

# Arnold and Mabel Beckman Foundation

## 2019 Annual Report

**SUPPORTING YOUNG SCIENTISTS TODAY  
FOR TOMORROW'S BREAKTHROUGH DISCOVERIES**



***On the cover:*** 2017 AOB Postdoctoral Fellow Danielle Mai, PhD,  
*presents her research during the annual Beckman Symposium.*

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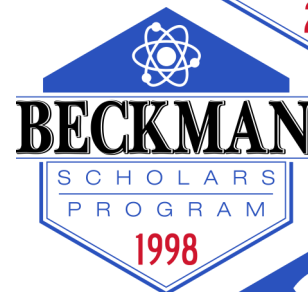
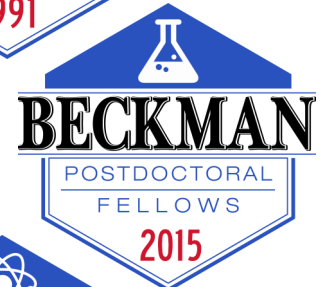
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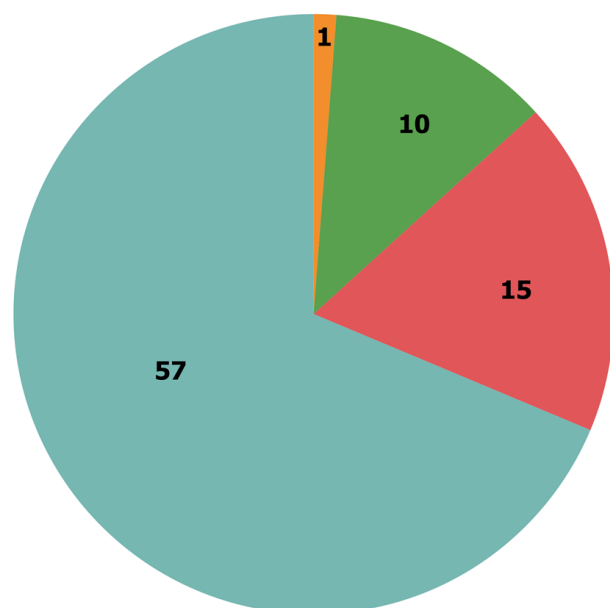


# Our Mission

*Dr. Arnold O. Beckman and his wife Mabel established the Foundation to support leading edge research in the fields of chemistry and life sciences, broadly interpreted, and particularly to foster the invention of methods, instruments, and materials that open up new avenues of research and application in those disciplines and related sciences.*

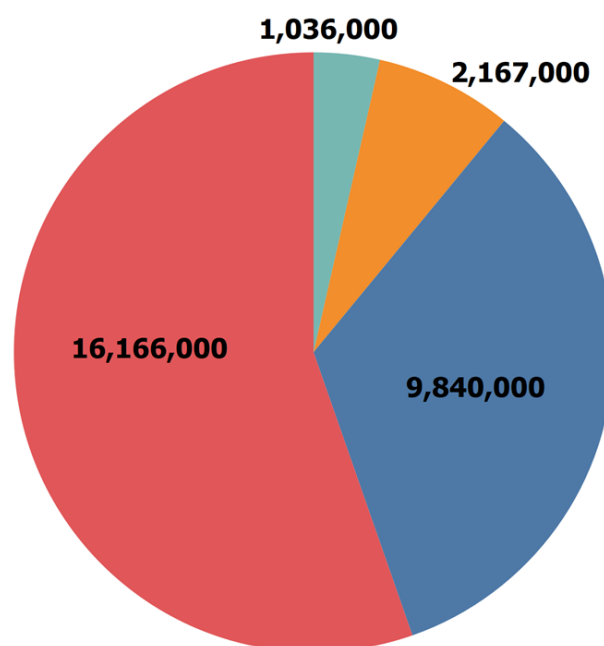
## 2019 At-A-Glance

**New Program Awardees (#)**



Program  
Beckman-Argyros Vision Award  
Young Investigators  
Postdoctoral Fellows  
Scholars

**Foundation Expenses (\$)**



Funding  
Special Gifts  
Foundation Operations  
Beckman Institutes  
Program Grants

**40 Years of Impact (1978-2018):  
\$700<sup>+</sup> Million in Research Support**

**Special  
Gifts  
\$145M**

**Program  
Grants  
\$174M**

**Beckman  
Institutes  
\$405M**



# The Future Looks Bright

## *A Message from the Executive Director*

Dear “Beckman Family” and Friends,

We hope you enjoy this inaugural annual report of the Arnold and Mabel Beckman Foundation! Last year we completed the 40<sup>th</sup> anniversary year of the Foundation, with several special events designed to reflect on the impact and legacy of the Beckmans in supporting the next generation of scientists through their philanthropy. We didn’t rest long after all the celebrations, though, and 2019 was again a busy year.

In addition to selecting our new classes of Beckman Young Investigators and Beckman Scholars, we also welcomed our first class of Arnold O. Beckman Postdoctoral Fellows in Chemical Sciences. In the Spring, we hosted an “Instrumentation Needs” meeting, gathering a diverse group of experts to discuss how the Foundation could best make a broad research impact through instrumentation grants, which led to our release of a one-time grant opportunity for the Advanced Light Sheet Microscopy and Data Science program. Finally, we also launched our new Orange County Beckman Legacy Award program—an opportunity for local high schoolers to build their own spectrophotometer and conduct lab activities for a chance to win a college scholarship valued at up to \$16,000. We look forward to meeting the first awardees from this program in early 2020!



**Anne Hultgren, PhD**  
Executive Director

A handwritten signature in black ink, appearing to read "Anne Hultgren". The signature is fluid and cursive, with a large loop at the end.

On top of everything else, we designed and launched a new [website](#) to highlight our grant programs and award recipients—please take a moment to look through the newly designed content and images from our awardees.

We remain laser focused on the Foundation’s goal of supporting young scientists today for tomorrow’s breakthrough discoveries, directing our energy and efforts to the young minds interested in science who may one day become the next Arnold Beckmans of the world.

