Faculty Recruitment

The Cardiovascular Institute and the Department of Medicine at Stanford University are recruiting a full-time academic faculty with expertise in any of the areas of drug/gene delivery, polymer chemistry/nanotechnology, bioengineering/biomaterial sciences, biomedical formulation, clinical medicinal chemistry, medical pharmacology/molecular pharmacology, toxicology, bioinformatics, applied proteomics and pharmacogenomics at the rank of Assistant or Associate Professor in the Non-Tenured Line-Research (NTL-R). Contact: Mark Mercola, mmercola@stanford.edu


Paul Yock Wins National Academy of Engineering’s Gordon Prize

Paul Yock, MD, professor of medicine and of bioengineering at Stanford University, will receive the National Academy of Engineering’s 2018 Bernard M. Gordon Prize for Innovation in Engineering and Technology Education.

The academy said Yock was chosen for “the development and global dissemination of Biodesign, a biomedical technology training program that creates leaders and innovations that benefit patients.” The prize is the academy’s top honor for teaching and carries a $500,000 award.

Yock, who holds the Martha Meier Weiland Professorship and was the founding co-chair of Stanford’s Department of Bioengineering, is known for his work inventing and testing new medical devices in the field of interventional cardiology. Motivated to help other aspiring innovators succeed in developing devices to improve health care, he founded Stanford Biodesign in 2001. Biodesign is part of Bio-X, Stanford’s interdisciplinary biosciences institute.

cvi.stanford.edu

3rd Annual Stanford Drug Discovery Conference
April 23-34, 2018

Kenneth Frazier, JD
CEO, Merck

Joe Jimenez, MBA
Former CEO, Novartis

Brent Saunders, JD, MBA
CEO, Allergan

Bob Bradway, MBA
CEO, Amgen

Patrick Soon-Shiong, MD
CEO, NantWorks

George Scangos, PhD
CEO, Vir

Roy Vagelos, MD
Former CEO, Merck

Janet Woodcock, MD
Director, FDA Center for Drug Evaluation and Research (CDER)

Maria Millan, MD
President, CIRM

Gary Gibbons, MD
Director, NHLBI

Marc Tessier-Lavigne, PhD
President, Stanford University

Brian Kobilka, MD
Nobel Prize in Chemistry, 2012
50th Anniversary Celebration of Dr. Norman E. Shumway’s First Heart Transplant Event

Dr. Norman E. Shumway performed the first adult heart transplant in the United States here at Stanford on January 6, 1968. To commemorate this epic event in history, on January 22, 2018, the Department of Cardiothoracic Surgery hosted a celebration of the 50th anniversary. A full day symposium was held at the Li Ka Shing Center for Learning and Knowledge at Stanford University with 350 guests in attendance.

We invited a host of speakers from around the country to detail pioneering achievements and contributions as well as provide a glimpse of the future of heart transplantation and technical circulatory support. Dr. Sara Shumway, heart transplant surgeon and daughter of Dr. Norman Shumway, and Dr. Edward Stinson, who assisted Dr. Shumway with the first adult heart transplant were among the luminaries.

Guests in attendance were also able to hear a few words from patient Linda Karr, who received a new heart from the rare procedure “domino” transplant performed here at Stanford on January 30, 2016 by Dr. Joseph Woo and Dr. Jack Boyd. She was extremely thankful for the doctors here at Stanford and provided a unique, heartwarming perspective during this historic celebration.

About the Stanford Cardiovascular Institute

The Institute currently consists of over 241 faculty members representing physicians, surgeons, engineers, basic scientists and clinical researchers. The mission of the Institute is to integrate fundamental research across disciplines and apply technology to prevent and treat cardiovascular disease.

To support cardiovascular research and education at CVI, please contact: Joseph Wu, CVI Director, at joewu@stanford.edu, or Cathy Hutton, Senior Associate Director, Medical Center Development at cathy.hutton@stanford.edu

For more information: http://med.stanford.edu/cvi/support-our-research.html and http://cvi.stanford.edu
Dr. Norman E. Shumway’s First Heart Transplant
Gerald Reaven, Scientist Who Coined ‘Syndrome X,’ Dies at 89

By Tracie White, Office of Communication & Public Affairs

Gerald “Jerry” Reaven, MD, who gained international recognition for coining the term Syndrome X — now known as metabolic syndrome — died Feb. 12 at his home on the Stanford University campus. He was 89.

An endocrinologist and professor emeritus of medicine at the Stanford School of Medicine, Reaven was one of the first researchers to argue for the existence of insulin resistance, a diminished response to the hormone insulin. It was a controversial concept that met with huge opposition. But Reaven proved the naysayers wrong. In 1988, he also introduced the novel idea of a link between insulin resistance and a cluster of other metabolic abnormalities that together greatly increased the risk for cardiovascular disease, which he called Syndrome X.

“Jerry Reaven was a true Stanford pioneer,” said Lloyd Minor, MD, dean of the School of Medicine. “He was the consummate scientist whose rigorous scholarship was a model for researchers at Stanford and around the world. He will be missed.”

