, MD, MS Epi
Arline and Peter Harman Endowed Faculty Scholar
(2009-2015)
Pediatrics (Neonatal & Developmental Medicine)

TRANSDISCIPLINARY INITIATIVES PROGRAM



The Transdisciplinary Initiatives Program (TIP) aims to support new and innovative maternal and child health research programs that could best (or only) be performed by faculty from different disciplines, interdisciplinary curricular innovations, seminars, and symposia. The institute encourages faculty from different schools to work together on these initiatives, and strongly promote collaborations between basic and physician-scientists.

All projects must be significantly related to the health of expectant mothers and children. The initiative must utilize a multi-PI approach where at least two of these lead investigators are from different disciplines and schools. The total award is up to \$100,000 per year for up to two years.

"MCHRI aims to catalyze the translation of discoveries into diagnostics and therapeutics that improve maternal and child health. This effort requires transdisciplinary collaborations across Stanford to spark novel solutions. "

MARY LEONARD, MD, MSCE
MCHRI Director

UNIQUELY STANFORD MCHRI'S REACH

Tackling the biggest health challenges requires more than world-class science; it requires focusing Stanford's intellectual talent across campus to improve the health of expectant mothers and children.



Stanford
School of
Humanities
& Sciences



Stanford Law School



Stanford | ENGINEERING

Funding for this program is supported by Lucile Packard Children's Hospital Stanford. For a full listing of MCHRI TIP Awardees, visit our website at mchri.stanford.edu.

AWARDEE SPOTLIGHTS



JOHN DAY, MD, PHD

Neurology & Neurological Sciences
Pediatrics (Medical Genetics)

[Project: Defining and Managing the Neuropsychological Abnormalities of Myotonic Dystrophy \(2013-2015\)](#)

Myotonic dystrophy roughly affects 1 in 8,000 people worldwide, and it's hard to say how many children remain undiagnosed. To John Day, MD, PhD, a leading researcher in muscular dystrophy and the director of the Neuromuscular Disorders Program at Stanford School of Medicine, the key is finding a solution to identify and treat the disease before symptoms ever appear in kids.

Dr. Day teamed up with Stanford psychologist, Brian Wandell, PhD, director of the Stanford Center for Cognitive and Neurobiological Imaging, and another neurologist, Michael Grecius, MD, MPH, to conduct a study on the neuropsychological abnormalities of myotonic dystrophies. With \$200,000 in TIP funding, they initiated the project to define and establish methods for performing imaging and neuropsychological evaluations of patients.

Transdisciplinary
Initiatives Program
Highlights

\$4.4M
Total Amount
Awarded

22
Total Number of
Awards

29
Number of
Publications

436%
Extramural ROI per
MCHRI Dollar
Awarded



"MCHRI has been that catalyst to help keep us going. It keeps me engaged in the project and encourages us all to brainstorm together about advancing the science about concussion."

GERALD GRANT, MD, FACS
Arline and Pete Harman Endowed Faculty
Scholar (2015-2018)
Neurosurgery

DAVID CAMARILLO, PHD

Tashia and John Morgridge Faculty Scholar in Pediatric Translational Medicine (2015-2020)
Bioengineering

[Project: Improving the Accuracy of Diagnosing Concussions with Biomechanical and Plasma Biomarkers \(2013-2015\)](#)

David Camarillo, PhD and Gerald Grant, MD, FACS, are among the nation's foremost concussion experts. MCHRI awarded Dr. Camarillo with a Transdisciplinary Initiatives Program award for his research on improving the accuracy of diagnosing concussions by using biomechanical and plasma biomarkers. Together, Drs. Camarillo and Grant teamed up to transform the science and treatment of head injuries among youth.

In total, MCHRI has given \$1,550,000 to Drs. Camarillo and Grant and \$835,000 towards concussion-specific research efforts. They received \$5 million from generous philanthropists Tad and Dianne Taube to create the Taube Stanford Concussion Collaborative, which advances education, care, and research to protect children from concussions.

UNIQUELY STANFORD MCHRI PAR

MCHRI partners with programs, centers, and institutions to advance research in maternal and child health. These members and help bring new investigators into the



MARCH OF DIMES

PREMATURITY RESEARCH CENTER
Stanford University



STANFORD
CENTER FOR INNOVATION IN
GLOBAL HEALTH



Stanford
MEDICINE

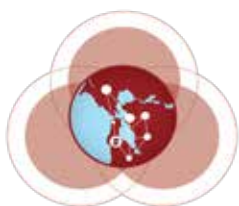
Global Child Health Program



STANFORD BYERS CENTER FOR
BIODESIGN

TNER PROGRAMS

utes across Stanford University and beyond to ad-
e partnerships bring unique opportunities to our
e maternal and child health community.



**PCHA-UHA Research
and Learning Collaborative**





SPARK

SPARK has a special focus on the often-neglected diseases, including those in the area of Child and Maternal Health. Thanks to funding from the Stanford Maternal and Child Health Research Institute, 18 projects in this area have reached the clinic or commercial sectors.

SPARK is a unique partnership between the University and industry experts. Building upon Stanford's tradition of technological innovation and entrepreneurship, Chemical and Systems Biology Professor, Daria Mochly-Rosen, founded the SPARK program, and joined by Professor Kevin Grimes later in the first year, to provide a cost-effective model to generate proof of concept using out-of-the-box academic approaches combined with industry standards.

SPARK provides access to specialized knowledge and technical expertise regarding drug and diagnostic development, dedicated core laboratory facilities, and sources of funding to support translational efforts.

Directors:

Daria Mochly-Rosen, PhD
Professor of Chemical & Systems Biology

Kevin Grimes, MD, MBA
Professor of Chemical & Systems Biology

STANFORD BYERS CENTER FOR BIODESIGN

The Stanford Maternal and Child Health Research Institute annually sponsors up to six Stanford Byers Center for Biodesign Faculty Fellowships to spur innovations in maternal and child health and offer faculty the opportunity to apply their knowledge to advance care delivered through Stanford Children's Health.

The Stanford Biodesign Faculty Fellowship Program provides motivated Stanford University faculty members from the schools of Medicine and Engineering with advanced training and mentoring in health technology innovation. Over approximately eight months, the program leads participants through a rigorous approach for identifying important innovation opportunities within or outside their departments, inventing cost-effective solutions, and—importantly—preparing to implement those inventions to improve patient care. Through the experience, faculty members gain an understanding of technology translation challenges and opportunities and develop a robust network of health technology contacts within and outside the university.

Director:

Paul Yock, MD
Professor of Bioengineering and of Medicine
(Cardiovascular Medicine)



PARTNER INSIGHTS

The SPARK program was established twelve years ago with the goal of advancing promising Stanford biomedical research discoveries into effective new treatments for patients with unmet medical needs. Since its founding, SPARK has advanced scores of diagnostics and drugs to the clinic and commercial sectors and has educated hundreds of faculty, postdoctoral fellows, and students on the translational process.

The biopharmaceutical industry has generally not focused on products that advance child and maternal health because of the limited market size (limited financial return) and increased complexity of developing products for these more vulnerable populations. But with MCHRI support and the generosity of scores of advisors from the local biotechnology ecosystem, SPARK has placed a particular emphasis on the development of child and maternal health projects.

Since its inception, forty-one percent of SPARK's 131 projects have focused on diseases of childhood or pregnancy. Sixty percent of these projects have been handed off to commercial partners and/or entered clinical study after graduating from SPARK. MCHRI supported projects have included novel treatments for pediatric cancers, a therapy to prevent type 1 diabetes mellitus, a treatment for neonatal hyperbilirubinemia, a non-surgical treatment for perforated eardrums, a therapy for intractable lymphatic malformations, diagnostics to identify women at risk of complications of pregnancy such as pre-eclampsia and placenta disorders, and many others.

MCHRI funding has been essential to our fulfilling our mandate of delivering new therapies to those most in need – regardless of financial return. On behalf of our investigators and our current and future patients, SPARK extends its sincere thanks to MCHRI leadership and staff for their incredibly generous support.



DARIA MOCHLY-ROSEN, PHD
Co-Director, SPARK
The George D. Smith Professor In
Translational Medicine



KEVIN GRIMES, MD, MBA
Co-Director, SPARK
Professor Of Chemical & Systems Biology



STANFORD CARDIOVASCULAR INSTITUTE

The Stanford Maternal and Child Health Research Institute partners with the Stanford Cardiovascular Institute (CVI) to support innovative research projects that contribute to the basic or clinical understanding of cardiovascular diseases with a focus in maternal and child health.

Members of the Cardiovascular Institute represent engineers, surgeons, physicians, scientists and some of the country's brightest fellows and students. In an era of constant change and innovations, the Institute leverages the incredible intellectual manpower found within Stanford University. The Stanford School of Medicine, Stanford Health Care, Betty Irene Moore Children's Heart Center, the Institute for Stem Cell Biology and Regenerative Medicine, Humanities & Sciences, Engineering, and Business schools are all located entirely on Stanford Silicon Valley campus. This intimate proximity promotes collaborations among a diverse mix of students, faculty, and scientists.

The Institute focuses its resources to: Ignite new research and clinical applications by awarding seed grants; Establish educational and training programs in the field of cardiovascular medicine and research; Support activities outside the bench and clinic that facilitates exchange of ideas through seminar series and invited guests open to all members. The Institute provides organizational structure to concentrate and coordinate the activities of scientists, engineers, educators, and physicians committed to improving the cardiovascular health of patients and educating and training the next generation of leaders in the field of cardiovascular medicine.

Director:
Joseph C. Wu, MD, PhD
Professor of Medicine (Cardiology) and of Radiology



STANFORD CANCER INSTITUTE

The Stanford Maternal and Child Health Research Institute partners with the Stanford Cancer Institute (CVI) to fund innovative projects with a focus on maternal and child health research.