It’s an exciting time to be a part of Arnold and Mabel Beckman Foundation. From our local high school students to our BYIs, Postdocs and Scholars across the country, the future indeed looks bright!



*Above: Arnold and Mabel Beckman Foundation's Board of Directors (2019).*

## Leadership

***"Hire the best people and then get out of their way." - Dr. Beckman***

We're grateful to the team of individuals who dedicate themselves to the success of the Arnold and Mabel Beckman Foundation, including:



F O U N D A T I O N

## Board of Directors

Mr. William May (Chairman)  
 Mr. Gary Wescombe (Treasurer)  
 Mrs. Jacqueline Dorrance-Tomlinson (Secretary)  
 Mr. Jon Fosheim  
 Dr. Jeffrey Johnston, PhD  
 Dr. Lawrence Kline, MD  
 Dr. Andrew Lyon, PhD  
 Mr. Steven Pizula  
 Mrs. Lynn Rahn  
 Mr. Peter Simon  
 Dr. Deborah Wuttke, PhD

# LEADERSHIP

## Foundation Staff

Ms. Catrina Bryant, BA  
Ms. Jackie Chamberlin, MS, MBA  
Ms. Esther Devanney, BS  
Mrs. Tiana Godges, BA  
Dr. Anne Hultgren, PhD  
Ms. Elizabeth Koppe, BA  
Mrs. Nicole Patras, BA  
Ms. Kaerie Ray, MBA  
Ms. Danica Resurreccion, BS\*

## Scientific Advisory Council

Dr. Nancy Allbritton, PhD\*  
Dr. Annaliese Franz, PhD  
Dr. Kent Hill, PhD  
Dr. Philip LeDuc, PhD  
Dr. Anne McNeil, PhD  
Dr. Karl Mueller, PhD  
Dr. Jason Shear, PhD  
Dr. Scott Strobel, PhD\*

**The Foundation's Program Executive Committees are instrumental in leading the proposal review committees, developing final award recommendations, and conducting annual assessments of the program requirements.**

**Our special thanks to the 2019 Executive Committee members:**

## Young Investigators

Prof. Susana Cohen-Cory, PhD  
Prof. Shiv Halasyamani, PhD  
Prof. Ke Hu, PhD  
Prof. Vassiliy Lubchenko, PhD

## Postdoctoral Fellows

Prof. Carolyn Anderson, PhD  
Prof. David Forbes, PhD  
Prof. Philip LeDuc, PhD  
Prof. Jill Millstone, PhD

## Scholars

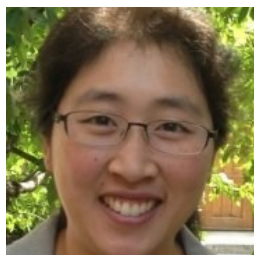
Prof. Jeff Brodsky, PhD  
Prof. Craig Gatto, PhD  
Prof. Laura Hunsicker-Wang, PhD  
Prof. Carol Parish, PhD

*\*Served in this role for part of 2019*

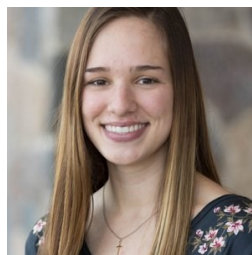


# AWARDEE

## Awardee Highlights from the Past Year



**Kang-Kuen Ni, PhD**  
**2015 Beckman Young Investigator**  
*Published in Science: “An Optical Tweezer Array of Ultracold Molecules” (cover)*



**Erin Fish**  
**2018 Beckman Scholar**  
*Received Goldwater Scholarship\* and Earned Top Poster Honors from Protein Society*



**Krzysztof Palczewski, PhD**  
**2014 Beckman-Argyros Awardee**  
*Elected to the National Academy of Medicine*



**Alex Shalek, PhD**  
**2015 Beckman Young Investigator**  
*Named Institute Member of the Broad Institute*



**Neville Bethel, PhD**  
**2019 AOB Postdoctoral Fellow**  
*Named Hanna H. Gray Fellow by HHMI*



**Chang Liu, PhD**  
**2015 Beckman Young Investigator**  
*Received 2019 ACS Synthetic Biology Young Innovator Award*

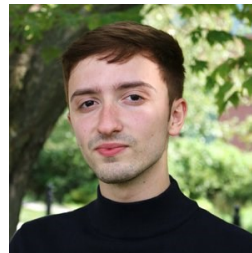
*\*Beckman Scholars Christina Beck, Alicia Bostwick, Andrea Cheng, Ariel Gale, Marlene Lawston, Ella Mullikin, Charlotte Mineo, and Grace Solini also received Goldwater Scholarships.*

# HIGHLIGHTS

## Awardee Highlights—cont'd.



**Elena Schroeter, PhD**  
**2017 AOB Postdoctoral Fellow**  
*Published in Journal of Proteome Research:*  
*“A Comparison of Common Mass Spectrometry Approaches for Paleoproteomics”*



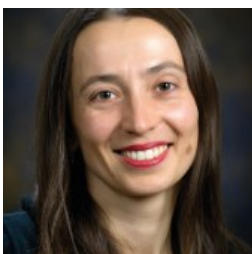
**Eric Beltrami**  
**2018 Beckman Scholar**  
*Published in Nature Neuroscience:*  
*“Single-cell Transcriptomic Analysis of the Lateral Hypothalamic Area Reveals Molecularly Distinct Populations of Inhibitory and Excitatory Neurons”, and received Margaret F. Ertman Award for Outstanding Undergraduate Research in Biology*



**Megan Thielges, PhD & Darren Lipomi, PhD**  
**2001 & 2003 Beckman Scholars**  
*Received Presidential Early Career Award for Scientists and Engineers*