Reaven broke ground when he argued for the existence of insulin resistance as an early and critical link in the development of Type 2 diabetes and conducted numerous studies over many decades proving the existence of insulin resistance and its many implications for metabolic diseases and cardiovascular diseases.

“Jerry Reaven was a giant in the Department of Medicine,” said Robert Harrington, MD, professor and chair of medicine at Stanford. “His scientific contribution in describing and then further defining insulin resistance is one of the great achievements in metabolic disease over the last 50 years.”

In the 1950s, when Reaven started out as a researcher, it was believed that there was only one type of diabetes and that it was caused by a lack of insulin.

“In the late ’70s early ’80s, there was a lot of controversy about insulin resistance, and Jerry was not shy about standing up and sharing his opinions,” said Frederic Kraemer, MD, professor and chief of endocrinology, gerontology and metabolism at Stanford. “He was tenacious when it came to defending his scientific observations. He didn’t like to accept opinions; he liked to accept facts — facts generated from well-controlled scientific investigations.”

In 1988, during the American Diabetes Association Banting award lecture, he introduced the concept of the link between insulin resistance and other metabolic abnormalities, calling it Syndrome X. This constellation of conditions — increased blood pressure, high blood sugar and abnormal HDL cholesterol and triglyceride levels — later became known as metabolic syndrome and has become a useful indicator of increased risk for heart disease, stroke and diabetes.

“I visited him at his house just before the Super Bowl in February, when I knew he was sick,” said Joshua Knowles, MD, an assistant professor of cardiovascular medicine. “He was very sad he couldn’t be at work. I brought a paper on the effects of insulin resistance on different race ethnicities. He wanted to see the data. Science was his life.”

Reaven was a Midwesterner and a baseball fan. He was born in Gary, Indiana, on July 28, 1928, but grew up in Cleveland, which accounts for his lifelong “affection and frustration” with the Cleveland Indians baseball team, said his son, Peter Reaven, MD, an endocrinologist and director of the diabetes research program at the Phoenix Veterans Affairs Health Care System in Arizona.

“Both my dad and my mom were academics,” he said. His mother, Eve Reaven, PhD, is a retired electron microscope who lives in the Stanford home where she and Jerry raised their three children.

“Often dinner conversations were about academics and science. Somehow that became comfortable.”

Reaven earned his undergraduate and medical school degrees at the University of Chicago and completed his residency training at the University of Michigan. He joined the Stanford faculty in 1960. He worked at the School of Medicine first in the endocrinology division and then, after semi-retirement, in the cardiovascular division.

Reaven won numerous awards, including the William S. Middleton Award for outstanding achievement in medical research from the Veterans Affairs Administration, the Banting Medal for Scientific Achievement from the American Diabetes Association, the Banting Memorial Lecture from the British Diabetes Association, the Fred Conrad Koch Award from the Endocrine Society, the Distinction in Clinical Endocrinology Award from the American Association of Clinical Endocrinologists, and the National Lipid Association Honorary Lifetime Member Award.

In addition to his wife and son, he is survived by daughters Marci Reaven of New York and Nancy Reaven of Los Angeles and their families.

In lieu of flowers, the family asks for consideration of a memorial donation to support the Gerald M. Reaven Memorial Research Fund either online or by making a check payable to “Stanford University” and sending it to Stanford University Development Services, P.O. Box 20466, Stanford, CA 94309-0466. Please note “In Memory of Dr. Gerald Reaven” online or on the memo line of the check.

The Secret to Building a Strong Heart Lies in Blood Vessels  By Nathan Collins, Stanford News Service

Every year, a small but not insignificant number of babies are born with hearts whose muscles are spongy and thin, although exactly what causes that condition isn’t clear. Now, Stanford biologists think they may have found a clue: spongy heart muscles could be the result of improperly developed blood vessels surrounding the heart, the researchers write January 25 in *Nature Communications*.

Apart from a deeper understanding of congenital heart disease, the results could shed light on how heart muscle forms in the first place, said the study’s two senior authors, Ashby Morrison and Kristy Red-Horse, assistant professors of biology.

Morrison, Red-Horse and their colleagues did not set out to understand congenital heart disease. Instead, they attribute the project to something altogether more random: their offices are right next to each other. Their physical proximity got them talking, and among the topics of conversation was a particular molecule that Morrison had been looking at, called Ino80. Without it, yeast get sick and die off – but in other organisms, “we didn’t know what to expect,” Morrison said.

To find out, Red-Horse and her lab started the process of genetically modifying mice to lack Ino80, either throughout their bodies or in specific areas of the body or specific cell types. The most intriguing results came from mice which didn’t produce Ino80 in endothelial cells – the progenitors of blood vessels that feed the muscles of the heart. Without Ino80, the network doesn’t develop properly, and as a result, cardiac muscles couldn’t develop properly either – instead remaining spongy and weak. It was at this point that the team noticed the similarity between their mice and a form of heart disease called left ventricular non-compaction, the third most common disease of the heart muscle.

What they’ve found should change how both doctors and biologists think about how the heart forms. Farther down the road, the research could also have implications for regenerative medicine specialists working to grow hearts and other organs in the lab, Red-Horse and Morrison said.