The Stanford Cancer Institute (SCI), an NCI-designated Comprehensive Cancer Center, has particular scientific strengths in cancer cell and stem cell biology, radiation biology, genetics and genomics, immunology and immunotherapy, and molecular imaging. Dating from the first use of the linear accelerator in 1955, Stanford has provided innovative ideas that have greatly advanced the diagnosis and treatment of a wide variety of cancers. Stanford faculty members have pioneered the development of genomic technologies, detection of circulating tumor DNA, and the application of monoclonal antibodies to cancer treatment, among many other major advances. By leveraging the expertise of nearly 500 physicians and researchers, the SCI harnesses the vast intellectual and scientific resources of Stanford University, Stanford Health Care, and Stanford Children's Health to advance the understanding of cancer and rapidly translate those research discoveries into improved prevention strategies, novel diagnostics, and safer, more effective therapies.

Director:
Steven Artandi, MD, PhD
Professor of Medicine (Hematology)

PARTNER INSIGHTS

Many faculty members are attracted to Stanford University because of its reputation as a leader in technology

innovation and its proximity to the resources and network of Silicon Valley. However, once on the campus, clinical demands and the lack of structured opportunities can make it difficult to pursue this interest. The Stanford Biodesign Faculty Fellowship remedies this by teaching Stanford faculty a proven, stepwise process for health technology innovation that has been developed and refined over the past 18 years. It includes 1:1 mentoring from both Stanford faculty with technology translation experience and outside experts in all aspects of technology innovation; from design thinking and prototyping to intellectual property, regulatory, reimbursement, and business models. Participants also benefit from the opportunity to meet and collaborate with faculty members from engineering, as well as from other clinical departments.

Historically, technological innovation in the field of maternal and child health has lagged other specialties, in part because of the smaller, more targeted markets and complex ethics of conducting pediatric research. This is where a program such as the Biodesign Faculty Fellowship can make a big difference. Since 2017, thanks to the support of MCHRI, 12 faculty fellows with expertise in pediatrics participated in our program. These innovators have focused their efforts on solving important unmet healthcare needs in maternal and children's health, and we are excited to see the impact of their endeavors.



PAUL YOCK, MD

Director, Stanford Byers Center for Biodesign;
The Martha Meier Weiland Professor in the
School of Medicine; Professor of Bioengineering

STANFORD BYERS CENTER FOR
BIODESIGN



STANFORD INSTITUTE FOR IMMUNITY, TRANSPLANTATION, AND INFECTION

The Stanford Maternal and Child Health Research Institute partners with the Stanford Institute for Immunity, Transplantation, and Infection (ITI) to fund projects related to maternal and child health research.

At the Institute for Immunity, Transplantation, and Infection, we seek to leverage decades of leadership at Stanford to achieve a new level of understanding and patient care. We also seek to enhance educational opportunities for students and training at all levels. We are at the healing edge of medicine, applying a new generation of treatments for some of the most serious diseases of our time. We achieve this by cutting across traditional boundaries to foster multidisciplinary teams of investigators to target every aspect of major diseases from the most basic to the most clinical. In this way, teams of experts can pool their knowledge and strategize about the most promising new ways to detect, prevent, and treat immune-mediated and infectious diseases and prevent organ rejection.

ITI and MCHRI have jointly sponsored critical research at the junction of immunology and maternal/child health. This includes research aimed at improving influenza vaccines for mothers and young children, understanding the mechanisms behind childhood and adolescent type I diabetes, the effects of probiotics on gut health in infants and the role breastfeeding plays in this important new health metric, and optimizing cancer immunotherapy for pediatric patients.

Director:
Mark Davis, PhD
Professor of Microbiology & Immunology

STANFORD DIABETES RESEARCH CENTER

The Stanford Maternal and Child Health Research Institute partners with the Stanford Diabetes Research Center (SDRC) to support projects related to maternal and child health research.

The mission of the Stanford Diabetes Research Center is to support basic and clinical research to discover, apply, and translate science about diabetes and its complications, to improve health and wellness. To advance this mission, the SDRC provides resources to support Research Cores, runs a Pilot and Feasibility Award Program to foster innovative diabetes research by Stanford investigators, and supports Enrichment Programs focused on diabetes research, education, and care. The SDRC promotes the teaching and training goals of Stanford University by training the next generation of investigators and leaders of diabetes research and care.

Directors:

Seung Kim, MD, PhD
Professor of Developmental Biology

David Maahs, MD, PHD
Associate Director, Stanford Diabetes Research Center;
Professor Pediatrics (Endocrinology & Diabetes)

PARTNER INSIGHTS

We at the Cardiovascular Institute are delighted to join our colleagues at MCHRI in celebration of their 10th Anniversary!

One of CVI's major mandates from the day it was founded in 2004 has always been to foster fruitful collaborations among disciplines to inspire the next generation of clinicians, researchers, and treatments in the cardiovascular medicine. MCHRI, founded four years later, has followed the same gestalt in the field of children's and expectant mothers' health.

We are proud of all the accomplishments that MCHRI has made in the last ten years and our inter-institutional collaboration in the areas of pediatric cardiology, maternal cardiovascular health, and many others. Countless CVI members in pediatrics, pediatric cardiology, vascular surgery, cardiothoracic surgery, and other areas are also members in MCHRI, so the cross-pollination of ideas between our institutes is constant and mutually beneficial.

Each year CVI offers seed grants (\$15,000 - \$40,000) that are intended to ignite new research and clinical applications in cardiovascular medicine, particularly for innovative but higher-risk and more preliminary projects in greater need of a kick-start to move forward. MCHRI has been a strong partner in these seed grants by providing funding since 2012 for 17 of our awardees, who have focused on pediatric and maternal related cardiovascular research. Ten years is just a start, and we look forward to embracing the future together with MCHRI under the exemplary visionary leadership of Mary Leonard, MD, MSCE, its governing board, executive committee members, and education committee members. Congratulations on your first ten years! We look forward to your next ten years and beyond!



JOSEPH C. WU, MD, PHD
 Director, Stanford Cardiovascular Institute
 The Simon H. Stertzer, MD, Professor of Medicine
 and Professor of Radiology

Stanford 
 Cardiovascular Institute

STANFORD INSTITUTE FOR STEM CELL BIOLOGY AND REGENERATIVE MEDICINE

The Stanford Maternal and Child Health Research Institute partners with the Stanford Institute for Stem Cell Biology and Regenerative Medicine to fund research projects related to maternal and child health.

Stanford has been a leader in stem cell research for the past quarter-century. In 2001, Stanford University School of Medicine unveiled a plan to create five new translational institutes of medicine, one of which is the Stanford Institute for Stem Cell Biology and Regenerative Medicine. The institute was established in 2002 to build on Stanford's leadership in stem cell science and to set the foundations for the creation of a new field of science: regenerative medicine. Under the direction of renowned stem cell researcher Dr. Irving Weissman, the institute is devoted to exploring how stem cells create other stem cells, the mechanisms by which stem cells are regulated, and how they develop into specialized cells. The ultimate goal is to translate this knowledge into dramatic new medical therapies for some of the world's most serious and intractable afflictions. Finally, as part of Stanford School of Medicine, the institute is dedicated to training the next generation of stem cell researchers.

Director:
Irving Weissman, MD
Professor of Pathology (Pathology Stem Cell Institute) and of Developmental Biology



SUICIDE PREVENTION THROUGH OUTREACH PROGRAM

The Stanford Maternal and Child Health Research Institute partners with the Department of Psychiatry and Behavioral Sciences at Stanford School of Medicine and the Lucile Packard Children's Hospital Stanford to fund special projects through the Suicide Prevention through Outreach (SPOT) program focused on suicide prevention among adolescents and young adults within the community.

UNDIAGNOSED DISEASES NETWORK SEED GRANT PROGRAM

The Stanford Center for Undiagnosed Diseases (CUD) is one of the 12 clinical sites of the Undiagnosed Diseases Network (UDN) supported by the NIH Common Fund. Our goal is to find answers for individuals whom exhaustive clinical work-up remains unrevealing. Patients undergo consultations with multiple specialists, and multi-omics profiling, including metabolome, transcriptome, immunome, exome, and genome sequencing are some of the tools we have available to find a diagnosis. We have also developed tools and workflows to overcome barriers present when working with self-identified Hispanic patients, such as culture, language, having access to the internet, ability to request medical records to multiple health providers, and unfamiliarity with genetics and genetic research.

Directors:
Matthew Wheeler, MD, PhD
Assistant Professor, Medicine (Cardiovascular Medicine)

Jon Bernstein, MD, PhD
Associate Professor, Pediatrics (Medical Genetics)

PARTNER INSIGHTS

The Stanford Maternal and Child Health Research Initiative was instrumental in the development of the Stanford

Diabetes Research Center which now includes 103 members across campus. In 2016, the MCHRI contributed seed funds for the initial SDRC Pilot and Feasibility research awards. This support allowed the SDRC to grant six initial awards, which greatly strengthened our P30 proposal to the National Institutes of Health by demonstrating strong institutional support for this endeavor. This investment was soon multiplied in 2017 when the SDRC was awarded a \$7.7 million 5-year grant to become one of sixteen nationally supported Diabetes Research Centers.

The partnership between the MCHRI and SDRC continues with the joint support of Pilot and Feasibility awards and more importantly, with expanded campus interest and support for research on childhood diabetes. Two of the initial Pilot and Feasibility awards have led to extramural funding from the NIH and the Department of Defense. The on-going collaboration between the MCHRI and SDRC will bring further benefit to children with diabetes as we investigate better care and aim to find a cure.