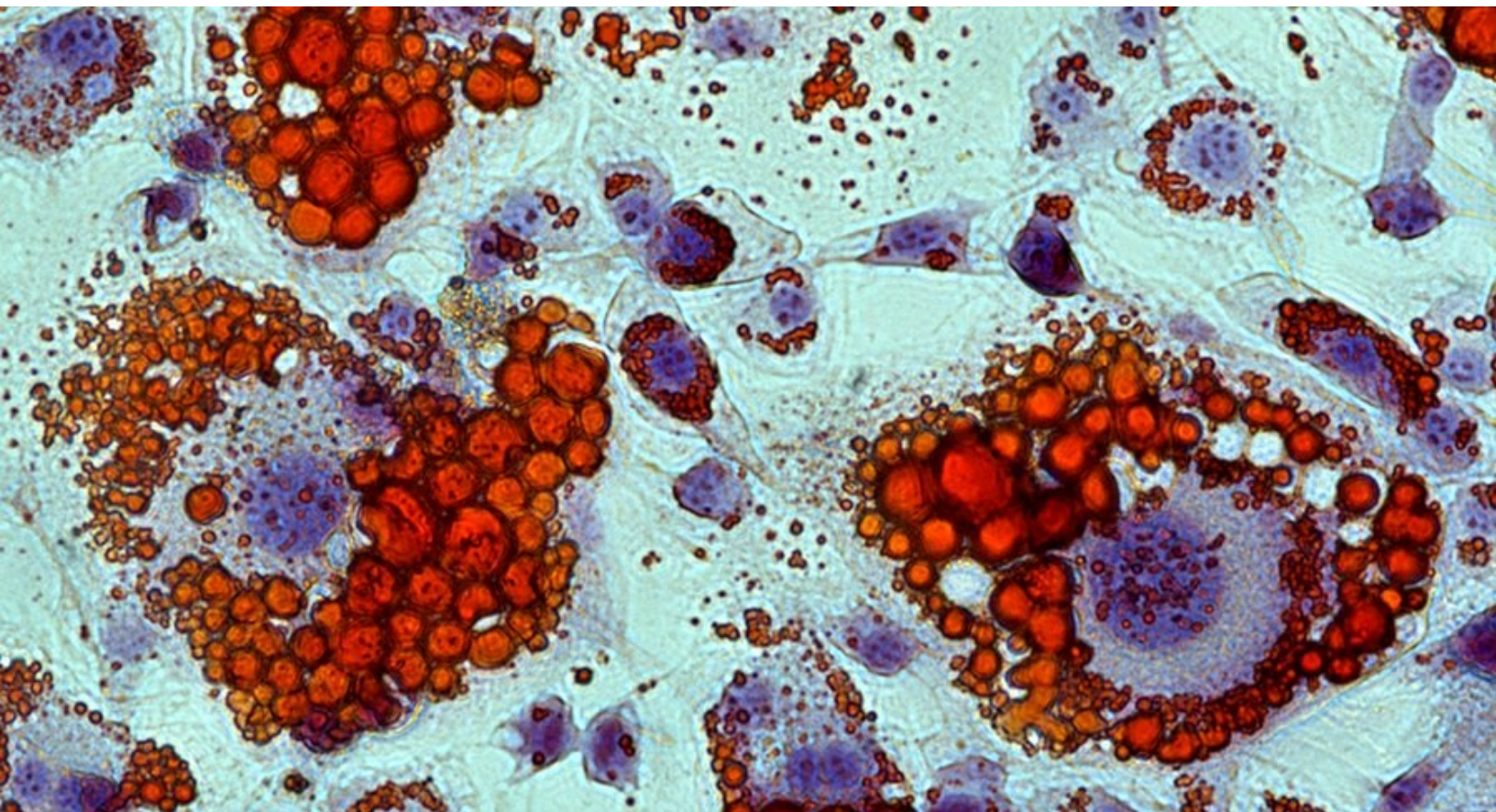


**Ariel Furst, PhD**  
**2016 AOB Postdoctoral Fellow**  
*Published in Current Opinion Electrochemistry:*  
*“Toward Multimarker and Functional Assays from Crude Cell Lysates: Controlling Spacing and Signal Amplification in DNA-CT-based Bioelectrochemical Devices” (cover)*



**Yevgenia Kozorovitskiy, PhD & Elena Gracheva, PhD**  
**2015 & 2018 Beckman Young Investigators**  
*Received NSF Career Award*





*Above: Adipocytes differentiated from 3T3-L1 cells were fixed and stained with Oil Red O for lipid droplets and counterstained with hematoxylin for nuclei. Image was acquired using Nikon Ti-E microscope at 200x magnification. Photo by Xiaojing Su, in the lab of 2018 BYI Ashleigh Theberge, PhD.*

## I. Beckman Young Investigator Program

The Beckman Young Investigator (BYI) Program provides four years of research support amounting to \$600,000 to promising young faculty members in the early stages of their academic careers in the chemical and life sciences, broadly defined, who have not yet received a major award from another organization.

Projects must be truly innovative, high-risk, and show promise for contributing to significant advances in chemistry and the life sciences, with preference to those that foster the invention of methods, instruments and materials that will open new avenues of research in science.

### **2019 BYI National Recognition:**

*Elected to the National Academy of Sciences*  
Arlene Sharp, Yang Dan

*Presidential Early Career Awards*  
Erik Grumstrup, Prashant Jain

*NSF Career Awards*  
Genia Kozorovitskiy, Elena Gracheva, Xiaoji Xu

### **2019 BYI Program Stats:**

**300+** Applicants

**10** Researchers Selected for Awards,  
Representing **9** Institutions

**\$6 Million** in Funding for '15-'19 Awardees



## 2019 Beckman Young Investigator Awardees

**Keriann Backus, PhD**  
University of California, Los Angeles

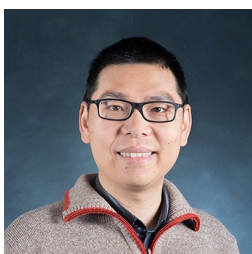
**Chenfeng Ke, PhD**  
Dartmouth College



**Wesley Legant, PhD**  
University of North Carolina, Chapel Hill  
*"Intelligent Microscopes to Observe and Interact with Dynamic Biological Specimens"*

