Stanford Cardiovascular Institute

Stanford MEDICINE

SPRING 2018

# Third Annual Stanford Drug Discovery Symposium

*Roy Vagelos, MD and Ken Frazier, CEO of Merck*

On April 23-24, 2018 over 550 people gathered at the Li Ka Shing Conference Center to attend the Third Annual Stanford Drug Discovery Symposium. On the first day, the packed-house audience was treated to presentations from academic scientists engaged in groundbreaking research that is laying the foundation for future therapeutic approaches. These included Stanford based Nobel Laureate **Brian Kobilka, MD** and **Edgar Engleman, MD**; **Kathleen Giacomini, PhD**, and **Kevan Shokat, PhD** from UCSF; and **Hugh Rosen, MD, PhD**, from the Scripps Research Institute.

Later that afternoon, attendees had the rare opportunity to interact with top pharmaceutical executives and philanthropists: **Ken Frazier**, CEO of Merck; **Robert Bradway**, CEO of Amgen; **Joseph Jimenez**, former CEO of Novartis; **Brent Saunders**, CEO of Allergan; **Patrick Soon-Shiong**, MD, CEO of Nantworks; and **Sanford Weill**, the Chairman Emeritus of Citigroup and CEO of Casa Rosa Ventures. In this "View from the Top" session moderated by Stanford President **Marc Tessier-Lavigne, PhD**, the panelists offered their perspectives on drug discovery. The first day ended with the presentation of a Lifetime Achievement Award to **Roy Vagelos, MD**, former CEO of Merck and current Board chair of Regeneron. Dr. Vagelos was acknowledged in part for his role in leveraging the power of the pharmaceutical industry to make a major impact on global health. During his term as Merck CEO, he personally committed to providing the drug Ivermectin free of charge to anyone in the world for the treatment of elephantiasis and river blindness, with the latter having been since eradicated in multiple Central and South American countries due to Dr. Vagelos' efforts.

The second day of the Symposium opened with a Keynote address from **Janet Woodcock, MD**, the Director of the Center for Drug Evaluation and Research (CDER) at the U.S. Food and Drug Administration (FDA), who provided a look inside the agency's new drug regulatory program. This was followed by important presentations about funding priorities from **Gary Gibbons, MD**, the Director of the National Heart, Lung, and Blood Institute (NHLBI), and **Maria Millan, MD**, President and CEO of the California Institute for Regenerative Medicine (CIRM). The meeting concluded with a dynamic Shark Tank-style session, in which representatives from eight competitively selected start-up biotechnology companies pitched their ideas to a panel of scientists, venture capitalists, and CEOs. The panelists who provided feedback were: **George Scangos, PhD** (CEO of Vir), **Robert Robbins, MD** (President of the University of Arizona), **Roy Vagelos, MD**, **Amy Chang, MSEE** (CEO of Accompany), **Ram Shriram** (Founder of Sherpalo), and **Wende Hutton, MBA** (General Partner, Canaan).

The organizers of the meeting, **Joseph Wu, MD, PhD**; **Sanjay Malhotra, PhD, FRSC**; **Kuldev Singh, MD**; **Mark Mercola, PhD**; and **Chaitan Khosla, PhD**, are thrilled with the success of this gathering, and are already looking forward to the next iteration, which will be held April 22-23, 2019.

Stanford MEDICINE | Department of Medicine

## Associate or Full Professor
## Division Chief of Cardiovascular Medicine, Department of Medicine

The Department of Medicine at Stanford University is recruiting a Chief for the Division of Cardiovascular Medicine to lead the research, clinical, and educational activities of the Division.

We are seeking a candidate who combines proven leadership skills with an outstanding record of academic accomplishment, a dedication to excellence in the clinical, research and educational missions, an understanding of the complexity of academic medicine, and the creative vision to continue to develop a premier Division of Cardiovascular Medicine. Candidates should be Board Certified in Cardiology and have a position of Associate Professor or full Professor. The successful candidate should be an accomplished physician investigator with a national/international reputation.