SEUNG K. KIM, MD, PHD
Director, Stanford Diabetes Research Center;
Professor, Developmental Biology



DAVID MAAHS, MD, PHD
Associate Director, Stanford Diabetes Research
Center; Professor Pediatrics (Endocrinology &
Diabetes)

Stanford | Diabetes
Research Center





**ACCELERATE INNOVATION,
TRANSLATE DISCOVERIES**

BRIDGE SUPPORT PROGRAM

NEW IN 2018



"The Bridge Support Program supports our maternal and child investigators to secure or continue NIH and other extramural funding for their research programs. This program provides short-term gap funding as the investigator collects additional data to address grant reviewer critiques."

ANTHONY ORO, MD, PHD
MCHRI Co-Director

The Bridge Support Program aims to provide maternal and child health researchers up to one year of funding to aid in the continuation of independent investigator clinical and translational research projects so that progress may be made to obtain renewed or replacement funding.

The applicant must be a pediatrician, obstetrician, a child health subspecialist, or scientist who has a focus on, or plans to focus on, child health research. The program funds up to \$100,000 with \$50,000 from the MCHRI and \$50,000 cost-shared from the applicant's department - for one year.

In 2018, MCHRI designed a more robust, standalone Bridge Support Program which, in partnership with the awardee's department, is designed to support research initiatives for up to \$100K for one year. It is the goal of this funding mechanism to continue impactful research related to maternal and child health, retain study personnel, and allow investigators additional time to obtain consistent future funding.

AWARDEE SPOTLIGHT



A. DESIREE LABEAUD, MD, MS

Bechtel Endowed Faculty Scholar in Pediatric Translational Medicine
(2015-2020)

Pediatrics (Infectious Diseases)

Project: Disentangling the Human-Vector Relationship to Disrupt Dengue and Chikungunya Transmission in Kenya

Dr. Desiree LaBeaud is a physician-scientist, epidemiologist, and professor for the Division of Pediatric Infectious Diseases. She currently heads a clinical research lab focused on better understanding the risk factors and long-term health consequences of arboviral infections, specifically Rift Valley fever, chikungunya, dengue fever, and Zika disease.

"I'm very happy and thankful that MCHRI was able to bridge the gap in our NIH R01 funding so that we did not need to shut down operations in Kenya this year and endure significant social capital loss. I am very grateful for the MCHRI Bridge Support, as well as funding that my postdocs have and are receiving through the Postdoctoral Support Program."

6
Total Number
of Awards
for Program

Total Amount
Awarded for
Program
\$255,000

CLINICIAN EDUCATOR (CE) SUPPORT PROGRAM



The Clinician Educator (CE) Support Program aims to encourage, develop, and support CEs to pursue clinical research studies that promote their ability to achieve external funding for the area of the proposed work. Applications may include involvement of other Allied Health Professionals.

The program seeks innovative, well-developed proposals that pursue clinical research relevant to their clinical practice related to maternal and child health research. The total award is up to \$35,000 for one year.

PROGRAM INSIGHTS

Clinicians Educators (CE) often lack avenues to explore scholarly work on Stanford's campus and lack experience

with grant writing relative to their Medical Center Line (MCL)/University Tenure Line (UTL) counterparts. Consequently, research-related activities are typically pursued by CEs only when a source of salary support has been identified.

To address these challenges, the MCHRI CE Grant Program was created and designed to support and encourage scholarly work by CEs and served to level the playing field. The program demonstrates MCHRI's commitment to Stanford's clinical faculty in a very concrete way.

Awardees may obtain significant salary support to protect their time for a specific research project, and access Stanford's research infrastructure (a rarity for this population) via funding for biostatistical, research coordinator, or analyst support.

In recent years, MCHRI has increased funding for the CE Grant Program to be on par with its sister program for the MCL/UTL (the Pilot Grant Program) and the frequency of funding opportunities from once to twice per year. Parity between these two programs strengthens MCHRI's portfolio as CEs can now reasonably implement innovative projects that improve clinical care across a wide range of existing specialties.

As chairs of the program, we are impressed by the diversity and quality of research proposals we receive each cycle, as well as the funding available. We recommend the program to any CE faculty member interested in pursuing important scholarly questions. Our hope is that this program continues to grow and that the research that results from MCHRI support of CEs continues to advance scholarship and patient care.



BERTIL GLADER, MD, PHD, CO-CHAIR
Professor, Pediatrics
(Hematology & Oncology)



DEIRDRE LYELL, MD, CO-CHAIR
Professor, Obstetrics & Gynecology
(Maternal Fetal Medicine)

Funding for this program is supported by Lucile Packard Foundation for Children's Health Children's Fund. For a full listing of MCHRI Clinician Educator Awardees, visit our website at mchri.stanford.edu.

AWARDEE SPOTLIGHTS



GRACE GENGOUX, PHD

Psychiatry & Behavioral Sciences
(Child & Adolescent Psychiatry)

Project: [Social Motivation Intervention for Children with Autism Spectrum Disorder: Improving Peer Initiation](#)

“The MCHRI award helped me to gather critical pilot data, which allowed for the refinement of the treatment program under investigation. The preliminary study allowed me to test the implementation of the novel treatment, as well as the utility of several novel outcome measures. I have attended several national and international conferences, including the American Psychological Association, International Meeting for Autism Research, and Gatlinburg conference, where I have presented the results of this investigation. This study was also featured in presentations at Stanford’s Annual Autism Spectrum Disorder Update conference.

The MCHRI award gave me access to statistical consultation through Stanford’s QSU, which has provided valuable learning opportunities for me as a junior investigator. Overall, the award allowed me to gain research mentorship and learn new statistical approaches which will aid me as I expand the project with additional funding and disseminate the results. The completed study has informed the development of a follow-up investigation of a more intensive version of the treatment, a proposal which received additional funding from the Department of Psychiatry Small Grants Program in 2017.”

Total Amount
Awarded
for Program
\$470,526

18
Total Number
of Awards for
Program



ANNETTE NASR, RN, PHD

Pediatrics (Gastroenterology)

Project: [Understanding the Long Term Relationship of the Parental Live Liver Donor and the Adolescent Young Adult Dyad](#)

As a pediatric nurse for over 30 years, Dr. Nasr has been focusing on creating a healing environment for patients and families. She is one of the few nurse scientists working at the Lucile Packard Children's Hospital Stanford with an academic research appointment in the Stanford School of Medicine. Dr. Nasr works at the Pediatric Transplant Center as an Independent Donor Advocate for patients who are thinking about donating one of their kidneys or a lobe of their liver.

MCHRI awarded Dr. Nasr the CE grant to support her study in living donation and the long-term emotional and relationship impact for both the donor and the recipient.

PILOT GRANTS PROGRAM



The Pilot Grants Program funds innovative maternal and child health-focused clinical and translational research in two categories: Early Career or New Ideas. Both programs support up to \$35,000 for one year.

The Early Career category provides both PI salary and non-salary support for hypothesis-driven or hypothesis-seeking research that could lead to research that is externally fundable as a result of the proposed study. The Pilot New Ideas category provides non-PI-salary support for high-impact, high-risk projects proposed by mid to senior investigators.

PROGRAM INSIGHTS

Residents and fellows come to Stanford University not only for superb clinical training but also to experience

cutting-edge activities that include research, outreach, advocacy, and excellence in clinical care. Research is an integral part of the day-to-day job of these young investigators, and our goal is to train future leaders in pediatric medicine and surgical specialties.

The life of a researcher bounces between applying for grant funding and doing the work that you are funded for and the exploratory work for the next application. When our trainees leave Stanford, they need to know the research grant process and have had experience in writing and receiving grant funding for research so they can hit the ground running and be successful from day one when they start their new jobs.

MCHRI has been critical in providing attainable grant funding and a process that combines rigorous evaluation with a strong formative component that allows the trainees to fail quickly, learn from their mistakes and ultimately succeed all within a very compressed time interval that is mandated by their training at Stanford. For many students, they have been successful in all their activities in school for many years, so receiving an "un-fundable" score may be one of their first experiences of failure in a very long time.

This is why the MCHRI process incorporates teaching and formative advice that allow the trainee to learn from their initial failure, pick them up, dust them off and give them the tools to press on to submit a grant application that is worthy of funding. MCHRI then provides the funds requested so they can do the research which will set them on their future career path and improve the quality of life of children everywhere.

Thank you to all the people at MCHRI and those who have contributed over the years.



PAUL GRIMM, MD, CO-CHAIR
Professor, Pediatrics (Nephrology)



GARY SHAW, DRPH, CO-CHAIR
Professor Pediatrics (Neonatal & Developmental Medicine)

Funding for this program is supported by Lucile Packard Foundation for Children's Health Children's Fund. For a full listing of MCHRI Pilot Grants Awardees, visit our website at mchri.stanford.edu.

AWARDEE SPOTLIGHTS



TAMAR GREEN, MD

Psychiatry & Behavioral Sciences (Interdisciplinary Brain Sciences)

Project: [Brain and Behavior in Noonan Syndrome](#)

Dr. Tamar Green's research focuses on neurodevelopmental disorders such as attention-deficit/hyperactivity disorder (ADHD) and executive function. She is interested in the manifestations of these deficits in children with known genetic conditions ("neurogenetic syndromes") and enables her to study the connection between mutant gene/aberration in the genetic materials, brain, and behavior.

"Funding from MCHRI has opened new scientific directions and provided me with the resources to advance my career as an independent researcher. This project has made a critical breakthrough in being the first to show the link between the affected gene in Noonan syndrome (NS), and a decrease in the striatum volume, a brain structure linked to ADHD. These results may explain the high rates of neurodevelopmental disorders and, specifically, ADHD in children with NS."

MCHRI Pilot Award
\$35,000



NIH Career Development
(K23) Award \$850,000



DAVID VU, MD

Pediatrics (Infectious Diseases)

Project: [Immunomodulation of Acute Dengue Virus Disease by Concurrent Malaria Infection](#)

Dr. David Vu is a pediatric infectious diseases specialist who is researching human responses to dengue virus and malaria infections. His proposed project aims to understand how dengue virus and malaria co-infection affect children in Kenya.