Stanford Medicine to Collaborate on Apple Heart Study

Stanford Medicine researchers are working with Apple on a research study to determine whether the Apple Watch’s heart-rate sensor can identify irregular heart rhythms associated with a condition known as atrial fibrillation.

The Apple Heart Study app was launched November 30. As part of the study, if an irregular heart rhythm is observed, participants will receive a notification on their Apple Watch and iPhone, a free consultation with a study doctor and an electrocardiograph patch for additional monitoring.

Each year in the United States, atrial fibrillation causes 130,000 deaths and 750,000 hospitalizations. It can lead to blood clots and is a leading cause of stroke, but many don’t experience symptoms, so it often goes undiagnosed.

The sensor in the Apple Watch uses LED lights to measure heart rate. The technology can also monitor the pattern of the heart-beat. The app uses this technology combined with software algorithms to identify an irregular heart rhythm.

“Through the Apple Heart Study, Stanford Medicine faculty will explore how technology like Apple Watch’s heart-rate sensor can help usher in a new era of proactive health care central to our precision health approach,” said Lloyd Minor, MD, dean of the School of Medicine.

Drs. Mintu Turakhia and Marco Perez are the co-PIs of the Apple Heart Study. SCCR, CDH, QSU, IRT and others are partnering to make this project a success.


cvi.stanford.edu
Creating a Platform to Help Transplanted Stem Cells Survive After a Heart Attack

Kevin McCormack, The Stem Cellar, CIRM

Repairing, even reversing, the damage caused by a heart attack is the Holy Grail of stem cell researchers. For years the Grail seemed out of reach because the cells that researchers transplanted into heart attack patients didn’t stick around long enough to do much good. Now researchers at Stanford may have found a way around that problem.

In a study published in the journal *Nature Biomedical Engineering*, a team at Stanford – led by Drs. Patricia Nguyen, Jayakumar Rajadas, and Joseph Wu – believe they have managed to create a new way of delivering these cells, one that combines them with a slow-release delivery mechanism to increase their chances of success. The team began by working with a subset of bone marrow cells that had been shown in previous studies to have what are called “pro-survival factors.” Step two involved creating a matrix that would enable the researchers to link the peptides and combine them with a delivery system they hoped would produce a slow release of pro-survival factors.

The team focused on cardiac progenitor cells (CPCs) which have shown potential to help repair damaged hearts, but which also have a low survival rate when transplanted into hearts that have experienced a heart attack. The team delivered CPCs to the hearts of mice and found the cells without the pro-survival matrix didn’t last long. In contrast, the cells on the peptide-infused matrix were found in large numbers up to eight weeks after injection. And the cells didn’t just survive, they also engrafted and activated the heart’s own survival pathways.

The team then tested to see if the treatment was helping improve heart function and found that mice treated with the matrix combination had statistically improved left ventricular function.

https://blog.cirm.ca.gov/2018/02/06/creating-a-platform-to-help-transplanted-stem-cells-survive-after-a-heart-attack/

Weight Flux Alters Molecular Profile

Hanae Armitage, Office of Communication & Public Affairs

The human body undergoes dramatic changes during even short periods of weight gain and loss, according to a study led by researchers at the Stanford University School of Medicine.

As people pack on pounds or shed excess weight, they exhibit notable changes in their microbiome, cardiovascular system, immune system and levels of gene expression, the study found.

A paper describing the work was published online January 17 in *Cell Systems*. Senior authorship is shared by Michael Snyder, PhD, professor of genetics at Stanford; Tracey McLaughlin, MD, professor of medicine at Stanford; and George Weinstock, PhD, professor and director of microbial genomics at the Jackson Laboratory, an independent, nonprofit biomedical research institution.

“The goal here was to characterize what happens during weight gain and loss at a level that no one has ever done before,” Snyder said. “We also really wanted to learn how prediabetic folks might differ in terms of their personal omics profiles and their molecular responses to weight fluctuation.”

Snyder and his colleagues found that even with modest weight gain—about 6 pounds—the human body changed in dramatic fashion at the molecular level. Bacterial populations morphed, immune responses and inflammation flared, and molecular pathways associated with heart disease activated. But that’s not the end of the story. When study participants lost the weight, most of the rest of the body’s systems recalibrated back to their original states, the study found.

The work is an example of Stanford Medicine’s focus on precision health, the goal of which is to anticipate and prevent disease in the healthy and precisely diagnose and treat disease in the ill.

Higher Blood Sugar in Early Pregnancy Raises Baby’s Heart-defect Risk

Higher blood sugar early in pregnancy raises the baby’s risk of a congenital heart defect, even among mothers who do not have diabetes, according to a study led by researchers at the Stanford University School of Medicine published online December 15 in The Journal of Pediatrics.

For many years, physicians have known that women with diabetes face an increased risk of giving birth to babies with heart defects. Some studies have also suggested a link between nondiabetic mothers’ blood sugar levels and babies’ heart defect risk. However, the new study is the first to examine this question in the earliest part of pregnancy, when the fetal heart is forming.