The Department of Medicine's goal is to enhance the research, clinical and educational capabilities of its premier Division of Cardiovascular Medicine. The Chief will be expected to lead the research, clinical, and educational activities of the Division and recruit additional faculty to support both laboratory and clinical research, and expand the clinical enterprise. The Chief will also be expected to strengthen the highly competitive fellowship program in Cardiovascular Medicine and increase its focus on the research opportunities prevalent at Stanford. The Division of CVMed benefits from an outstanding scientific and clinical environment at Stanford, including active collaborations with the basic science departments and the Stanford Cardiovascular Institute.

The faculty position is at the Associate Professor or Professor level in the University Tenure Line or the Medical Center Line. The predominant criterion for appointment in the University Tenure Line is a major commitment to research and teaching. The major criteria for appointment for faculty in the Medical Center Line is excellence in the overall mix of clinical care or programmatic development, clinical teaching, scholarly activity that advances clinical medicine, and institutional service appropriate to the programmatic need the individual is expected to fulfill. Faculty rank and line will be determined by the qualifications and experience of the successful candidate.

Interested candidates should submit their curriculum vitae, a brief letter outlining their interests and the names of three references to:

**Joseph C. Wu, MD, PhD**
Professor & Director,
Stanford Cardiovascular Institute

and **Joseph Woo, MD**
Professor & Chair,
Dept of Cardiothoracic Surgery
Search Committee Co-Chairs

c/o Gretchen M. Picache
gpicache@stanford.edu
Director of Academic Affairs
1520 Page Mill Road
Palo Alto, CA 94304

*Stanford is an equal employment opportunity and affirmative action employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability, protected veteran status, or any other characteristic protected by law.*

# About the Stanford Cardiovascular Institute

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


*Cathy Hutton, MBA*

To support cardiovascular research and education at CVI, please contact: **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**

# 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** and visit *https://medicine.stanford.edu/faculty/openpositions.html.*

# Physical Activity helps fight genetic risk of heart disease

*By Tracie White, Office of Communications and Public Affairs*

*Erik Ingelsson MD, PhD*

In one of the largest observational studies on fitness and heart disease, researchers examined data collected from nearly a half-million people in the UK Biobank database. They found that people with higher levels of grip strength, physical activity and cardiorespiratory fitness had reduced risks of heart attacks and stroke, even if they had a genetic predisposition for heart disease.

"People should not just give up on exercise because they have a high genetic risk for heart disease," said Erik Ingelsson, MD, PhD, professor of cardiovascular medicine. "And vice versa: Even if you have a low genetic risk, you should still get exercise. It all ties back to what we have known all along: It's a mix of genes and environment that influence health."

A paper describing the research was published online April 9 in *Circulation*. Ingelsson is the senior author. The lead author is Emmi Tikkanen, PhD, a former postdoctoral scholar at Stanford who is now senior data scientist at Nightingale Health Ltd. in Finland.

Given little has been known about the risk-modifying effects of exercise in individuals with increased genetic risk of cardiovascular disease, these results could have important ramifications for public health the study said.

"This is important because of how we advise our patients," Ingelsson said. "It's basically indicating that you can make some lifestyle changes, be more physically active and it can make a difference to your long-term health."

*http://med.stanford.edu/news/all-news/2018/04/physical-activity-helps-fight-genetic-risk-of-heart-disease.html*

# Low fat or Low carb? It's a draw, study finds

*By Hanae Armitage, Office of Communications and Public Affairs*

*Christopher Gardner, PhD*

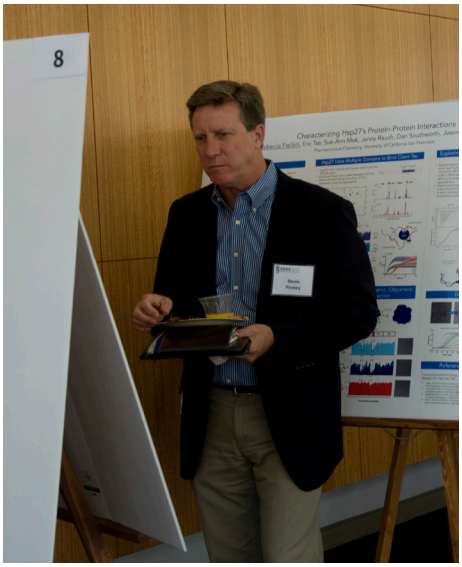
New evidence from a study at the Stanford University School of Medicine might dismay those who have chosen sides in the low-fat versus low-carb diet debate. Neither option is superior: Cutting either carbs or fats shaves off excess weight in about the same proportion, according to the study. What's more, the study inquired whether insulin levels or a specific genotype pattern could predict an individual's success on either diet. The answer, in both cases, was no.