"Support from the MCHRI Early Career Pilot Grant provided crucial support at a time during my career development when I most needed protected research time. MCHRI's investment has led to additional intramural and extramural grant funding and has helped me advance in my career development."

MCHRI Pilot Award
\$35,000



NIH Career Development
(K23) Award \$925,000



KARL SYLVESTER, MD

Surgery (Pediatric Surgery)

Project: [Biologic Studies for Biomarkers in Necrotizing Enterocolitis](#)

Dr. Karl Sylvester's project looks for biomarkers in necrotizing enterocolitis (NEC), a common and serious intestinal disease among premature babies.

“As a result of our early studies in biomarkers for Necrotizing Enterocolitis, we have broadened our investigations to a multi-omic approach to overall newborn gut health and susceptibility to disease. As a further extension of our findings, we are working toward applications in newborn growth faltering and early childhood stunting as biologically related problems. Current efforts are focused on validation studies through funding proposals submitted to the NICHD and several large foundations with international portfolios. In total, we remain enthusiastic about the prospects of translating our findings toward molecular diagnostics in pregnancy and at-risk newborns.”

MCHRI Pilot Award
\$35,000



NIH Cooperative Research
Award (U01) \$900,000

Pilot Grants Program Highlights

\$5.8M
Total Amount
Awarded

170
Total Number of
Awards

165
Number of
Publications

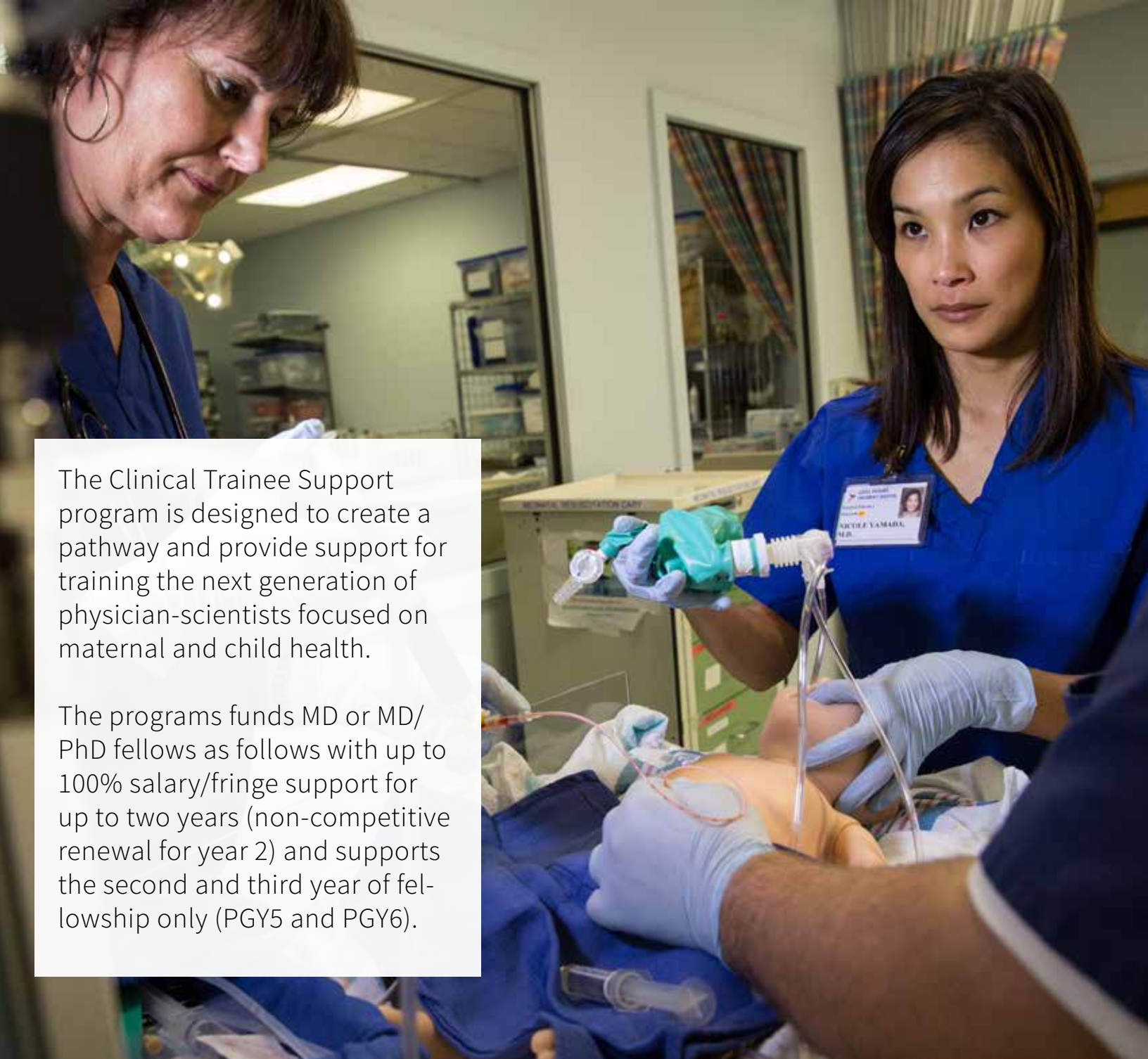
538%
Extramural ROI per
MCHRI Dollar
Awarded





**INCREASE FUTURE
ACADEMIC LEADERS**

CLINICAL TRAINEE PROGRAM



The Clinical Trainee Support program is designed to create a pathway and provide support for training the next generation of physician-scientists focused on maternal and child health.

The program funds MD or MD/PhD fellows as follows with up to 100% salary/fringe support for up to two years (non-competitive renewal for year 2) and supports the second and third year of fellowship only (PGY5 and PGY6).

PROGRAM INSIGHTS

Supporting clinical trainees in their pursuit of clinical, translational and basic science projects is a critical component

of the MCHRI portfolio. Funded by generous donor endowments, these programs are specifically directed at post-doctoral fellows holding MD or MD/PhD degrees who are enrolled in clinical fellowships and residents on dedicated two years of research training, providing them with salary support in their second and/or third years of training to pursue scholarly work.

Targeting this group of trainees is critical to enhancing the pipeline for clinician scientists of the future: a recent report from the National Institutes of Health Physician-Scientist Workforce Group documents a concerning 45% decrease in mid-career clinician investigators, and a lack of new young investigators to carry on this important work.

This MCHRI program targets physicians at a key point in their training, one of the few times they will have substantial longitudinal protected time for a high quality mentored research experience. The MCHRI not only provides salary support, but provides trainees workshops in research design, grant writing and biostatistics, to enhance the quality of their proposals and ensure that their projects translate into a successful launch to careers as physician investigators.



DANIEL BERNSTEIN, MD, CO-CHAIR
Alfred Woodley Salter and Mabel
Smith Salter Endowed Professor in
Pediatrics; Associate Dean for Curricu-
lum and Scholarship, Stanford School
of Medicine



GERALD GRANT, MD, FACS, CO-CHAIR
Endowed Professor in Pediatric
Neurosurgery

AWARDEE SPOTLIGHTS



NATALIA GOMEZ-OSPINA, MD, PHD

Tashia and John Morgridge Endowed Postdoctoral Fellow (2015-2017)
Pediatrics (Medical Genetics and Stem Cell Transplantation)

[Project: Correction of Mucopolysaccharidosis Type 1: Targeting Safe Harbor Loci Using Genome Editing](#)

Dr. Natalia Gomez-Ospina is a physician-scientist and medical geneticist with a strong interest in the diagnosis and management of genetic diseases. Her research focuses on developing genome editing tools to target a group of childhood genetic diseases known as lysosomal storage disorders.

"The funding from MCHRI provided me with the time to strengthen my knowledge and research experience, central to my research plan as an independent physician-scientist. During this period, I established a genetic engineering platform to treat lysosomal enzyme deficiencies and applied it towards the development of autologous transplantation of engineered hematopoietic stem cells for the treatment of these diseases. The data and training acquired during this time allowed me to successfully apply for research grants from the National Organization of Rare Disorders, Thrasher Research Fund, and a K08 career development award from the National Institute of Health (NIH). The MCHRI award was also essential to my career advancement, first in my promotion as a full-time instructor in the Department of Pediatrics and later to Assistant Professor in the same department."





YAIR BANNETT, MD

Charles B. Woodruff Endowed Fellow (2017-2019)
Pediatrics (Developmental-Behavioral Pediatrics)

[Project: Management of Developmental and Behavioral Conditions in Primary Care: Objective Measures of Variation](#)

Dr. Yair Bennett is a developmental-behavioral pediatrician with a research interest in the clinical practices of primary care providers in the identification and management of developmental and behavioral disorders. His MCHRI study uses structured data from the electronic health record to examine the management of common developmental and behavioral disorders in primary care (e.g., ADHD, autism). The purpose of his work is to inform effective systems-level and clinician-level strategies for implementation of evidence-based practices in community-based primary care.

"The generous support I received from MCHRI during my fellowship was the crucial first step that catapulted me towards an academic career trajectory. Following the MCHRI funding, I received extramural support from the Society for Developmental and Behavioral Pediatrics (SDBP) for direct research expenses, and more recently was selected for the Bridge to K instructor support program through the Department of Pediatrics. I am grateful and excited about the opportunity I was given to fulfill my passion for bringing innovation and change to healthcare delivery for children with developmental and behavioral disorders and their families."

FELLOWSHIPS

Thanks to the generous gifts from donors and community leaders, we empower the next generation of physician-scientists who are committed to advancing maternal and child health research.