“Most women who have a child with congenital heart disease are not diabetic,” said the study’s senior author, James Priest, MD, assistant professor of pediatric cardiology. “We found that in women who don’t already have diabetes or develop diabetes during pregnancy, we can still measure risk for having a child with congenital heart disease by looking at their glucose values during the first trimester of pregnancy.”

The research team studied medical records from mothers and their babies born between 2009 and 2015. The scientists analyzed blood glucose levels collected from the mothers between four weeks prior to the estimated date of conception and the end of the 14th gestational week, just after the completion of the first trimester of pregnancy. After excluding women who had diabetes before pregnancy or who developed it during pregnancy, the results showed that the risk of giving birth to a child with a congenital heart defect was elevated by 8 percent for every increase of 10 milligrams per deciliter in blood glucose levels in the early stages of pregnancy.

The next step is to conduct a prospective study that follows a large group of women through pregnancy to see if the results are confirmed, Priest said. If researchers see the same relationship, it may be helpful to measure blood glucose early in pregnancy in all pregnant women to help determine which individuals are at greater risk for having a baby with a heart defect.

New Toolkit Will Help Doctors Spot Heart Disease Linked to Pregnancy

A new set of guidelines will help doctors spot hidden heart disease in pregnant women and new mothers. The guidelines, part of a recently released toolkit from the Stanford-based California Maternal Quality Care Collaborative, are intended to improve diagnosis and treatment of women whose new or existing heart conditions interact with pregnancy.

Heart problems are the leading cause of death in pregnant women and new moms.

“Most pregnancies occur in young, healthy women and there is an overlap between signs and symptoms women may experience in a normal pregnancy and those they may experience due to cardiac disease, specifically shortness of breath, fatigue and swelling,” the toolkit authors write. As a result, doctors can mistake warning signs of peripartum cardiomyopathy for harmless pregnancy side effects. A 2016 study found that about half of these cardiac patients were initially misdiagnosed, while a statewide survey of maternal deaths that occurred in California between 2002 and 2006 found that most women who died of heart problems did not have a known cardiac condition before pregnancy.

The toolkit identifies “red flag” symptoms of pregnancy-related heart disease. The guidelines also describe diagnostic tests to order if a woman shows signs of heart disease. Stanford cardiologist Abha Khandelwal, MD, and nurse-researcher Julie Arafeh wrote the guidelines for women with adult congenital heart disease, and Stanford research sociologist Christine Morton, PhD, is a co-author of the section describing cardiovascular health disparities in African-American women.

Importantly, the toolkit also encourages all pregnant women to receive screening for cardiovascular disease, and provides a detailed algorithm to help doctors decide what combinations of symptoms, vital-sign abnormalities, cardiac risk factors and warning signs on a physical exam should prompt them to refer a patient for follow-up with a cardiologist.


Induced pluripotent stem cells, or iPS cells, are a keystone of regenerative medicine. Outside the body, they can be coaxed to become many different types of cells and tissues that can help repair damage due to trauma or disease. Now, a study in mice from the Stanford University School of Medicine suggests another use for iPS cells: training the immune system to attack or even prevent tumors.

“We’ve learned that iPS cells are very similar on their surface to tumor cells,” said Joseph Wu, MD, PhD, director of Stanford’s Cardiovascular Institute and professor of cardiovascular medicine and of radiology. “When we immunized an animal with genetically matching iPS cells, the immune system could be primed to reject the development of tumors in the future. Pending replication in humans, our findings indicate these cells may one day serve as a true patient-specific cancer vaccine.”

Wu is the senior author of the study, which was published online February 15 in Cell Stem Cell. Former postdoctoral scholar Nigel Kooreman, MD, is the lead author. “These cells, as a component of our proposed vaccine, have strong immunogenic properties that provoke a systemwide, cancer-specific immune response,” said Kooreman, who is now a surgery resident in the Netherlands. “We believe this approach has exciting clinical potential.”

“Although much research remains to be done, the concept itself is pretty simple,” Wu said. “We would take your blood, make iPS cells and then inject the cells to prevent future cancers. I’m very excited about the future possibilities.”

https://gizmodo.com/scientists-successfully-test-a-vaccine-in-mice-that-cou-1823034669
Three times a year the CVI grants awards to trainees to support their travel to national conferences to present their work. Congratulations to the recent winners!

**Aldo Cordova Palomera, PhD**  
Mentor: James Priest, MD  
Genome-Wide Association Study of Congenital Heart Disease in the UK Biobank  
American Society of Human Genetics (ASHG) Conference 2017  
Orlando, Florida  
October 17-21, 2017

**Nadia Ouazani, MD**  
Mentor: Jeffrey Teuteberg, MD  
Estimation of Pulmonary Capillary Wedge Pressure by Transthoracic Echocardiography in Mechanically Ventilated Patients: Comparison Tissue Doppler Imaging with Color M-mode Doppler Propagation Flow  
Acute Cardiovascular Care  
Milan, Italy  
March 3-5, 2018