"We've all heard stories of a friend who went on one diet — it worked great — and then another friend tried the same diet, and it didn't work at all," said Christopher Gardner, PhD, professor of medicine and the lead author of the study.

Over a 12-month period, researchers tracked the progress of participants, logging information about weight, body composition, baseline insulin levels and how many grams of fat or carbohydrate they consumed daily. By the end of the study, individuals in the two groups had lost, on average, 13 pounds. There was still, however, immense weight loss variability among them; some dropped upward of 60 pounds, while others gained close to 15 or 20. But, contrary to the study hypotheses, Gardner found no associations between the genotype pattern or baseline insulin levels and a propensity to succeed on either diet.

Perhaps the biggest takeaway from this study, Gardner said, is that the fundamental strategy for losing weight with either a low-fat or a low-carb approach is similar. Eat less sugar, less refined flour and as many vegetables as possible. Go for whole foods, whether that is a wheatberry salad or grass-fed beef. "On both sides, we heard from people who had lost the most weight that we had helped them change their relationship to food, and that now they were more thoughtful about how they ate," said Gardner.

*http://med.stanford.edu/news/all-news/2018/02/low-fat-or-low-carb-its-a-draw-study-finds.html*



Denis Finey, attendee, explores some of the 42 research posters displayed by student, postdocs, and industry researchers.

(Left to Right): Sanjay Malhotra, Joseph Wu, Paul Berg, SDDS2018 Award Honoree Roy Vagelos, and Stanford University President Marc Tessier-Lavinge post with Dr. Vagelos after receiving his award.

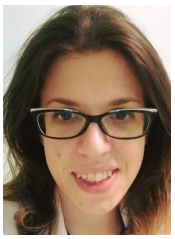
## Snapshots from the Third Annual Stanford Drug Discovery Symposium held April 23–24, 2018

(Left to Right): Edward Lau, Elena Matsa, Jared Churko, Ioannis Karakikes.


(Left to Right): Sanjay Malhotra and Jennifer Cochran.

## Manuscript Award Winners

Each Spring, the Cardiovascular Institute awards authors of outstanding manuscripts published in the previous year. **Congratulations to the 2017 Manuscript Award Winners!**

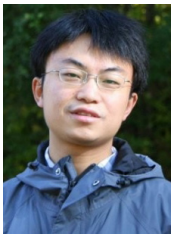


**Myriam Amsallem, MD**

Right Heart End-Systolic Remodeling Index Strongly Predicts Outcomes in Pulmonary Arterial Hypertension: Comparison With Validated Models Amsallem M, Sweatt AJ, Aymami MC, Kuznetsova T, Selej M, Lu H, Mercier O, Fadel E, Schnittger I, McConnell MV, Rabinovitch M, Zamanian RT, Haddad F. *Circ Cardiovasc Imaging*. 2017 Jun;10(6).
Labs: Francois Haddad, MD; Roham Zamanian, MD

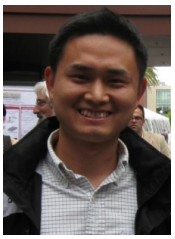
**Yuhei Kobayashi, MD**

Agreement of the Resting Distal to Aortic Coronary Pressure With the Instantaneous Wave-Free Ratio Kobayashi Y, Johnson NP, Zimmermann FM, Witt N, Berry C, Jeremias A, Koo BK, Esposito G, Rioufol G, Park SJ, Nishi T, Choi DH, Oldroyd KG, Barbato E, Pijls NHJ, De Bruyne B, Fearon WF; CONTRAST Study Investigators. J Am Coll Cardiol. 2017 Oct 24;70(17):2105-2113.
Lab: William Fearon, MD



**Qing Liu, PhD**

Genome-Wide Temporal Profiling of Transcriptome and Open Chromatin of Early Cardiomyocyte Differentiation Derived From hiPSCs and hESCs Liu Q, Jiang C, Xu J, Zhao MT, Van Bortle K, Cheng X, Wang G, Chang HY, Wu JC, Snyder MP. Circ Res. 2017 Aug 4;121(4):376-391.
Lab: Michael Snyder, PhD