Akiko Yamazaki and Jerry Yang Fellowship Fund in
Pediatric Translational Medicine

Anne T. and Robert M. Bass Endowed Fellowship Fund
in Pediatric Cancer and Blood Diseases

Pete and Arline Harman Fellowship Research Fund
in Pediatrics

Ernest and Amelia Gallo Endowed Fellowship Funds

The Tashia and John Morgridge Endowed Postdoctoral
Fellowships Fund in Pediatric
Translational Medicine

Marion and Jack Euphrat Fellowship Fund in Pediatric
Translational Medicine

"I am deeply grateful for MCHRI support of my research training. As a Stephen Bechtel endowed fellow, I can receive dedicated research time to continue my journey as a physician-scientist pursuing translational, clinical and basic science research so that I can help those with diabetes."

RAYHAN A. LAL, MD

Stephen Bechtel Endowed Postdoctoral Fellow (2017-2019)
Pediatrics (Endocrinology and Diabetes)



Clinical Trainee
Program
Highlights

\$12M

Total Amount
Awarded

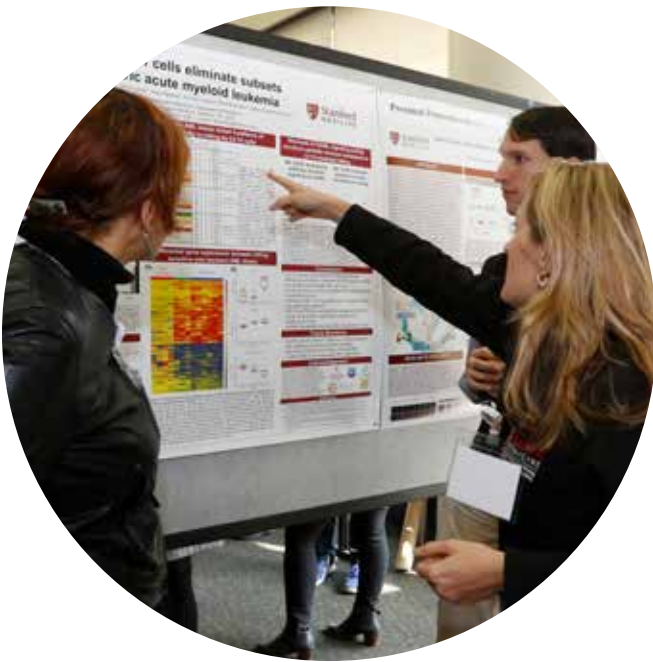
130

Total Number of
Awards

69

Number of
Publications

POSTDOCTORAL SUPPORT PROGRAM



The Postdoctoral Support Program funds innovative maternal and child health-focused clinical and translational research for postdoctoral fellows. This funding mechanism provides \$75,000 in year 1 and requires a commitment from the primary mentor of \$40,000 for year 2, providing a total combined support of \$160,000 over two years.

All projects must be significantly related to the health of expectant mothers and children. The applicant must be a pediatrician, obstetrician, a child health subspecialist, or scientist who has a focus on, or plans to focus on, maternal and child health research. Projects resulting in a new maternal and child health focus in the mentor's lab, are encouraged.

"Receiving the MCHRI Postdoctoral Support grant is an invaluable stepping stone at this stage in my career. The funding has enabled me to establish my own independent research line in pediatric cancer survivorship, which I hope will lead to a future faculty position and to building my research team."

LAUREN HEATHCOTE, PHD
Anesthesiology, Perioperative, and Pain Medicine

PROGRAM INSIGHTS

It is impressive the MCHRI can support postdocs working on maternal conditions like pre-eclampsia, public health

conditions like mosquito-borne diseases, psychiatric conditions like ADHD, and eating disorders. Given the competitive NIH climate, the MCHRI Postdoctoral Support Program is one of the few funding opportunities to fund these young researchers and an example of where a little help during a crucial time will make a big impact on someone's career.

Besides providing timely and needed funding, the MCHRI postdoctoral fellowships serve at least two critical purposes. First, through the review process, the applicants often get a first taste of the type of reviews they will get throughout their careers when they apply for grants at the NIH and other funding agencies. A major difference is that the MCHRI review process focuses on providing constructive feedback to help junior scientists learn how to write better proposals. Second, these fellowships are extremely important to promote basic and translational research in maternal and child health. For mentors of postdocs who were awarded such fellowships, this funding is not only a great line for them to add to their CV when they apply for faculty positions, it is also an important tool to bring or retain young scientists in this field of research.

Without the support of MCHRI, these postdoctoral fellows would not be able to continue their research towards making seminal discoveries in the diagnosis and treatment of disease-related to maternal and child health.

We are so grateful to Dr. Mary Leonard and the MCHRI team for their support!

Funding for this program is supported by Lucile Packard Children's Hospital Stanford. For a full listing of MCHRI Postdoc Awardees, visit our website at mchri.stanford.edu.



JEFFREY FEINSTEIN, MD, MPH, PANEL CHAIR
Dunlevie Family Professor of Pulmonary Vascular Disease; Pediatrics (Cardiology)



JULIEN SAGE, PHD, PANEL CHAIR
Professor, Pediatrics (Hematology & Oncology) and Genetics



KATHLEEN SAKAMOTO, MD, PHD, PANEL CHAIR
Shelagh Galligan Professor in the School of Medicine; Pediatrics (Hematology & Oncology)



HSI-YANG WU, MD, PANEL CHAIR
Associate Professor, Urology

AWARDEE SPOTLIGHTS



KARMA MCKELVEY, PHD, MPH

Former Postdoc Fellow in Pediatrics (Adolescent Medicine)

Project Title: [Evaluation of Tobacco Prevention Toolkit 10 Session Curriculum](#)

Dr. Karma McKelvey is a postdoctoral fellow and currently researches adolescent health risk behaviors with a focus on substance use prevention, intervention, and program evaluation. She works in Dr. Bonnie Halpern-Felsher's lab, where they focus on understanding and preventing youth risk behaviors, with a particular focus on youth substance use, including e-cigarettes/vapes and marijuana.

"Funding from MCHRI is invaluable to my training. I am excited to have support to gain hands-on experience with program evaluation and a better understanding of implementation science, which I will use to independently evaluate other existing behavioral interventions aimed at reducing and preventing adolescent health risk behaviors. Findings will provide pilot data to inform an NIH mentored career development grant proposal and other grant applications, possibly to develop novel interventions/programming with the same goal in mind."

Postdoctoral
Support Program
Highlights

\$8.3M
Total Amount
Awarded

178
Total Number of
Awards

137
Number of
Publications

190%
Extramural ROI per
MCHRI Dollar
Awarded



STEPHANIE LEONARD, PHD

Pediatrics (Neonatal & Developmental Medicine)

[Project Title: Understanding Severe Maternal Morbidity: Predictors and Trends](#)

Dr. Stephanie Leonard is a perinatal epidemiologist with a strong research interest in maternal health, a field that lags far behind in funding compared to other fields in medicine. With funding from MCHRI, this enabled Dr. Leonard and her colleagues to conduct a study of California hospital records to determine if there was an association between the rise of pre-pregnancy health and cesarean delivery and the rise of life-threatening pregnancy complications over time in the U.S.

“None of this would have been possible without the funding support of both MCHRI and NICHD, and we’re so grateful for that because, traditionally, this is not a very well-studied topic and has not been well-funded.”

INSTRUCTOR K AWARD SUPPORT PROGRAM *NEW IN 2018*



The Instructor K Award Support Program intends to support early-career investigators who pursue an NIH K-award. The MCHRI recognizes that this NIH award series provides substantial salary support but limited research funding. It is the purpose of the MCHRI award to bolster this shortfall in research support to expand the number of future academic leaders in maternal and child health.

The Instructor K-awards Support provides supplemental non-PI-salary support for instructors on individual K-awards by providing one-to-one matching funds from the instructor's department to fund innovative maternal and child health-focused clinical and translational research for up to \$50,000 per year for up to two years.

"MCHRI recognizes that the NIH K-award series provides substantial salary support but limited research funding. The MCHRI Instructor K Award Support program aims to help with this shortfall in research support and to expand the number of future academic leaders in maternal and child health."

MARY LEONARD, MD, MSCE
MCHRI Director

AWARDEE SPOTLIGHT



JULIET KNOWLES, MD, PHD

Neurology & Neurological Sciences

Project Title: [Impact of Recurrent Seizures Upon Myelin Structure and Function](#)

Dr. Juliet Knowles is an instructor in child neurology at Stanford School of Medicine and is using rodent models of epilepsy to study the impact of recurrent seizures on myelin. Her research aims to advance knowledge in the pathogenesis of pediatric epilepsy and to treat pediatric patients with epilepsy more effectively.

“My work indicates that maladaptive myelination occurs in epilepsy. This may represent a previously unknown pathogenic mechanism contributing to epileptogenesis and cognitive comorbidities, with novel opportunities for therapeutic intervention. I am very grateful to the Stanford MCHRI and the Stanford Department of Neurology for their support of this research.”

Master's Tuition Program *NEW IN 2017*



"Participants of the program receive a solid foundation in the skills they need to conduct high-quality research at Stanford. This includes access to faculty expertise, research support, and training to turn scientific discoveries into solutions."

MARY LEONARD, MD, MSCE
MCHRI Director

The Master's Tuition Program (MTP) supports those planning to pursue a career as a physician-scientist, spending the majority of their time doing NIH funded basic or clinical research related to maternal and child health. The MCHRI project serves as the MS thesis project.

Applicants are expected to pursue a Master of Science (MS) degree in health research policy, clinical research, epidemiology, or similar in support of the intent of the funding mechanism.

These include: MS program in Epidemiology and Clinical Research; MS program in Health Services Research; Other MS programs on or off Stanford campus that meet the theme of the MTP. Programs typically not funded are MS program in Business Administration (MBA); MA program in Education; or other MS programs not related to the development or career of a physician-scientist.