**David Paik, PhD**  
Mentor: Joseph Wu, MD, PhD  
Human iPSC-Derived Endothelial Cells Predict Predilection to Atherogenesis by Endothelial Proinflammatory Activation  
AHA Scientific Sessions  
Anaheim, California  
November 11-15, 2017
Faculty Funding Opportunities

Stanford Neurosciences Institute
Big Ideas in Neuroscience: Transformative Research Initiatives in the Brain Sciences
Call for Letters of Intent (Round 2, Phase 1)
The Institute is dedicated to stimulating and supporting interdisciplinary efforts that advance neuroscience research and education.
Letter of intent (required) deadline: March 12, 2018
Full proposal (by invitation only) deadline: July 11, 2018
SNI

Burroughs Wellcome Fund
Quantitative and Statistical Thinking in the Life Sciences
Deadline: March 14, 2018
BWFund

The Stanford Institute for Immunity, Transplantation and Infection (ITI)
NIH Cooperative Centers for Translational Research in Human Immunology (CCHI)
Pilot Project Grants
Deadline: March 16, 2018
ITI

National Institutes of Health
Improving Outcomes in Cancer Treatment-Related Cardiotoxicity (R21)
Deadline: Mar 16, 2018
PA-18-013

Improving Outcomes in Cancer Treatment-Related Cardiotoxicity (R01)
Deadline: June 5, 2018
PA-18-003

California Institute for Regenerative Medicine (CIRM)
Discovery Stage Research Projects DISC 2: The Quest Awards
Deadline: March 15, 2018
CIRM Discovery Stage Research Awards

Clinical Trial Stage Projects
CLN 1: Partnering Opportunity for Late Stage Preclinical Projects
CLN 2: Partnering Opportunity for Clinical Stage Projects
CLN 3: Partnering Opportunity for Supplemental Accelerating Activities
Deadline: CIRM is establishing an open call for proposals and will accept applications on a monthly basis
CIRM Clinical Trial Stage Projects

Children’s Cardiomyopathy Foundation Research Grant Program
Amount of funding: $25-50K for 1 year
Deadline: June 14, 2018
CCF

Stanford Bio-X Interdisciplinary Initiatives Seed Grant Program-Round 9
High-risk, high-reward collaborative proposals
Letter of intent deadline: March 19, 2018
Biox

Intermountain-Stanford Collaboration Grants
Research to advance healthcare transformation, ideally through the scale and spread of proven or promising clinical improvements.
Deadline: March 2018
Intermtn-SU

Stanford Nano Shared Facilities (SNSF)
Bio/Medical Mini Seed Grants
Deadline: Proposals are accepted on an ongoing basis as funds permit.
SNSF

Center for Health Policy (CHP)/ Center for Primary Care and Outcomes Research (PCOR)
VA Fellowship in Health Services Research and Development
Deadline: Applications accepted anytime
CHP

Marfan Foundation
Clinical Research Program Faculty Grant Program
Deadline: April 20, 2018
Marfan Foundation

Breakthrough Prizes
Topics: Life Sciences, Physics, Mathematics
Deadline: April 30, 2018
Breakthrough Prize

Breakthrough Prizes – Early career researchers
Topics: Fundamental Physics and Mathematics
Deadline: April 30, 2018
Breakthrough Prize

Stanford Cardiovascular Institute 2018 Seed Grants
Deadline: August 1, 2018
CVI Seed Grants
January 11, 2018  
KIRAN K. KHUSH, MD, MAS  
Associate Professor of Medicine, Cardiovascular Medicine

January 18, 2018  
SIDDHARTHA JAISWAL, MD, PHD  
Assistant Professor of Pathology

January 25, 2018  
OLIVER O. AALAMI, MD  
Clinical Associate Professor of Surgery, Vascular Surgery

February 1, 2018  
JOSHUA W. KNOWLES, MD, PHD  
Assistant Professor of Medicine, Cardiovascular Medicine

February 8, 2018  
ALEXANDER DUNN, PHD  
Associate Professor of Chemical Engineering

February 15, 2018  
MICHAEL SNYDER, PHD  
Stanford W. Ascherman, MD, FACS, Professor in Genetics  
Chair, Department of Genetics

February 22, 2018  
JAMES R. PRIEST, MD  
Assistant Professor of Pediatrics, Cardiology

March 1, 2018  
SANJIV NARAYAN, MD  
Professor of Medicine, Cardiovascular Medicine

March 8, 2018  
RONGLIH LIAO, PHD  
Professor of Medicine, Cardiovascular Medicine

March 15, 2018  
NICHOLAS J. LEEPER, MD  
Associate Professor of Surgery, Vascular Surgery and  
Associate Professor of Medicine, Cardiovascular Medicine

The focus of MED223 is to fine tune critical thinking skills by analyzing original publications and understand the current complexities of the cardiovascular system.