**Mingtao Zhao, PhD**

Molecular and functional resemblance of differentiated cells derived from isogenic human iPSCs and SCNT-derived ESCs Zhao MT, Chen H, Liu Q, Shao NY, Sayed N, Wo HT, Zhang JZ, Ong SG, Liu C, Kim Y, Yang H, Chour T, Ma H, Gutierrez NM, Karakikes I, Mitalipov S, Snyder MP, Wu JC.Proc Natl Acad Sci USA. 2017 Dec 26.
Lab: Joseph Wu, MD, PhD

# Joseph Woo, MD, wins top 10 Clinical Research Achievement Award

On April 18, Dr. Joseph Woo, Professor and Chair of Cardiothoracic Surgery at Stanford School of Medicine, received one of the Top 10 Clinical Research Achievement Awards from the Clinical Research Forum. Following a nationwide call for nominations, the Clinical Research Forum Board of Directors selected winners based on the degree of innovation and novelty involved in the advancement of science; contribution to the understanding of human disease and/or physiology; and potential impact upon the diagnosis, prevention and/or treatment of disease.

In the award winning study, published in the New England Journal of Medicine in 2017, Dr. Woo and his team investigated the relative risks and benefits of mechanical and biologic heart valve replacements. The researchers found that mechanical heart valves may be safer than biologic valves in younger patients, because patients lived longer despite the need for blood thinners. They also found that among patients 50-70 years old, the best choice can hinge on which valve is being replaced—a finding that has been under appreciated in the past. This study shows that a mechanical valve is actually beneficial for mitral valve replacement until the age of 70. For patients undergoing aortic valve replacement, the benefit of implanting mechanical valves ceased after the age of 55.

*http://www.clinicalresearchforum.org/page/RiskBenefit*

# National and Global Cardiovascular Conferences

## JUNE 2018

**Stanford University**
**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
Optimal Mgmt

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

2018 Vascular Annual Meeting
June 20-23
Boston, MA
Vascular

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

**22nd Annual Hypertension, Diabetes and Dsylipidemia Conference**
June 22-24, 2018
Charleston, South Carolina
HDD

## JULY 2018

**Basic Cardiovascular Sciences Scientific Sessions**
July 30-Aug 2, 2018
San Antonio, TX
BCVS

**10 Day Seminar on the Epidemiology and Prevention of Cardiovascular Disease and Stroke**
July 22-Aug 3, 2018
Tahoe City, CA
10 Day Seminar

**International Academy of Cardiology – 23rd World Congress on Heat Disease**
July 27-29, 2018
Boston, MA
IAC

## AUGUST 2018

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

## SEPTEMBER 2018

**Council on Hypertension 2018 Scientific Sessions**
Sept 6-9, 2018
Chicago, IL
Hypertension

**Heart Failure Society of America Annual Scientific Meeting**
Sept 15-18, 2018
Nashville, TN
HFSA meeting

**Stanford University**
**3rd Annual Diagnosis and Management of Adult Congenital Heart Disease: Special Focus Session on Myocardial Bridges**
Li Ka Shing Center for Learning and Knowledge at Stanford, CA
September 22-23, 2018
Bridges

**Western Vascular Society**
Sept 22-25, 2018
Santa Fe, NM
Western Vascular Society

## OCTOBER 2018

**Update in Clinical Cardiology**
**Harvard Medical School**
Oct 10-12, 2018
Boston, MA
Clinical Cardiology

**Vascular Biology (NAVBO – North American Vascular Biology)**
Oct 14-18, 2018
Newport, RI
NAVBO

## NOVEMBER 2018

**29th Annual Cardiovascular Interventions**
October 23-26, 2018
La Jolla, CA
Cardiovascular Interventions

**AHA Scientific Sessions 2018**
**Cardiovascular Clinical Nursing Symposium: November 11**
Nov 10-12, 2018
Chicago, IL
AHA 2018

**Controversies & Advances in the Treatment of Cardiovascular Disease**
November 15-16, 2018
Carlsbad, CA
Cardiovascular Disease