**Frank Leibfarth, PhD**  
University of North Carolina, Chapel Hill

**Jarad Mason, PhD**  
Harvard University



**Jia Niu, PhD**  
Boston College  
*"A General Strategy for the Synthesis of Precision Sustainable Polymers with Main-Chain Functionalities from Renewable Resources"*

**Leslie Schoop, PhD**  
Princeton University



**Kimberly See, PhD**  
California Institute of Technology  
*"Divalent Ion Conductivity in the Solid-State"*

**Kirk Wangenstein, MD/PhD**  
University of Pennsylvania



**Brad Zuchero, PhD**  
Stanford University  
*"Elucidating New Roles of Myelin in Plasticity, Learning, and Disease"*





*Above: 2016 Arnold O. Beckman Postdoctoral Fellow Ariel Furst, PhD (right), working with Natalie Muren, PhD (left), while attending Caltech..*

## II. Arnold O. Beckman Postdoctoral Fellows

The Arnold O. Beckman Postdoctoral Fellows Award Program supports first and second year postdoctoral fellows at research institutions who are judged to have the highest potential for success in a career in chemistry, and who will become the next generation of leaders and innovators in science, engineering, and technology.

The program awards \$180,000 over 2 years for salary, fringe benefits, and research expenditures; instrumentation fellowships will receive additional one-time \$100,000 for material/development costs.

### 2019 Program Highlights:

After a pause in 2018, the Postdoctoral Fellows Program was restructured and relaunched in 2019, with a new focus on chemistry and chemical instrumentation.

### 2019 Postdoc Program Stats:

**45** Applicants

**15** Researchers Selected for Awards

**11** Institutions Represented

**\$4 Million** in Funding for '17-'19 Awardees

# POSTDOC

## 2019 Arnold O. Beckman Postdoctoral Fellows

**Neville Bethel, PhD**

University of Washington

**James Bour, PhD**

Massachusetts Institute of Technology

**Quinn Burlingame, PhD**

Princeton University



**Alice Chang, PhD**

University of Minnesota, Twin Cities

*“Tough, Sustainable Plastics via Graft Block Polymer Design”*

**Kangway Chuang, PhD**

University of California, San Francisco



**Julie Fenton, PhD**

Northwestern University

*“Macrocyclic Nanotubes as a Platform for Functional Membranes and Materials Discovery”*

**Miguel Gonzalez, PhD**

Harvard University

**Stewart Mallory, PhD**

California Institute of Technology



**Hossein Robotjazi, PhD**

University of California, Santa Barbara

*“Atomistic Insights into Surface Phenomena in Heterogeneous Catalysis”*

**Sam Sanders, PhD**

Harvard University

**Alexander Schuppe, PhD**

Massachusetts Institute of Technology

**Adam Slavney, PhD**

Harvard University

**Patrick Smith, PhD**

Massachusetts Institute of Technology

**Benjamin Snyder, PhD**

University of California, Berkeley

**Dayne Swearer, PhD**

Stanford University







*Above: 2018 Beckman Scholar Karina Targos, BA, creates a web-like material made of cubic siloxanes monomers decorated with an aryl and ester functional group on each corner, an example using organic chemistry and catalysts to make new functionalized nanomaterials.*

### III. Beckman Scholars Program

The Beckman Scholars Program provides an in-depth, sustained research experience for exceptional undergraduate students in chemistry, biological sciences, or interdisciplinary combinations thereof. The program's award of \$26,000 for a student and mentor team over 15 continuous months of research, in conjunction with the Annual Beckman Symposium, offers an academically stimulating and unique educational experience.

The award spans three years with four to six student/mentor pairs named per institution; applications submitted by invitation only.

#### **BSP National Recognition in 2019:**

##### *2019 Goldwater Scholars*

Christina Beck, Alicia Bostwick,  
Andrea Cheng, Erin Fish, Ariel Gale,  
Marlene Lawston, Charlotte Mineo,  
Ella Mullikin, Grace Solini

#### **2019 BSP Program Stats:**

**13** Institutions Selected for 2019 Awards

**57** Scholar/Mentor Teams began their  
Research Projects

**\$1.7 Million** in Funding for '17-'19 Awardees

## 2019 Beckman Scholars

**Sahar Amin**

San Francisco State University

**Christina Beck**

Pomona College

**Erik Bidstrup**

Northwestern University

**Nicole Carrillo-Vallejo**

College of William and Mary

**Alicia Caughman**

Georgia Institute of Technology

**Ziyan Chen**

College of William and Mary

**Ryan Clark**

University of Virginia

**Julianna Cresti**

Villanova University

**Gillen Curren**

Villanova University



**Shaoni Dasgupta**

Clemson University

*"The Role of Carnitine Acetyltransferases  
in the Virulence of the Fungus  
Cryptococcus Neoformans"*

**Alexis Davison**

Pennsylvania State University

**Jasmine Esparza**

University of California, Los Angeles

**Aidan Fike**

Tufts University

**Taylor Fish**

Brigham Young University

**Lucas Frye**

University of Virginia

### 2019 Awardee Institutions

Calvin University

Clemson University

Colgate University

Georgia Institute of Technology

Pennsylvania State University

San Francisco State University

Santa Clara University

University of California, Los Angeles

University of Chicago

University of Connecticut

University of Kansas

University of Virginia

Whitman College



## 2019 Beckman Scholars—continued

**Ariel Gale**

Furman University

**Grayson Hamrick**

Haverford College

**Xiaoyi Sean Hu**

Northwestern University

**Kathleen Imbach**

Georgia Institute of Technology

**Angelica Lang**

University of Kansas



**Brandon Lookfong**

Texas A&M University

*"The Use of Functional Ubx Proteins  
for Nerve Growth"*

**Molly Madden**

University of Colorado, Boulder

**Kaitlin Malley**

Boston College

**Vennela Mannava**

University of Chicago

**Nathan Matzko**

Clemson University

**Patrick McGeoghegan**

Boston College

**Silas Miller**

Whitman College

**Alexandra Moore**

Whitman College

**Ella Mullikin**

Wellesley College

**Jett Murray**

University of Idaho

**Audrey Muscato**

Bowdoin College

**Emi Nakahara**

University of California, Los Angeles

**Kartik Nath**

Union College

**Benjamin Neubert**

University of Virginia

**Kevin Pataroque**

Case Western Reserve University

**Gwendolyn Pyeatt**

Boston University

**Ryan Rahman**

Texas A&M University

**Jeffrey Rasmussen**

University of Connecticut





## 2019 Beckman Scholars—continued

**Kristen Read**

Brigham Young University

**Megan Rodriguez**

University of Chicago

**Alice Sardarian**

Barnard College



**Bradley Scholten**

Calvin University

*"The Effects of Human Technology on Behavioral and Physiological Stress in Tachycineta bicolor and Danio rerio"*