Directors: Patricia Nguyen, MD; Themistocles L. Assimes, MD, PhD; Ioannis Karakikes, PhD; Ngan Huang, PhD

http://med.stanford.edu/cvi/education/med223.html
Frontiers in Cardiovascular Science 2017-2018
Tuesdays 12:30 - 1:20 p.m. (unless otherwise noted), Li Ka Shing Center, LK130

January 9, 2018
JENNIFER VAN EYK, PHD
Director, Advanced Clinical Biosystems
Institute in the Department of Biomedical Sciences; Director, Basic Science
Research in the Women’s Heart Center; Erika J. Glazer Chair in Women’s Heart Health
Cedars Sinai

January 16, 2018
ERIK INGELSSON, MD
Professor of Medicine (Cardiovascular Medicine) and, by courtesy, of Health Research and Policy (Epidemiology)
Stanford

January 23, 2018
JAMES F. MARTIN, MD, PHD
Professor, Vivian L. Smith Chair in Regenerative Medicine
Baylor College of Medicine

January 30, 2018
ALISON L. MARSDEN, PHD
Associate Professor of Pediatrics (Cardiology) and of Bioengineering and, by courtesy, of Mechanical Engineering
Stanford

February 6, 2018
(1:30 p.m., Munzer Auditorium)
BRIAN BLACK, PHD
Professor, Cardiovascular Research Institute, Department of Biochemistry and Biophysics, UCSF

February 13, 2018
WALTER J. KOCH, PHD
William Wikoff Smith Endowed Chair in Cardiovascular Medicine; Professor and Chair, Pharmacology, Temple University

February 20, 2018
KAIMURU SHINGO, PHD
Associate Professor, Department of Cell and Tissue Biology
UCSF

March 6, 2018
The Steven M Gootter Foundation Lecture
MARK E. ANDERSON, MD, PHD
William Osler Professor of Medicine; Chair, Department of Medicine, Johns Hopkins University

March 13, 2018
KAM W. LEONG, PHD
Samuel Y. Sheng Professor; EiC, Biomaterials; Department of Biomedical Engineering, Columbia University

March 20, 2018
RICHARD SCHELLER, PHD
Chief Science Officer & Head of Therapeutics, 23andme

March 27, 2018
SARAH C. HEILSHORN, PHD
Associate Professor, Materials Science & Engineering, Stanford
Associate Editor, Science Advances, AAAS

April 10, 2018
THOMAS M. VONDRISKA, PHD
Professor of Anesthesiology, Medicine and Physiology, UCLA

April 17, 2018
PEIPEI PING, PHD
Professor, Physiology; Professor, Medicine/Cardiology, and Bioinformatics, UCLA; Director, NIH BD2K Center of Excellence at UCLA; Director, NIH BD2K Centers-Coordination Center at UCLA

May 1, 2018
GEOFFREY PITT, MD, PHD
Director of the Cardiovascular Research Institute; The Ida and Theo Rossi Distinguished Professor of Medicine, Weill Cornell Medical College

May 8, 2018
ROBERT J. GROPLER, MD
Professor of Radiology, Medicine and Biomedical Engineering
Senior Vice-Chair and Division Director Radiological Sciences & Chief, Cardiovascular Imaging Laboratory
Washington University School of Medicine

May 15, 2018
BRADFORD C. BERK, MD, PHD
Distinguished University Professor in Medicine, Neurology, Pathology, and Pharmacology & Physiology
Director, University of Rochester Neurorestoration Institute
University of Rochester Medical Center

May 22, 2018
PETER LIBBY, MD
Mallinckrodt Professor of Medicine, Harvard Medical School
Senior Physician, Brigham and Women’s Hospital

June 5, 2018
CHRISTINE MUMMERY, PHD
Professor of Developmental Biology, Chair Dept. of Anatomy & Embryology, Leiden University Medical Center

http://cvi.stanford.edu
MARCH 2018
American College of Cardiology
Scientific Session & Expo
March 10-12, 2018
Orlando, Fl
Scientific Session

Epidemiology and Prevention; Lifestyle and Cardiometabolic Health
March 20-23, 2018
New Orleans, LA
EPI LIFESTYLE 2018

APRIL 2018
AHA QCOR (Quality of Care and Outcomes Research)
April 6–7, 2018
Arlington, Va.
AHA

Mayo Clinic School of Continuous Professional Development:
Extracorporeal Membrane Oxygenation (ECMO) Symposium 2018
April 10-18, 2018
Scottsdale, AZ
Mayo Clinic

Stanford Pulmonary Artery Reconstruction and Right Ventricle Rehabilitation Symposium
Li Ka Shing Center for Learning and Knowledge, Stanford, CA
April 14-15, 2018
SPARRVRS

2018 Drug Discovery Conference
April 23-24, 2018
Li Ka Shing Center for Learning and Knowledge, Stanford, CA
CVI

Society for Cardiovascular Angiography and Interventions
April 25-28, 2018
San Diego, CA
SCAI 2018

MAY 2018
AHA ATVB|PVD (formerly: Arteriosclerosis, Thrombosis and Vascular Biology | Peripheral Vascular Disease)
May 10–12, 2018
San Francisco, Calif.
AHA

Heart Rhythm Scientific Sessions
May 9-12, 2018
Boston
HR Sessions

Big Data in Biomedicine Conference
May 23–24, 2018
Stanford, CA
Big Data

European Society of Cardiology – Heart Failure
May 26-29, 2018
Vienna, Austria
Heart Failure