**29th World Cardiology Conference**
November 19-20, 2018
Edinburgh, Scotland
World Cardiology

**Stanford-Duke Cardiovascular Research Symposium**
November 29-30, 2018
Stanford, California
CVI Retreat

## DECEMBER 2018

**World Congress of Cardiology & Cardiovascular Health 2018**
December 5-8, 2018
Dubai, Saudi Arabia
WCC

**2018 Colorado Heart Failure Summit**
December 13-15, 2018
Colorado Springs, CO
CHFS

**Device Therapies for Heart Failure 2018 (D-HF 2018)**
December 14-15, 2018
Frankfurt, Germany
4th D-HF


## 'Circulation Research' Publishes a Special Cardiovascular Omics Compendium Featuring Contributions from CVI Faculty

Omics, Big Data, and Precision Medicine in Cardiovascular Sciences
**Edward Lau, Joseph C. Wu (Guest Editor)**

Personal Omics for Precision Health
**Ryan A. Kellogg, Jessilyn Dunn, Michael P. Snyder**

Epigenomics; Technologies and Applications
**Kevin C. Wang, Howard Y. Chang**

Advances in Transcriptomics; Investigating Cardiovascular Disease at Unprecedented Resolution
**Robert C. Wirka, Milos Pjanic, Thomas Quertermous**

## Travel Award Winners

Four 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!

**Andrew Chang, MD**
*Mentor: Mintu Turakhia, MD, PhD*
'Association of Healthcare Plan with Medication Prescriptions for the Treatment of Atrial Fibrillation'
2018 Heart Rhythm Society (HRS) Scientific Sessions
May 9–12, 2018
Boston, Massachusetts

**Abbygail Foster, PhD**
*Mentor: Sarah Heilshorn, PhD*
'Protein-engineered Hydrogels for Improved Cell Transplantation in the Treatment of Peripheral Arterial Disease
Signal Transduction by Engineered Extracellular Matrices'
Gordon Research Conference
July 22–27, 2018
Andover, New Hampshire

**William Goodyer, MD, PhD**
*Mentor: Marco Perez, MD*
'Early-onset Atrial Fibrillation: Genetic Testing Uncovers a High Rate of Looming Inherited Cardiomyopathy'
Heart Rhythm Society
May 9-12, 2018
Boston, Massachusetts

**Pritam Roy, PhD**
*Mentor: Eric Gross, MD*
'E-cigarette Vapor Elevates Heart Rate in Mice with Limited Reactive Aldehyde Metabolism'
Experimental Biology
2018
San Diego, California

**Xinyan (Lisa) Zhang**
*Mentor: Anson Lee, MD*
'High Spatiotemporal Resolution Mapping of Cardiac Arrhythmic Activities In Porcine Model using Novel Elastic Polymeric Sensors Array'
Heart Rhythm Scientific Sessions
May 9-12, 2018
Boston, Massachusetts

# The new, 'next' for healthcare...a revolution in progress


**Peter Fitzgerald, MD, PhD** | *Director, Center for Innovation of CV Medicine; Stanford School of Medicine & Engineering, Stanford University*


Healthcare is being disrupted and dislocated by the advent of digital technology which places empowerment in the patient's palm—the conversion and interaction within healthcare from "Blockbuster-like" processes to "Netflix-like" pathways are occurring exponentially…without a doubt, the Uberization of health is upon us.