**Sarah Shnayder**

Tufts University

**Ekaterina Skaritanov**

University of Connecticut

**Jonah Stiel**

University of Kansas

**Jamison Takashima**

University of Arizona

**Isabel Thompson**

Grand Valley State University

**Peyton Tierney**

Boston University

**Brooke Van Wyk**

Hope College

**Ana Verma**

Amherst College

**Elizabeth Wade**

University of San Diego

**Jacob Watts**

Colgate University

**Catherine Weibel**

University of Arizona

**Shoshana Williams**

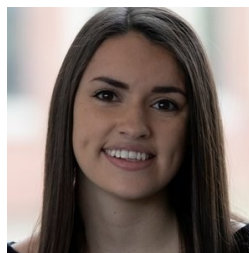
Barnard College

**Katherine Xia**

Santa Clara University

**Katherine Yan**

Case Western Reserve University

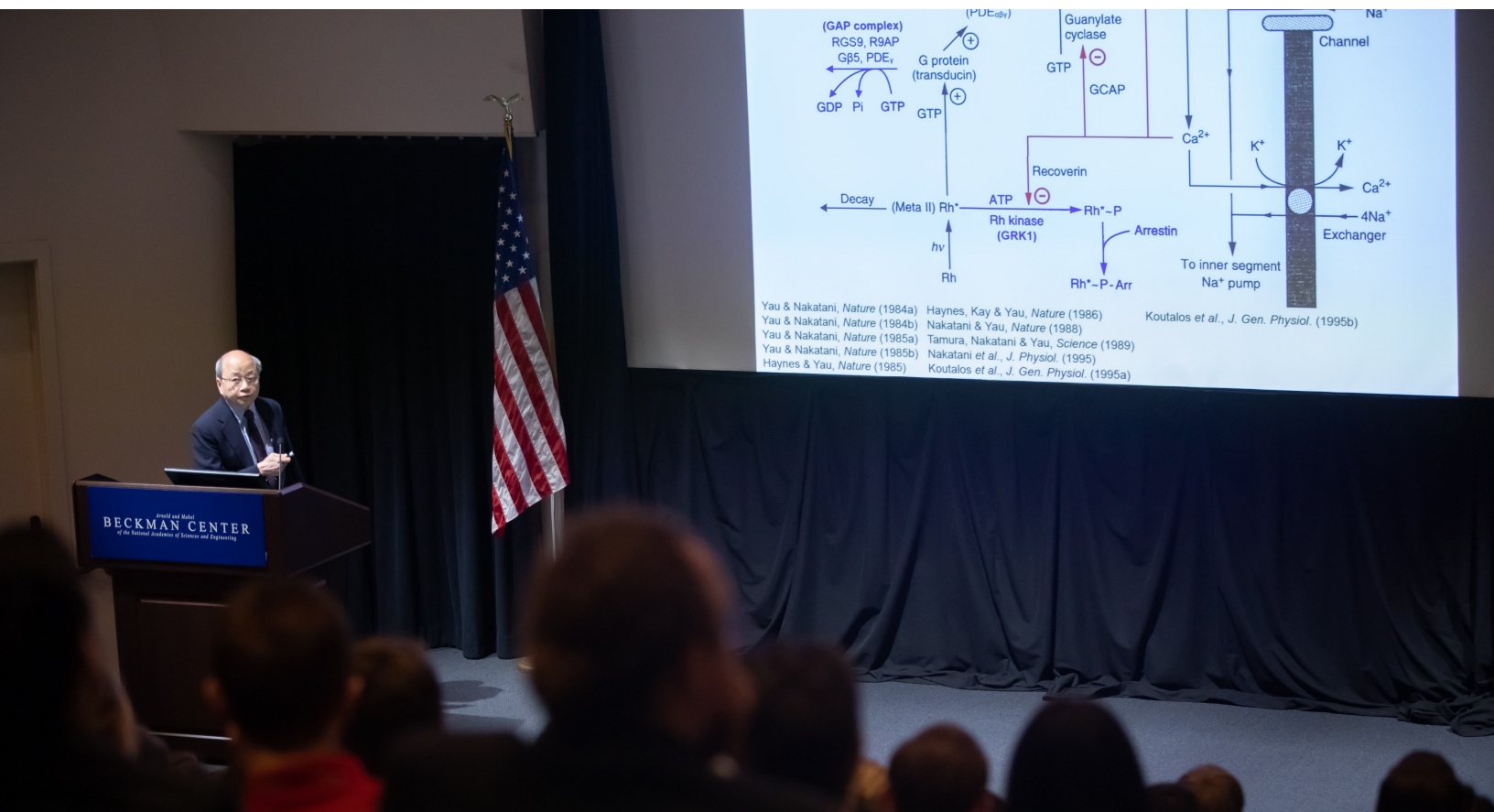


**Taylor Yount**

Pennsylvania State University

*"Small-molecule Signaling between Bacterial Populations within a Host"*





*Above: 2019 Beckman-Argyros Vision Research Awardee King-Wai Yau, PhD, delivers a presentation during the Annual Beckman Symposium.*

## IV. Beckman-Argyros Award in Vision Research

The Beckman-Argyros Award in Vision Research rewards one individual who has made, and is continuing to make, significant transformative breakthroughs in vision research; including those whose contributions are to science in general, or through the development of an innovative technology or fundamental scientific breakthrough have been applied to, aided and/or improved the vision sciences. One award of \$500,000, consisting of the prize and grant, is presented annually along with a commemorative medallion.