JUNE 2018
Stanford’s 4th Annual Mechanical Circulatory Support: Optimal Management and New Frontiers
Li Ka Shing Center for Learning and Knowledge, Stanford, CA
June 9, 2018
SMCSOMNF

International Society for Stem Cell Research
June 20-23
Melbourne, Australia
ISSCR

CARDIA 2018: Cardiac Arrhythmia, Sudden Death, Inherited Cardiovascular Disease, Athletes
June 21-22, 2018
Paul Brest Hall
Stanford, CA
CARDIA

JULY 2018
AHA ATVB|PVD (formerly: Arteriosclerosis, Thrombosis and Vascular Biology | Peripheral Vascular Disease)
May 10–12, 2018
San Francisco, Calif.
AHA

Heart Rhythm Scientific Sessions
May 9-12, 2018
Boston
HR Sessions

Big Data in Biomedicine Conference
May 23–24, 2018
Stanford, CA
Big Data

European Society of Cardiology – Heart Failure
May 26-29, 2018
Vienna, Austria
Heart Failure

JUNE 2018
Stanford’s 4th Annual Mechanical Circulatory Support: Optimal Management and New Frontiers
Li Ka Shing Center for Learning and Knowledge, Stanford, CA
June 9, 2018
SMCSOMNF

International Society for Stem Cell Research
June 20-23
Melbourne, Australia
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CARDIA 2018: Cardiac Arrhythmia, Sudden Death, Inherited Cardiovascular Disease, Athletes
June 21-22, 2018
Paul Brest Hall
Stanford, CA
CARDIA

AUGUST 2018
European Society of Cardiology – Congress 2017
Aug 25-29, 2018
Munich, Germany
ESC Congress

Stanford Cardiovascular Health
Leadership in heart and vascular care, research, and education have made Stanford Cardiovascular Health a destination for patient referrals from around the country and around the world. Each year, we receive more than 80,000 visits from patients who come to us for state-of-the-art cardiovascular care. Our experts collaborate to deliver the personalized approach integral to optimizing each patient’s heart and vascular health. Learn more about our clinical and research program [https://issuu.com/stanfordhospital/docs/cardio_telescoping_br_v9_ppt?e=10554343/57900660](https://issuu.com/stanfordhospital/docs/cardio_telescoping_br_v9_ppt?e=10554343/57900660).
Clinical Biomarker & Phenotyping Core Lab (BPCL)

BPCL provides quantitative assessment of clinical cardiovascular phenotypes for translational research and clinical trials. These cardiovascular phenotypes include evaluating cardiac structure and function, measuring carotid intimal thickness and arterial stiffness, and testing endothelial function and cardiopulmonary exercise testing.

In collaboration with the Human Immune Monitoring Center at Stanford and members of the Cardiovascular Institute, we also offer central blood processing and banking capabilities. In addition, we develop new biomarker platforms and imaging modalities.

Contact: Francois Haddad, MD / fhaddad@stanford.edu

CVI Clinical Trials Core

The CVI Clinical Trials Core provides full spectrum of support to CVI members and their clinical trials. The coordinators have extensive clinical research experience in both industry and academia. The team provides services and support to principal investigators and sponsors, including:

- Consultation
- Study start-up management, including IRB applications, budget development
- Subject recruitment, site visits, and follow-ups (AE reporting and queries)
- Data management
- Regulatory compliance and documentation
- Closeout

Contact: Ed Finn, Clinical Trials Manager or Hoa Ly, Clinical Research Coordinator at (650) 498-6279

Stanford CVI Human iPSC Biobank Service

Normal and patient-derived reprogrammed cardiomyocytes are a tremendous resource for researchers and physicians here at Stanford and around the country. Understanding the disease process directly at the population level and observing these cells as surrogates under a myriad of conditions has the potential to be a game-changer for cardiovascular medical research.

To facilitate research in a dish that allows screening of new compounds or characterization of human disease phenotypes using cardiomyocytes, the Institute created a service by which de-identified peripheral blood mononuclear cell (PBMC) samples from selected patients can be sent to Stanford CVI for reprogramming free of cost.

SCVI biobank is supported in part by National Heart, Lung and Blood Institute (NHLBI) and the Stanford Cardiovascular Institute (CVI).

Stanford iPSC Biobank was recently mentioned in Nature Methods news: nature.com/nmeth/journal/v12/n2/full/nmeth.3263.html.

Contact: Joseph Wu, MD, PhD / joewu@stanford.edu
or Biobank manager, Yan Zhuge / yanzhuge@stanford.edu with any questions.

Cardiovascular Pharmacology (BioADD)

The Cardiovascular Pharmacology/Biomaterials and Advanced Drug Delivery (BioADD) Laboratory is a cutting edge research facility that specializes in the creation of biomaterials and drug delivery agents. The lab lends its expertise toward designing and analyzing biomaterials, developing drug delivery devices and formulations, pharmacokinetic and pharmacodynamic studies, and developing smart materials for biomedical applications. The CVI Cardiovascular Pharmacology also offers trainings and lectures.