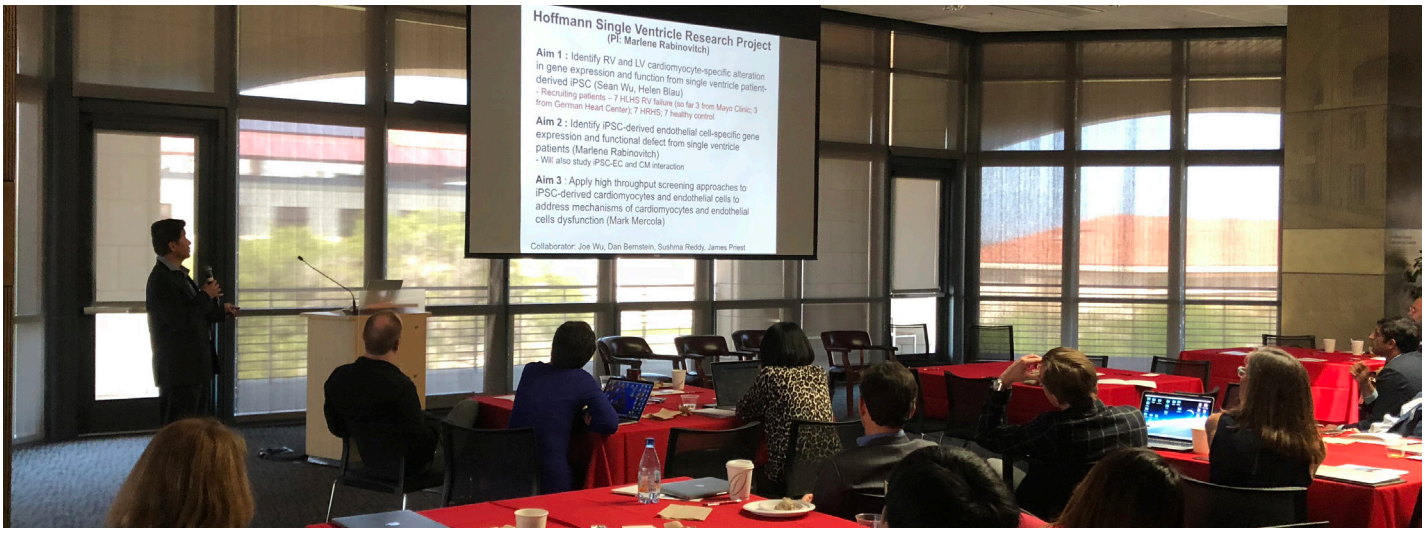
Digital information from ERs, ICUs, to Skilled nursing facilities, allows machine learning to intelligently assist healthcare professionals to make concentrated and concise data-driven decision support directives…ultimately, providing efficient and cost-effect care for patients in their continuum of care.

Data being the "electricity" for healthcare is of highlighted importance for the care in Cardiovascular disease, from heart disease to neurologic stroke. The advent of robotics, synchronized with "autonomous-like" guidance will help to deliver focal and standardized care to these patient populations, directly or at remote sites.

This luncheon panel took place on May 2, 2018, as part of the American Heart Association Silicon Valley Annual Research Roundtable. Peter Fitzgerald (Stanford Professor Emeritus, Medicine & Engineering) and Michael McConnell (Clinical Professor of Medicine) were featured speakers at this exciting event.

# Single Ventricle Summit

On April 23-24, basic scientists, bioengineers, clinicians, patients, and parents gathered for the inaugural Stanford Single Ventricle Scientific Summit. This event was a novel opportunity for synergy across disciplines, with the major focus being the preservation of ventricular function in single ventricle patients. The aim was for clinicians who work with single ventricle patients to frame the issues, and for scientists and engineers to propose how their research approach might inform our ability to better understand and investigate ventricular function to ultimately prevent and reverse this condition.

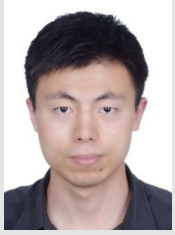



The summit was organized by Dr. Gail Wright, the Erin Hoffmann Medical Director of Comprehensive Single Ventricle Program; Dr. Sean Wu, Associate Director of the Stanford Cardiovascular Institute, and Dr. Marlene Rabinovitch, Dwight and Vera Dunlevie Professor of Pediatrics. It was made possible by the Hoffmann Schroepfer Foundation, committed to the vision that individuals born with single ventricle heart disease live a long, healthy, and happy life.

## Recent Awards

Several junior members of the CVI were recently awarded postdoctoral fellowship and career development grants from the American Heart Association. Congratulations to the recipients!