AWARDEE SPOTLIGHT



NEHA KUMBHAT, MD, FAAP

Pediatrics (Neonatal & Developmental Medicine)

Master Student in Epidemiology and Clinical Research

Dr. Neha Kumbhat is a neonatal and developmental pediatrician at Stanford School of Medicine and is currently pursuing a Master's degree in Epidemiology and Clinical Research. Her research aims to understand how hypotension caused by adrenal insufficiency affects preterm infant death and morbidities, and how that may provide clinicians with information to guide interventions and counseling families on outcomes and prognosis.

"Correctly interpreting data, comprehending statistical techniques, and understanding their proper use and limitations are tools that are especially needed in current times. The Master's Tuition Program through MCHRI has provided me with funds to pursue a Master of Science in Clinical Research and Epidemiology, which has enabled me to empower myself with these tools. I am grateful for this additional training, which has opened many doors for me. Following my graduation from Stanford, I will be joining Children's Hospital Los Angeles to focus on outcomes research in preterm infants and also have an appointment at the Department of Preventive Medicine at USC's Keck school of medicine."





**LEAD LOCALLY,
NATIONALLY, AND
GLOBALLY**

LEAD LOCALLY, NATIONALLY, AND GLOBALLY MCHRI PARTNER PROGRAMS

MCHRI plays a leadership role locally, nationally, and globally to promote the health and well-being of expectant mothers and children, and fosters collaboration with community-based partners to better address national and global maternal and child health issues.





"We are excited that MCHRI and Stanford Global Health are supporting our team's mission to improve the health of children born with cleft around the world. Funding from MCHRI will help our team understand the research, development, and regulations surrounding the creation of low-cost nasoendoscopes for under-resourced cleft clinics."

LAMBERTUS HESSELINK, PHD (Electrical Engineering)
Research Team: Maya Ramachandran; Ashwini Ramamoorthy; Anna von Wendorff
MCHRI Global Child Health Equity Seed Grant Awardees



MARCH OF DIMES PREMATURITY RESEARCH CENTER

One out of every ten babies in the U.S. is born preterm. Thanks to a \$1 million contribution from the MCHRI, Stanford has assumed a national leadership role in solving the mysteries of prematurity.

In 2011, March of Dimes Prematurity Research Center at Stanford became the nation's first trans-disciplinary research center to address the issue of preterm birth. Now in its eighth year, its efforts are joined by an additional four Prematurity Research Centers at academic institutions around the nation and, as of February 2018, one in London, England.

The MCHRI granted the Center two separate awards of \$500,000 each in unrestricted funds, allowing the Center to accept \$20 million in fund-

ing (\$2 million each year for a period of ten years) from the March of Dimes. The Center is now a self-sustaining entity that has received support from a host of funding sources, including a recent \$3.6 million award from the Bill and Melinda Gates Foundation.

Principal Investigator for the Stanford Prematurity Research Center and Co-Director of MCHRI, Dr. David Stevenson, chose to direct some of the MCHRI funds toward promising ideas that were high-risk and are yielding important findings today.

INSIGHTS

The founder of MCHRI, Dr. Hugh O’Bro-
dovich, had the foresight to see how a
funding entity that supported the

lifecourse of human development would be distinctive from other insti-
tutes that addressed a single health issue, like cardiovascular disease or
cancer. MCHRI was established on the idea that it would use unrestrict-
ed funds to support research related to maternal and child health and
be blind to school and department and field. It would simply encourage
the assembly of the best intellects that we could find to make transfor-
mational discoveries.

Quietly and without a lot of fanfare, MCHRI has done a tremendous
job encouraging interaction between disciplines to address complex
human problems that cannot be solved with the expertise represented
by one particular silo of inquiry. To date, 49 percent of the institute’s
total funding has supported individuals from the Department of Pedi-
atrics. This means significant amounts have been awarded to individuals
affiliated with departments outside of Pediatrics and in schools at the
University other than the School of Medicine.

Unrestricted funds are instrumental in the pursuit of high-risk research.
If the science is sound and reflects a true need for interdisciplinary or
transdisciplinary work, MCHRI will not tell investigators how to use the
money it awards. The return on investment is not only the completion
of a discrete project but also the development of an entire field or area.
What’s more, some of the most important returns will come years from
now when we see a healthier adult population.



DAVID K. STEVENSON, MD
Principal Investigator, Stanford March of Dimes
Prematurity Research Center

“MCHRI was es-
tablished on the
idea that it would
use unrestricted
funds to support
research related
to maternal and
child health and
be blind to school
and department
and field.”

GLOBAL CHILD HEALTH PROGRAM & STANFORD CENTER FOR INNOVATION IN GLOBAL HEALTH

Starting in 2017, the Stanford Maternal Child Health Research Institute began sponsoring Global Child Health Equity Seed Grants with the Global Child Health program and the Stanford Center for Innovation in Global Health. These annual seed grants of up to \$25,000 each support two projects seeking solutions to improve the health of pregnant women and children in low-resource settings. The inaugural call for applications received over 30 high quality responses from multidisciplinary teams across the School of Medicine and the University, indicating significant interest in research related to global child health disparities and equity solutions.

The first round of awards were given to (1) Dr. Jennifer Keller and team to adopt an empowerment and resilience program for adolescent girls to Gujarat, India, and (2) Dr. Clea Sarnquist and team to examine the role of an empowerment self-defense intervention on mental health and violence among adolescents in Nairobi, Kenya. These grants contribute to the Global Child Health program by supporting researchers with pilot projects that might be too high-risk for traditional funders, but that has the potential to create preliminary data to support future robust grant applications.

Directors:

Michele Barry, MD, FACP

Senior Associate Dean for Global Health; Director of Stanford Center for Innovation in Global Health;

Professor of Medicine (Primary Care & Population Health)

Yvonne Maldonado, MD

Senior Associate Dean for Faculty Development & Diversity; Professor of Pediatrics (Infectious Diseases) and of Health Research and Policy



"MCHRI's partnership with Stanford Children's Health and Stanford School of Medicine enabled the Pediatric Device Accelerator Pitch Competition at the Pediatric Innovation Showcase to expand participation beyond pediatrics to maternal and fetal health technologies."

JAMES WALL, MD

Surgery (Pediatric Surgery)

PACKARD CHILDREN'S HEALTH ALLIANCE UNIVERSITY HEALTHCARE ALLIANCE

The Stanford Maternal and Child Health Research Institute partners with the Packard Children's Health Alliance (PCHA)-University Healthcare Alliance (UHA) Research & Learning Collaborative (RLC) and the Stanford Community Medical Groups Research Consortium to support maternal and child health research focused on improving health outcomes through community-based research.

The PCHA-UHA RLC was established to build a Northern California regional network for research and education to improve care for expectant mothers, children, and adults across the life-course. The RLC is coordinated by the Center for Policy, Outcomes, and Prevention and the Stanford Center for Clinical Research with support from the School of Medicine, Lucile Packard Children's Hospital, Stanford Health Care, the Department of Medicine, and the Stanford Maternal and Child Health Research Institute. The PCHA-UHA RLC was established in 2016 in order to promote research collaboration between Stanford School of Medicine and PCHA and UHA.

Directors:

C. Jason Wang, MD, PhD

Associate Professor of Pediatrics (General Pediatrics) and of Medicine (Primary Care Outcomes Research)

Kenneth Mahaffey, MD

Professor of Cardiovascular Medicine

Gary Shaw, DrPH

Professor of Pediatrics (Neonatal & Developmental Medicine)

STANFORD WOMEN'S HEALTH AND SEX DIFFERENCES IN MEDICINE CENTER

The Stanford Maternal and Child Health Research Institute partners with the Stanford Women's Health and Sex Differences in Medicine (WHSDM) Center to support efforts that foster the study of sex differences in women's health as it relates to pregnancy and the placenta.

The Stanford WHSDM Center is a Stanford School of Medicine center that evolved from the former Women's Health at Stanford Program. The WHSDM Center acknowledges the wisdom of conducting innovative, multi-disciplinary research on women's health and sex differences in biology and medicine, from conception through the lifespan, and in every medical discipline, from basic science to clinical and population health science.

The Stanford WHSDM Center also recognizes the value of educating scientists and bioengineers, medical researchers, physicians and other health care providers, and the public on the broad range of women's health issues, as well as the spectrum of biological (and sociocultural) differences (and similarities) that may affect female and male health outcomes over the life course.

Director:

Marcia Stefanick, PhD

Professor of Medicine (Stanford Prevention Research Center) and of Obstetrics & Gynecology

STANFORD CHILDREN'S HEALTH PEDIATRIC INNOVATION SHOWCASE

The Stanford Maternal and Child Health Research Institute partners with Stanford Children's Health to support initiatives that showcase the innovative pediatric technologies being developed at the hospital and beyond.

In 2018 and 2019, MCHRI supported the annual Pediatric Innovation Showcase that took place on Stanford University campus, bringing together innovators, researchers, clinicians, and industry experts to experience new health care technology. At these showcases, participants have the opportunity to see prototypes in development at Stanford Children's Health and network with thought leaders and researchers who are passionate about bringing new technology advances to the field.

AWARDEE SPOTLIGHTS



ANISHA PATEL, MD, MSPH, MSHS

Arline and Pete Harman Faculty Scholar (2018-2021)
Pediatrics (General Pediatrics)

[Project: Assessing the Cost of Water First: A School-Based Water Intervention to Prevent Childhood Obesity](#)

Dr. Anisha Patel is the Arline and Pete Harman Faculty Scholar (2018-2021) and looking at a school-based water intervention to prevent childhood obesity. This award presents an opportunity for her to cultivate new skills in cost-effectiveness methods of Water First through didactic coursework and experiential training.

" With this award, we are collaborating with national experts to gather cost data for an ongoing R01 study (Water First) that we are conducting to examine how promoting fresh water intake in schools impacts childrens' intake of sugary drinks and obesity. This data will support future proposals to estimate the long-term cost-effectiveness and population health impacts of the Water First intervention."