Contact: Jayakumar Rajadas, PhD
jayraja@stanford.edu

3DQ Imaging Laboratory

Stanford’s 3DQ Imaging Laboratory develops new approaches to exploration, analysis and quantitative assessments of diagnostic images that result in new and/or more cost-effective diagnostic approaches, and new techniques for the design and monitoring of therapy. The lab processes over 1,200 clinical cases to deliver relevant visualization and analysis of medical imaging data at Stanford.

The lab is co-directed by Dominik Fleischmann, MD, Roland Bammer, PhD and Sandy Napel, PhD.

Contact: Dominik Fleischmann, MD
d.fleischmann@stanford.edu
Communication is at the heart of scientific advancement and innovation. This quarter, the Stanford Cardiovascular Institute members published over 350 original manuscripts and reviews, further contributing to our understanding of cardiovascular biology and disease. Here, we highlight selected manuscripts by our members.

**JANUARY**


**Cancer therapy-induced cardiomyopathy: can human induced pluripotent stem cell modelling help prevent it?** Stack JP, Moslehi J, Sayed N, Wu JC. Eur Heart J. 2018 Jan 25


**CRISPR/Cas9 genome editing in human hematopoietic stem cells.** Bak RO, Dever DP, Porteus MH. Nat Protoc. 2018 Feb;13(2):358-376


**Anticoagulant and antiplatelet therapy choices for patients with atrial fibrillation one year after coronary stenting or acute coronary syndrome.** Oliveira CB, Turakhia MP, Mahaffey KW. Expert Opin Drug Saf. 2018 Jan 24;1-8

**Altmetric Scores, Citations, and Publication of Studies Posted as Preprints.** Serghiou S, Ioannidis JPA. JAMA. 2018 Jan 23;319(4):402-404


**Inhibition of Drp1/Fis1 interaction slows progression of amyotrophic lateral sclerosis.** Joshi AU, Saw NL, Vogel H, Cunningham AD, Shamloo M, Mochly-Rosen D. EMBO Mol Med. 2018 Jan 15.


**Microtubule Polymerization and Cross-Links Dynamics Explain Axonal Stiffness and Damage.** de Rooij R, Kuhl E. Biophys J. 2018 Jan 9;114(1):201-212


Cardiac Cell Cycle Activation as a Strategy to Improve iPSC-Derived Cardiomyocyte Therapy. Rhee JW, Wu JC. Circ Res. 2018 Jan 5;122(1):14-16


Human Induced Pluripotent Stem Cell (hiPSC)-Derived Cells to Assess Drug Cardioxicity: Opportunities and Problems. Magdy T, Schultd AJT, Wu JC, Bernstein D, Burridge PW. Annu Rev Pharmacol Toxicol. 2018 Jan 6;58:83-103


## Leadership

<table>
<thead>
<tr>
<th>Name</th>
<th>Title and Department</th>
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<tbody>
<tr>
<td>Joseph C. Wu, MD, PhD</td>
<td>Director, Stanford Cardiovascular Institute, Simon H. Stetzer Professor of Medicine (Cardiovascular) and Radiology</td>
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<tr>
<td>Robert A. Harrington, MD</td>
<td>Arthur L. Bloomfield Professor of Medicine, Chair, Dept. of Medicine</td>
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<tr>
<td>Ronald L. Dalman, MD</td>
<td>Walter C. and Elsa R. Chidester Professor of Surgery, Chief, Division of Vascular Surgery</td>
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<tr>
<td>Stephen J. Roth, MD, MPH</td>
<td>Professor and Chief, Pediatric Cardiology, Director, Children’s Heart Center</td>
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<tr>
<td>Dominik Fleischmann, MD</td>
<td>Professor, Dept. of Radiology, Chief, Cardiovascular Imaging</td>
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<td>Michael Snyder, PhD</td>
<td>Professor and Chair, Dept. of Genetics, Director, Stanford Center for Genomics and Personalized Medicine</td>
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<td>Kenneth Mahaffey, MD</td>
<td>Professor, Dept. of Medicine, Vice Chair of Medicine for Clinical Research</td>
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<tr>
<td>Y. Joseph Woo, MD</td>
<td>Norman E. Shumway Professor in Cardiothoracic Surgery, Chair, Dept. of Cardiothoracic Surgery</td>
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<tr>
<td>Mark Nicolls, MD</td>
<td>The Stanford Professor of Pulmonary and Critical Care Medicine, Chief, Pulmonary and Critical Care Medicine</td>
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<tr>
<td>Alan Yeung, MD</td>
<td>Li Ka Shing Professor of Medicine, Co-Chief (Clinical), Division of Cardiovascular Medicine</td>
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<td>Tom Quertermous, MD</td>
<td>William G. Irwin Professor of Medicine, Co-Chief (Research), Division of Cardiovascular Medicine</td>
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<td>Paul Yock, MD</td>
<td>Martha Meier Weiland Professor, Bioengineering and Medicine; and Professor, by courtesy, of Mechanical Engineering, Director, Byers Center for Biodesign</td>
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<tr>
<td>Marlene Rabinovitch, MD</td>
<td>Dwight and Vera Dunlevie Professor in Pediatric Cardiology</td>
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