### AHA Postdoctoral Award


Ning Ma, PhD


Huaxiao Yang, PhD

### AHA Career Development Award


Ningyi Shao, MD, PhD


Mingtao Zhao, PhD


Christine Wahlquist, PhD


Ian Chen, MD, PhD


Qing Liu, PhD

## JUNE 2018

Dr. Ralph and Marian Falk Medical Research Trust Awards Program

**Catalyst Award**

This program is designed to support high-risk, high-reward projects that address critical scientific and therapeutic roadblocks.
Amount of funding: One-year awards of up to $300,000 (inclusive of 10% indirect costs)
Internal selection process deadline: Tuesday, June 5, 2018, 5 pm (http://med.stanford.edu/rmg/funding/Falk_catalyst_award.html)
Falk Medical Research Trust

**Children's Cardiomyopathy Foundation Research Grant Program**

Amount of funding: $25-50K for 1 year
Deadline: June 14, 2018
CCF

National Institutes of Health

**Limited Competition: Small Grant Program of NHLBI K01/K08/K23 Recipients (R03)**
**R03 Clinical Trial Optional**
Deadline: June 14, 2018
RFA-HL-18-025

National Institutes of Health

**NHLBI Single-site Investigator-initiated Clinical Trials (R61/R33) R61/R33 Clinical Trial Required**

Deadline: June 13, 2018
PAR-18-406

## JULY 2018

National Institutes of Health

**Improving Outcomes in Cancer Treatment-Related Cardiotoxicity (R21)**

Deadline: July 16, 2018
R21: PA-18-013

National Institutes of Health

**NHLBI Clinical Trial Pilot Studies (R34)**

Deadline: July 16, 2018
PAR-18-463

**AHA Merit Award**

Required Letter of Intent Deadline: Tuesday, July 24, 2018
Deadline for Applicants Invited to Submit Full Application: Thursday, October 11, 2018
AHA Merit

## AUGUST 2018

Stanford Cardiovascular Institute

**2018 Seed Grants**

Award amounts will be determined by committee and will range from $15,000 – $40,000
Deadline: Aug 1, 2018
CVI Seed Grants

## SEPTEMBER 2018

**NIH Director's Pioneer Award (DP1 - Clinical Trial Optional) (RFA-RM-18-007)**

Amount of funding: $700K direct costs (plus indirects) per year x 5 years ($3.5M total direct costs plus indirects)
DP1

**NHLBI Program Project Applications (P01) PAR-18-405**

Amount of funding: $1,515,000 direct costs per year (5yr max)
Deadline: Sept. 25, 2018
PAR-18-405

## OCTOBER 2018

**AHA Collaborative Sciences Award**

Required Letter of Intent Deadline: Tuesday, October 9, 2018
Deadline for Applicants Invited to Submit Full Application: Thursday, January 31, 2019
Total Award Amount: $750,000
AHA Collab

National Institutes of Health

**NIH Small Research Grant Program (Parent R03-Clinical Trials not allowed) (PA-18-488)**

Deadline: October 16, 2018
PA-18-488

National Institutes of Health

**NIH Exploratory/Developmental Research Grant Program (Parent R21-Clinical Trial not allowed) (PA-18-489)**

Deadline: October 16, 2018
PA-18-489

**AHA 2019 Career Development Award**

Application Deadline: Wednesday, October 17, 2018
Total award amount: $231,000
AHA CDA

**AHA Established Investigator Award**

Required Letter of Intent Deadline: Tuesday, October 23, 2018
Deadline for Applicants Invited to Submit Full Application: Tuesday, January 15, 2019
Total Award Amount: $400,000
AHA EIA

**JUNE 2018**

**NIH Director's Early Independence Award DP5 RFA-RM-18-010**
The NIH Director's Early Independence Awards provide an opportunity for exceptional junior scientists to accelerate their entry into an independent research career by forgoing the traditional post-doctoral training period.
Amount of funding: $1.25M total direct costs plus indirect costs over 5 years
Deadline: Internal submission deadline: June 6, 2018, 5 p.m.
DP5

**Stanford Systems Biology Seed Grants**
Amount of funding: $25,000 per team
Deadline: June 8, 2018
Systems Biology Seed Grants

**Cardiovascular Institute (CVI) Travel Award**
Eligibility: Postdoctoral fellows, Instructors, Nurses with an accepted abstract to a national or international meeting related to cardiovascular research.
Deadline: June 10, 2018
Amount of funding: $750
CVI Travel

National Institutes of Health
**K08 Mentored Clinical Research Career Development Award**
Independent Clinical Trial not Allowed
Deadline: June 12, 2018
PA-18-373 Independent Clinical Trial NOT Allowed
PA-18-372 Independent Clinical Trial Required