FERNANDO MENDOZA, MD, MPH

Transdisciplinary Initiatives Program Awardee (2017-2019)
Pediatrics (General Pediatrics)

[Project: The Health and Well-Being of Children in Immigrant Families](#)

Dr. Fernando Mendoza is the primary investigator on an MCHRI Transdisciplinary Initiatives Program grant for understanding the health and well-being of children in immigrant families in California, where researchers will explore the impact of federal, state, and local policies on health outcomes.

“Our grant builds infrastructure for academic excellence among people who have a lot of expertise but would be otherwise in silos if we didn’t have these funds to make bridges for collaboration. That, I think, is the basis of good research—developing a way to look at a problem from different perspectives, thus bringing us closer to reality than if it’s just one view.”

AWARDEE SPOTLIGHT



LISA CHAMBERLAIN, MD, MPH

Arline and Pete Harman Faculty Scholar (2017-2020)
Pediatrics (General Pediatrics)

Project: [A Transdisciplinary Approach to Improving School Readiness](#)

Dr. Chamberlain has focused her career on the elimination of child health disparities. Her research is tightly policy-focused, examining the non-clinical factors contributing to disparate outcomes for low-income children with chronic illness.

"I am so appreciative to MCHRI for their support as we try to advance high-risk, high-return interventions that could potentially have both local and national implications for kids. MCHRI support has allowed our team to test innovative texting interventions with parents to make sure their kids are ready to start kindergarten. I would never have imagined five years ago that this would be my work, but in the clinic, I had grown increasingly frustrated by the overwhelming number of 5-year-olds not ready to start kindergarten. These smart, bilingual, and curious kids when tested were overwhelmingly not ready to start school. This is a lost opportunity as critical child development occurs in the first five years.

My desire to address a core social determinant of health – education – led me to the Stanford School of Education where I learned of Professor Loeb's, "Tips By Text" (TbT) program, a texting intervention that increased school readiness in Head Start preschools. The Harman Faculty Scholar Award allowed us to develop a partnership to test TbT in a community-engaged clinic.

We have been texting families Santa Clara Valley Medical Center 18 months ago. Our hope is that TbT will be ready to roll out to our Bay Area pediatric partners as a powerful new tool to support kinder-readiness for ALL of our local kids. Beyond that, we plan to disseminate this work nationally, ultimately contributing to the work of redefining the pediatric office as the first place parents begin their journey as their child's first teacher!"



Children and parents can enjoy the colorful mural painted by artist Sean Howe as they wait for their appointments in the Mountain View Mayview Clinic waiting room. (Photo courtesy of Sean Howe/Mayview Clinic)

"I am so appreciative to MCHRI for their support as we try to advance high-risk, high-return interventions that could potentially have both local and national implications for kids."

In addition to the "Tips by Text" project, Dr. Chamberlain and research members of the Pediatric Advocacy Program are promoting the importance of early brain and language development through public awareness and community-wide outreach.

They have also collaborated with local community health clinics to create "Little Libraries" in the waiting rooms and transform waiting rooms into learning environments by incorporating vibrant educational murals - artistic scenes that promote learning for children.





**EDUCATIONAL
EXCELLENCE**

LEADERSHIP INSIGHTS



ANTHONY ORO, MD, PHD
MCHRI CO-DIRECTOR
Eugene and Gloria Bauer
Professor of Dermatology

We are very blessed to foster such a rich community dedicated to advancing maternal

and child health here at Stanford. As an institute, MCHRI has embraced numerous initiatives designed to promote rigorous and inclusive education and training of its members across all of Stanford's seven schools.

In an effort to expand the number of future academic leaders in maternal and child health (one of the Institute's strategic goals) and create an interactive academic community, our Education Committee has been instrumental in driving new educational initiatives, including our monthly seminar series featuring a wide array of topics ranging from maternal and neonatal conditions to basic science applications and community health concerns. These well-attended sessions are designed to provide a forum where those with interest in maternal and child health will learn about ongoing innovative programs, and be able to connect within our academic community.

Other educational initiatives MCHRI supports are designed with these objectives in mind as well. Our annual symposium features a range of work funded by MCHRI and provides the opportunity for our community to be featured publicly through its sessions and associated poster session. We also partner with the Eureka Institute for Translational Medicine, a global community of multidisciplinary translational professionals, to provide early-career development and mentoring to our young faculty. We feel this investment will pay great dividends in identifying innovative new therapies and enabling their maturation into clinical practice for our patients.

As MCHRI has experienced tremendous growth over the last decade, we are so excited that our educational pursuits are able to complement our other activities and strengthen our support to the maternal and child health community.





6
NEURAL & CHILD HEALTH
RESEARCH INSTITUTE
Melissa Mavers
Pediatrics

ANNUAL RESEARCH SYMPOSIUM

A key goal of the Institute is to tell success stories that are “uniquely Stanford” by highlighting transdisciplinary research focused on maternal and child health across campus.

MCHRI hosts its annual scientific meeting at Stanford University, highlighting the innovative research funded by the Institute, funding programs and educational resources available to researchers, and investigators who making an impact on maternal and child health.



SYMPOSIUM RESEARCH THEMES



- Global Health / Infectious Disease
- Stem Cell
- Cardiovascular Medicine
- Undiagnosed Disease Network
- Hematology / Oncology
- Neonatal & Developmental
- Allergy / Asthma / Immunology
- SPARK
- Biodesign / Biotechnology
- Neurobiology & Behavioral
- Maternal & Fetal Health



“At our signature annual event, world-class investigators convey their groundbreaking discoveries that will improve the health of mothers and children around the world.”

ANTHONY ORO, MD, PHD
MCHRI Co-Director



CHILDX CONFERENCE

The Stanford Maternal and Child Health Research hosted the inaugural Childx conference in April of 2015 at Stanford University. This TED-style conference featured an exciting two-day program filled with inspiring panels and keynote sessions, highlighting experts from across Stanford and guests from around the country. Childx has brought together hundreds of participants to Stanford campus, including researchers, clinicians, educators, scientists, clinicians, and industry and policy experts to address the challenges and solutions in maternal and child health.

At the inaugural conference, the event centered on the difficult health problems in pregnancy, infancy, and childhood. Five major themes emerged from the conference: Definitive stem cell and gene therapy for child health; The arc of fetal, developmental/cognitive and adult health; Accelerating child and maternal health innovation; Precision medicine for rare and historically untreatable childhood disease; The health ecosystem and the impact of social, economic, political, environmental and cultural issues on children's health and well-being

MCHRI held its second Childx conference in April of 2016 with support from the Stanford School of Medicine, Stanford Children's Health, and Lucile Packard Foundation for Children's Health. This conference launched a rotational 'Life Course' program that focuses on a series of transdisciplinary topics aimed at improving health for expectant mothers and infants.

The program featured speakers who advanced our understanding of human development from conception to birth, and the events during pregnancy that influence lifelong health and disease. Six thematic sessions span topics ranging from stem cell biology, fetal development, prematurity, and innovative technologies to the evolving microbiome, pathogens that threaten the fetus, and how to thrive in a changing world.



"It's really been one of the real strengths of what MCHRI has done and that is to bring the whole campus together with everyone focusing on maternal and child health."

MARY LEONARD, MD, MSCE
MCHRI Director



The pace of discovery in pediatrics has never been more rapid. We need people from multiple disciplines looking at the problems and opportunities involved. Stanford is uniquely well positioned to do that.



In April 2018, MCHRI hosted its third Childx conference with the theme “Learn, Collaborate, Innovate.” Over 30 speakers from a range of disciplines, from bioengineering to psychology, took the stage to address the complex health problems facing pregnant women and children. Keynotes for this year’s conference focused on the economic opportunities for children; growth mindsets among adolescents; the bioethics of science; and non-invasive prenatal tests.

Six other presentations covered today’s most compelling health issues: the origins of illness and disability; mental health; literacy; childhood obesity; new genetic treatments; and innovative technology against diseases. The conference provided physicians and healthcare professionals the opportunity to earn continuing medical education credits and learning objectives to employ in their practice.



EUREKA INSTITUTE FOR TRANSLATIONAL MEDICINE

A key goal of the Stanford Maternal and Child Health Research Institute is to provide early-career development and enhance the Stanford translational medicine community. The Institute partners with the Eureka Institute for Translational Medicine to provide our maternal and child health community additional professional development through the Eureka International Certificate Program in Translational Medicine, the Eureka Annual Summer School Course in Translational Medicine, and the Eureka Monsoon School Certificate Program.

The vision of the Eureka Institute is to build and foster a global community of translational medicine professionals to advance the application of biomedical innovation for the tangible benefit of patients and society as a whole. Several MCHRI awardees have participated in the Eureka International Certificate Program in Translational Medicine, the flagship program of the Eureka Institute, and a few have also served as a member of the core faculty for Summer School Course in Translational Medicine.

Their passion for spreading the know-how of translational medicine at Stanford has propelled MCHRI's educational efforts, including the well-attended seminar series and the annual research symposium.

"The Eureka Institute for Translational Medicine International Certificate Program was a career game-changer for me. I was able to understand better my identity and responsibility as a translational scientist, which clarified my priorities and helped me see the potential for my work that I had never known existed before."

MANPREET K. SINGH, MD, MS

Akiko Yamazaki and Jerry Yang Faculty Scholar (2013-2018)

Psychiatry & Behavioral Sciences (Child & Adolescent Psychiatry)



MCHRI's collaboration with the Stanford Center for Definitive and Curative Medicine provides an opportunity to highlight the excellent work being done in cell and gene therapies at Stanford, and in particular, curative medicine for children with incurable diseases.