### 2019 Program Highlight:

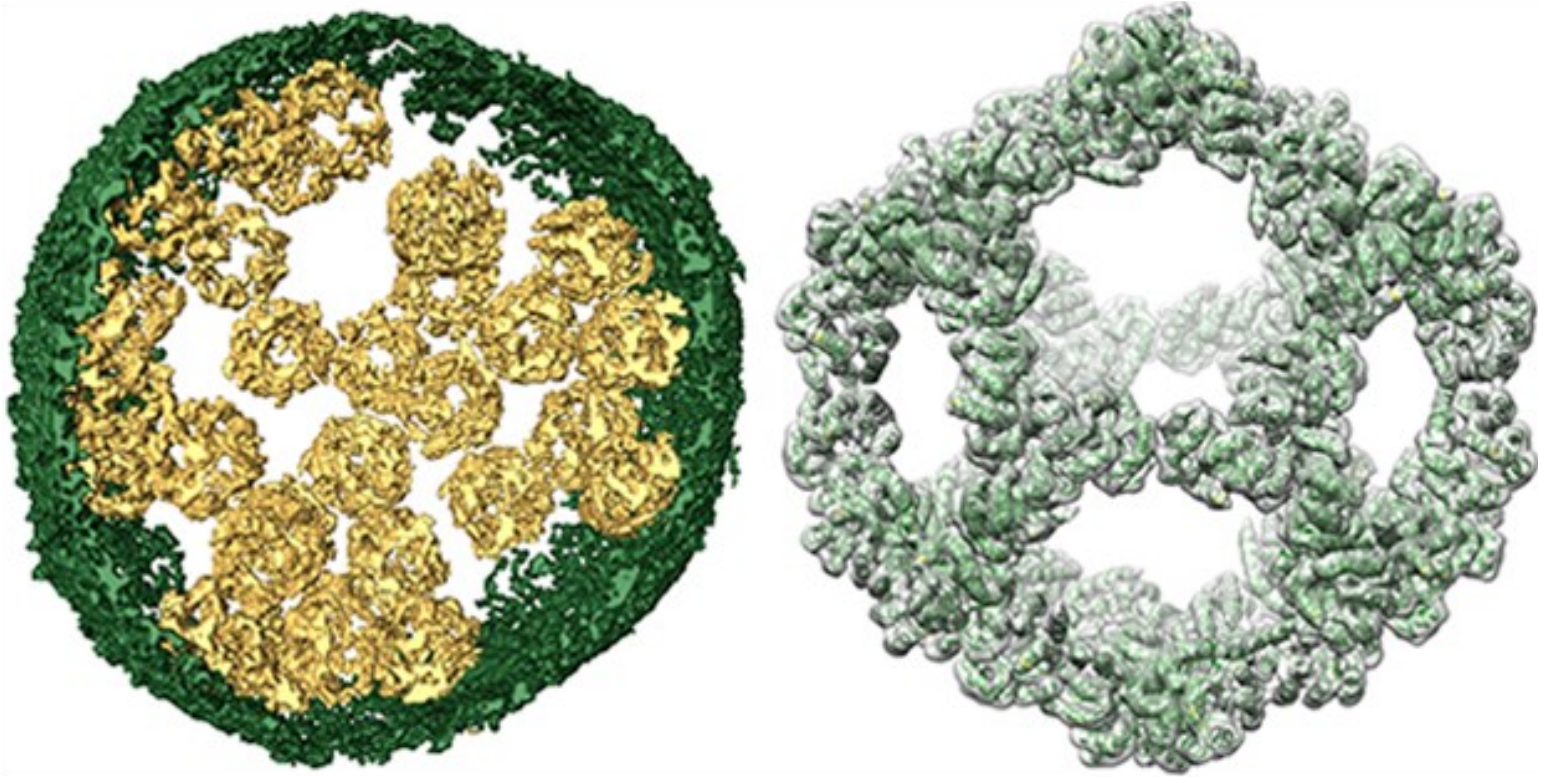
The final selection for this program was made in 2019.

Since 2014, the Program has provided a total investment of **\$3 Million** to support innovative research in the vision sciences.

### 2019 Awardee:

**Dr. King-Wai Yau, PhD**  
Johns Hopkins School of Medicine

# CRYO-EM



*Above: Isosurface model of a vesicle filled with nanocages (left) and a cryo-EM reconstruction of a nanocage with the computational design model (green ribbon) fitted in (right). Image credit: Sundquist Lab, Univ. of Utah*