National Institutes of Health
**K23 Mentored Patient-Oriented Research Career Development Award**
Deadline: June 12, 2018
PA-19-374 Independent Clinical Trial Required
PA-18-375 Independent Clinical Trial NOT Allowed

**JULY 2018**

**AHA Postdoctoral Fellowship**
Application Deadline: July 12, 2018
AHA Postdoc

National Institutes of Health
**K01 Mentored Research Scientist Development Awards**
Deadline: July 12, 2018
PA-18-363 Independent Clinical Trial Required
PA-18-369 Independent Clinical Trial NOT allowed

**AUGUST 2018**

National Institutes of Health
**Ruth L. Kirschstein National Research Service Awards (NRSA) for Individual Postdoctoral Fellows**
Deadline: August 8, 2018
NRSA

Cardiovascular Institute
**Mechanisms and Innovations in Cardiovascular Disease T32 Training Grant**
Deadline: Rolling. See CVI website.
T32

**OCTOBER 2018**

**NHLBI Mentored Career Development Award to Promote Faculty Diversity in Biomedical Research (K01)**
Deadline: October 12, 2018
PA-18-369 Clinical Trial NOT allowed
PA-18-363 Clinical Trial Required

**NOVEMBER 2018**

National Institutes of Health
**K01 Mentored Research Scientist Development Awards**
Deadline: November 12, 2018
PA-18-369 Clinical Trial NOT allowed
PA-18-363 Clinical Trial Required

**DECEMBER 2018**

**Ruth L. Kirschstein National Research Service Awards (NRSA) for Individual Postdoctoral Fellows**
Deadline: December 8, 2018
PA-18-670

# New AHA-CVI Stanford Summer Research Program

The CVI is partnering with the American Heart Association to sponsor a summer research experience for undergraduates. The 10 week program provides an opportunity for undergraduates to immerse themselves in the cardiovascular research performed in CVI-affiliated laboratories. Welcome to the inaugural class!

**Jose Acosta-Julbe**
Universidad de Puerto Rico
(Mentor: Vinicio de Jesus-Perez )

**Cali Loblundo**
Villanova University
(Mentor: June Rhee)

**Tyler Muser**
Biola University
(Mentor: Mark Mercola)

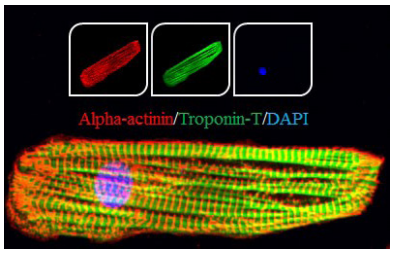
**Joy Udoh**
Oberlin College
(Mentor: Daniel Bernstein)

**Linling "Lily" Cheng**,
University of Michigan
(Mentor: Nazish Sayed)

**Mishra Ridhima**
Stanford University
(Mentor: Joseph Wu)

**Kailey Totherow**
Stanford University
(Mentor: Joseph Woo)

## 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 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.*

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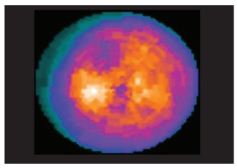
or Biobank manager, **Yan Zhuge** / yanzhuge@stanford.edu with any questions.

## 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.

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## CVI Clinical Trials Core

The CVI Clinical Trials Core provides full spectrum of support to CVI members and their clinical trials. The coordinators has 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

## 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.

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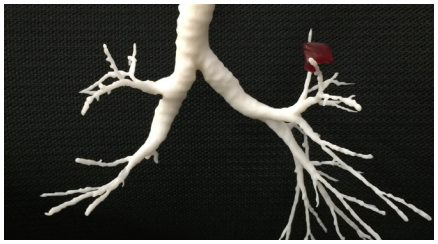

## 3DQ Imaging Laboratory

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.

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# Member Publications

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.

## FEBRUARY

Humanizing the mdx mouse model of DMD: the long and the short of it. Yucel N, **Chang AC**, Day JW, Rosenthal N, **Blau HM**. *NPJ Regen Med.* 2018 Feb 16;3:4.

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## MARCH

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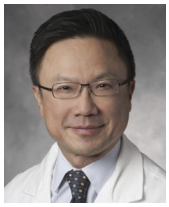

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