STANFORD CENTER FOR DEFINITIVE AND CURATIVE MEDICINE

The Stanford Center for Definitive and Curative Medicine (CDCM) provides the know-how, organizational, and physical infrastructure to support investigator-initiated translational studies on Cell and Gene Therapy (CGT) from initial discovery through completion of clinical proof-of-concept trials.

With support of the Stanford Maternal and Child Health Research Institute, the CDCM puts on their annual research symposium to explore stem cell and gene therapies from the discovery stages to the clinical trials to the development and commercialization of curative medicine.



SEMINAR SERIES

One of the Institute's goal is to expand the number of future academic leaders in maternal and child health and create an interactive academic community

MCHRI launched a monthly seminar series in 2017, highlighting the latest research in maternal and child health, with topics ranging from maternal and neonatal conditions to community health concerns. This premier event serves as a forum for engaging in conversations with other researchers and scientists across the Stanford community who are dedicated to solving health issues in this field.

Topics for the seminar series have included:

CAR-T Cell Therapy for Pediatric Oncology

Linking Conception, Vascular Health & Preeclampsia

Nanoparticles for Pediatric Cancer Imaging and Therapy

Therapeutic Genome Editing for Genetic Diseases

Designing Innovations to Improve Health & Health Care

Improving Maternal Health by Understanding Placenta Accreta

Improving Pregnancy & Neonatal Outcomes

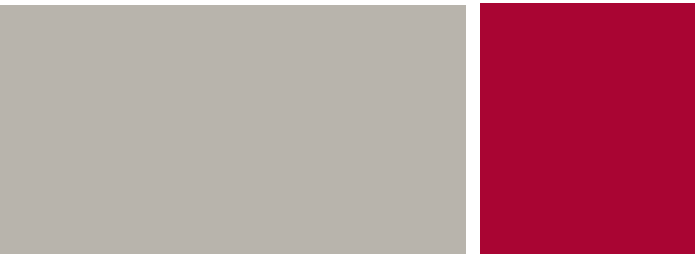
Health & Well-being of Children in Immigrant Families

"The monthly seminar series provides a perfect venue for clinicians and researchers across the Stanford community to come together and discuss how they can solve challenges related to maternal and child health."

ANTHONY ORO, MD, PHD
MCHRI Co-Director







INFRASTRUCTURE AND RESOURCES

LEADERSHIP INSIGHTS



KARL SYLVESTER, MD
Associate Dean for Maternal
and Child Health Research,
Stanford School of Medicine,
Professor of Surgery (Pediatric
Surgery)

MCHRI was founded in 2009 to catalyze groundbreaking research in maternal and pediatric health across

Stanford Children's Health (SCH). Over the past decade, an impressive portfolio of discoveries and investigators have been developed through strategic leadership and investment. In the coming years, MCHRI is poised to build on established foundational research capabilities and to accelerate the translation of dramatic advances across the research spectrum from basic discovery to first in human therapeutics and first-in-class diagnostics.

To this end, in 2019, MCHRI established the Clinical Research Support Office (CRSO) to provide the needed operational support to ensure the effective and efficient conduct of clinical research at SCH. It is an incredibly exciting time to be a part of SCH and the transformative changes in healthcare delivery that will emanate from these efforts for the care of pregnant women and children everywhere.

The primary role of the CRSO is to provide oversight and governance for all operational, informatics, regulatory, and additional ancillary support for the execution of clinical research at SCH. This office serves as a resource for all physicians, nurses, allied health investigators, and all hospital, departments, and services lines, providing tactical solutions for research teams to execute their studies within SCH. With executive leadership from the Chief Nursing Officer at SCH and the Assistant Dean for Maternal and Child Health Research in the School of Medicine, the CRSO bridges the School of Medicine Research Office, the MCHRI research agenda, and the operational capabilities for research at SCH.

The CRSO partners with research and hospital teams to remove the hurdles to conduct research within the inpatient and outpatient hospital setting, reduce red tape, improve the efficiency of conducting clinical trials, and overcome administrative burdens. The CRSO is harnessing our electronic medical records by integrating clinical research workflows with clinical care workflows to enable and accelerate discovery and innovation. Ultimately, we are making research a deeply engrained culture of our health system, consistent with our three-part academic and clinical mission.





INFRASTRUCTURE AND RESOURCES SUPPORT

MCHRI provides high-quality services to assist investigators and study teams in the design, start-up, and execution of clinical research studies.

These include biostatistics consultation and data management through the Quantitative Sciences Unit; clinical research professional staff with expertise in IRB procedures, study start-up, regulatory documents, and coordination of study visits; and a recruitment enhancement program.

Biostatistics
Consultation

Clinical
Research
Support

Data
Management

Recruitment
Enhancement
Core

PARTNER INSIGHTS

The Quantitative Sciences Unit (QSU) entered a key partnership with the Stanford Maternal and Child Health

Research Institute in November 2016. As part of the partnership, a new faculty member will be appointed to lead efforts in building a research infrastructure for the purpose of facilitating research related to maternal and child health.

QSU members have been collaborating with MCHRI researchers to design studies and securely house, process, and analyze data, while being mindful of ensuring the integrity of research findings. Key goals involve developing the careers of faculty conducting maternal and child health research through the preparation of proposals and research manuscripts. In addition to reaching these goals is to developing the career of the faculty biostatistician who primarily develops methods for maternal and child health-related research.

Other critical aspects involve the mentoring of clinical and translational junior investigators. Mentoring junior data scientists in team science is also a priority. Since the inception of the partnership, the QSU has collaborated on 180 activities related to maternal and child health research, of which 50% involved grant proposal submissions, and the remaining involved data management and analysis of ongoing studies.



MANISHA DESAI, PHD
Director, Quantitative Sciences Unit;
Professor of Medicine (Biomedical Informatics
Research) and of Biomedical Data Science



MARY BOULOS, MPP
Executive Director,
Quantitative Sciences Unit

CLINICAL RESEARCH SUPPORT OFFICE

Enabling innovative, high-quality research is critical to fulfilling the mission of Stanford Children's Health (SCH).

The Clinical Research Support Office (CRSO), under the direction of the Stanford Maternal and Child Health Research Institute, provides operational, informatics, regulatory, and other needed support for the execution of studies at SCH. The CRSO supports MCHRI strategic goals by addressing critical challenges in research infrastructure and developing solutions to enhance research collaboration between the School of Medicine and Stanford Children's Health.

CRSO serves as a resource for physician, nurse, and allied health researchers, as well as all hospital Departments and services lines to enable efficient and compliant conduct of maternal and pediatric clinical research. The CRSO team is available to provide strategic direction, operational support, informatics solutions, and other assistance for maternal and child health clinical research projects.



"Stanford Children's Health and MCHRI are committed in their shared vision of advancing innovative research in maternal and child health. The key to this is ensuring the availability of resources and access for translational research, from bench to bedside. SCH's collaboration with MCHRI and CRSO address these clinical research needs, as well as support a strong infrastructure for translation of science to care. As a leading institution for translational research, this partnership is a critical to our success and the ability to provide cutting-edge therapies in a safe, high quality, clinical environment."

KELLY M. JOHNSON, RN, PHD, NEA-BC
Vice President Patient Care Services and Chief Nursing Officer
Pediatrics (Neurology & Neurosciences)
Stanford Children's Health

CLINICAL RESEARCH COORDINATION SUPPORT

The MCHRI Clinical Research Core consists of experienced and pediatric-focused clinical research coordinators. Services available range from full support for clinical research studies and trials (pre-award to closeout) to select “a la carte” assistance (IRB preparation only, patient screening, etc.).

What We Support

- Federal and other Peer-Reviewed Studies
- NIH, foundation, and other non-industry sponsored peer-reviewed studies (submitted or awarded).
- Industry-Sponsored and Non-Peer Reviewed Studies

The MCHRI Executive Committee must approve all industry-sponsored studies and non-peer reviewed studies.

RECRUITMENT ENHANCEMENT CORE

The Stanford Medicine Research Office Recruitment Enhancement Core (REC) provides resources and tools to help research teams meet their participant recruitment and retention goals. MCHRI is a funder of REC.

Current services:

- Recruitment consultations
- Review of recruitment materials
- Cohort exploration assistance
- Design of recruitment plans
- Community engagement, including referrals to Stanford’s Community Advisory Board (CAB) for Clinical Research
- Trial Innovation Network resources for multi-site studies

Future services:

- Participant Engagement Platform (PEP)
- Epic MyChart for study invitations
- Stanford Research Registry 2.0 (database of individuals interested in being contacted for research)
- Other honest broker services (mailed invitations, email, phone calls)

BIOSTATISTICS AND DATA MANAGEMENT SUPPORT

The Stanford Maternal and Child Health Research Institute partners with the Quantitative Sciences Unit (QSU), a collaborative statistics unit in the Biomedical Informatics Research (BMIR) Division in the Department of Medicine (DOM), to provide biostatistics and data management support.

In partnership with MCHRI, the QSU provides comprehensive biostatistics and data management support for research that is directly related to maternal and child health. The QSU is a collaborative group of over 25 data scientists including faculty and Masters- and PhD-level staff who collaborate with investigators by lending expertise in study design, database creation, data management, and data analysis using an interdisciplinary collaborative approach. Their expertise is available for collaboration and includes the development of grant proposals and implementation of funded projects.

Their specific goals are to:

- Design studies that optimize the ease of interpreting results
- Provide high-quality data analysis using modern statistical techniques
- Develop new or adapt old methods for optimal analysis as the need arises
- Securely house and track data in a HIPAA-compliant and IRB-compliant manner
- Create user-friendly publicly available software for recommended methods
- Interpret results
- Disseminate findings
- Mentor clinical investigators and data scientists in research methods and team science

Director:

Manisha Desai, PhD
Professor of Medicine (Biomedical Informatics Research) and of Biomedical Data Science





ADMINISTRATION AND ACKNOWLEDGEMENTS



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