## V. Beckman Center for Cryo-EM

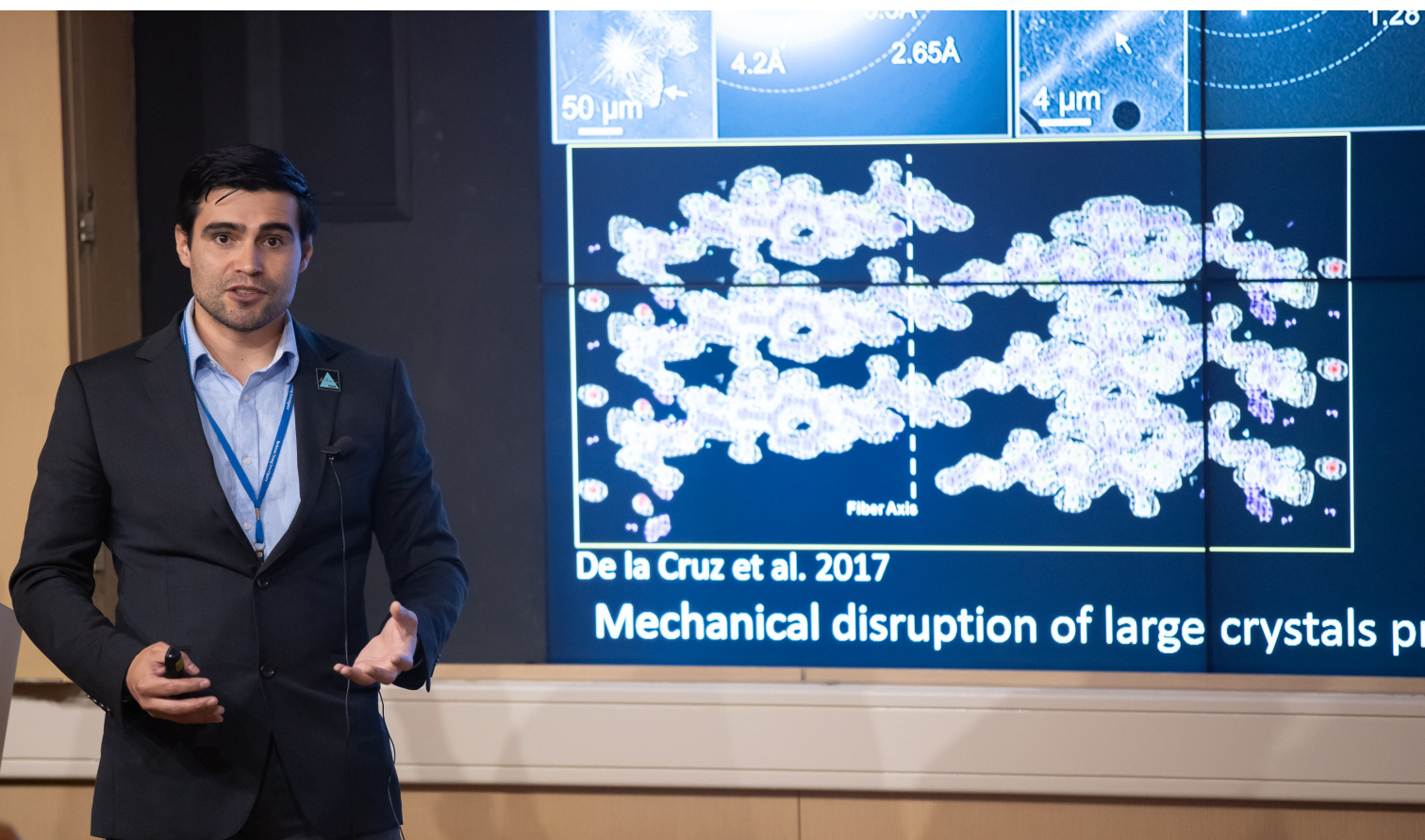
Advances in instrumentation and methods have revolutionized applications of cryogenic electron microscopy (Cryo-EM) to determine atomic structures of biological samples that are currently beyond the reach of other structural biology methods. However, the expense of the instrumentation is a major roadblock to increasing access to this technology. In 2016, the Foundation provided 5 grants of \$2.5M each that could be used for purchase costs of new Cryo-EM instrumentation, support for a junior faculty hire in structural biology, and operational expenses.

The following 5 institutions were selected for awards: **Johns Hopkins University School of Medicine, Massachusetts Institute of Technology, University of Pennsylvania, University of Utah, and University of Washington.**

### 2019 Program Highlight:

This year marked the official opening of the final two CryoEM Centers at University of Pennsylvania and Johns Hopkins University, with all five Centers now operational and collecting data.





*Above: BYI Jose Rodriguez presents his research during the Chemistry Breakout at the Beckman Symposium.*

## VI. Annual Beckman Symposium

The annual Beckman Symposium brings together the nearly 300 grantees from our programs and Foundation leadership, including members of the Board of Directors, Scientific Advisory Council, Executive Committees, and Beckman Institutes.

The 3-day event features researchers from varied backgrounds, career stages, disciplines and institutions sharing their latest research findings in the form of oral and poster presentations, networking during group meals, and participating in career guidance workshops led by invited experts.

After the scientific sessions conclude, the participants relax with the colleagues and enjoy a variety of competitive lawn games.

*"The exciting thing was that all of the stories being told in talks and posters were open and honest about the fact that no matter what problem they were tackling, they weren't there YET. Nobody felt compelled to tell a 'complete story.' The presentations were all wonderful snapshots of where the research stood, while presenting the sometimes daunting path forward to true understanding of the system under investigation."*

— Dr. Andrew Lyon, Board of Directors





*Left column (top down):* Board Chair William May congratulates award winners Dr. Kent Hill, Dr. King-Wai Yau, Dr. Gary Firestone and Dr. Carolyn Anderson; BYI Executive Committee Member Dr. Vas Lubchenko relaxes with some friendly foosball competition, and Professor Brian Goess hosts a round of Beckman “Jeopardy.” *Right column (top down):* BSP Stephanie Song delivers her poster presentation, guests take part in after-dinner ping pong. Corey Sandler, OC Event Photos





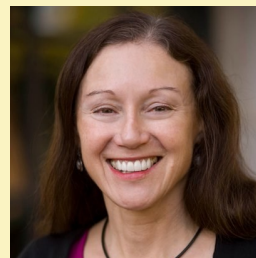
*Above: Groundbreaking ceremony for the Beckman Institute at University of Illinois, Urbana-Champaign.*

## VII. Beckman Institutes and Centers

In 1978, Dr. and Mrs. Beckman began their philanthropic giving by founding five basic science research institutes and centers at leading universities that had been influential in their own lives. Each of the research Institutes and Centers have a mission to promote novel interdisciplinary science programs, and provide access to leading instrumentation facilities.

In addition to the research Institutes, Dr. and Mrs. Beckman also established the Beckman Center of the National Academies as the west coast headquarters for National Academy activities and scientific conferences.

The Beckman Foundation continues the commitment to these Institutes and Centers through an annual Director's Fund grant, which may be used at the sole discretion of the Directors.



Welcome to Dr. Marianne Bronner,  
Director of the Beckman Research  
Institute at Caltech





### **Beckman Research Institute at Caltech**

*Director: Dr. Marianne Bronner  
Pasadena, CA*



### **Beckman Institute for Advanced Science and Technology at the University of Illinois, Urbana-Champaign**

*Director: Dr. Jeffrey Moore  
Urbana, IL*



### **Beckman Research Institute at City of Hope**

*Director: Dr. Steven Rosen  
Duarte, CA*



### **Beckman Laser Institute & Medical Clinic at University of California, Irvine**

*Director: Dr. Matthew Brenner (interim)  
Irvine, CA*



### **Beckman Center for Molecular & Genetic Medicine at Stanford University**

*Director: Dr. Lucy Shapiro  
Stanford, CA*



*Above: Teacher kits from 2019 Physical and Earth Sciences classes, offered by Kids@Science. The Foundation donated \$600,000 to extend support for the initiative for an additional three years.*

## VIII. Local Community Support

The Foundation is proud to support innovative STEM and STEAM activities in the local community we call home, including:

### **Kids@Science**

*STEM teacher training initiative*

### **Irvine Public Schools Foundation**

*CubeSat high school program*

### **Beckman Arts & Science Family Day**

*Festival-style science entertainment at the Segerstrom Center*

### **OC Science and Engineering Fair**

*Special awards and support*

### **Chapman University Keck Center for Science and Technology**

*Capital campaign*

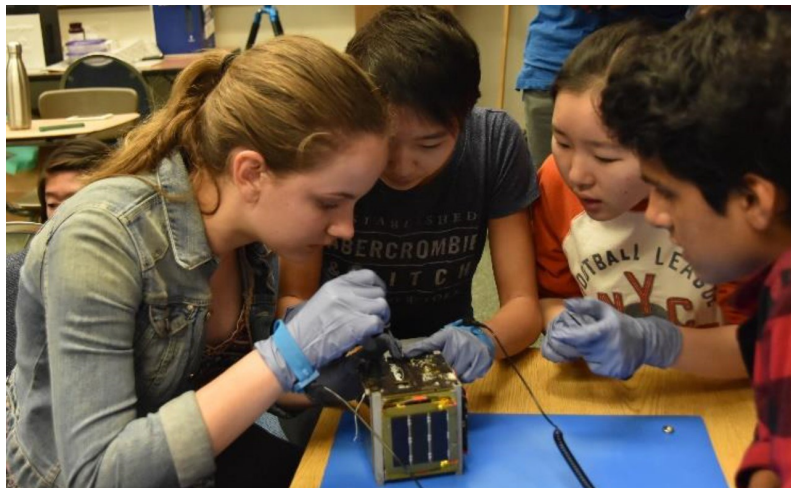
### **Richard Nixon Presidential Library and Museum**

*Apollo 11: One Giant Leap for Mankind Exhibit*





*Right column (top down):* CubeSat team members work on their satellite; Dr. Anne Hultgren joins families at the Beckman Arts & Science Family Day; Dean Andrew Lyon recognizes Beckman-Chapman awardees from OCSEF.



*Left column (top down):* AMBF staff member Tiana Godges leads a pH activity with local kids; University High student Jaeho Lee presents his research poster; *Center:* BYI Dr. Chang Liu kicks off the OC Beckman Legacy Award reception.





# LEGACY



*Above: Lead halide perovskite. Image credit: Erik Grumstrup*

## IX. Orange County Beckman Legacy Award

The Arnold and Mabel Beckman Foundation is proud to announce the launch for the Orange County Beckman Legacy Award, a college scholarship competition with awards up to \$16,000.

Participating students work with a science teacher mentor at their school to complete a project build inspired by the revolutionary tools of Dr. Arnold O. Beckman, as well as perform experiments, create their own innovative experiment, report on experiment findings, and answer essay-style questions. Submitted projects are evaluated by the Foundation using a panel of outside experts to select the award winners.

The following schools have students participating in the pilot year of this program:

**Northwood High School**  
**University High School**  
**Arnold O. Beckman High School**



# SPEAKERS



*Above: 2015 Beckman Symposium Panel, Scientific Careers in the Business World.*

## X. Beckman Speaker & Conference Support

The Arnold and Mabel Beckman Foundation Speaker and Conference Support Program is open to all current Foundation grant awardees, specifically from the BSP, AOB Postdoc, BYI, or Beckman-Argyros Vision Research programs. Current Beckman awardees organizing or hosting a seminar or conference at their institution can invite a member of the Beckman Family to be a speaker and submit an application to this program for funding up to \$3,000 per request, in support of, but not limited to: Speaker travel, room rental fees, reception costs, food, beverages, printed materials, etc.

The Foundation chooses a limited number of Speaker and Conference events based on their relevance to the mission of the program and Foundation as a whole, campus, scientific and community impact, and the scope of appeal of the event.

In 2019, Speaker and Conference support was provided to:

**Prof. Shiv Halasyamani, PhD**  
*University of Houston*

**Prof. Bo Wang, PhD**  
*Stanford University*





*Above: 2016 BYI Jing-Ke Weng investigates harnessing the light production pathway of fireflies for other imaging and power applications.*

## XI. Financial Report

In accordance with our Founders' wishes to 'not spend money to give money away,' the Foundation remains focused on finding operational efficiencies and technology improvements without adding long-term operating costs. To this end, the Foundation implemented the nonprofit Salesforce edition for tracking awardees and grant deliverables, and a new grants application system to streamline collection of award documents. In 2019, we benchmarked our operating expenses as a percent of grant distributions, with the Beckman Foundation at 7% compared to the average of 24% for other similar private foundations.

During 2019, the Foundation announced a new Light Sheet Instrumentation and Data Science program, a one-time grant opportunity for the procurement of advanced light-sheet capabilities.

### **Fiscal Year (Sept. '18-Aug. '19) Financial Highlights:**

**Total expenses and disbursements:  
\$29,209,000**

After our expenses, investment income, amounts set aside, and net accruals, the **reduction in net assets was \$15,124,000.**