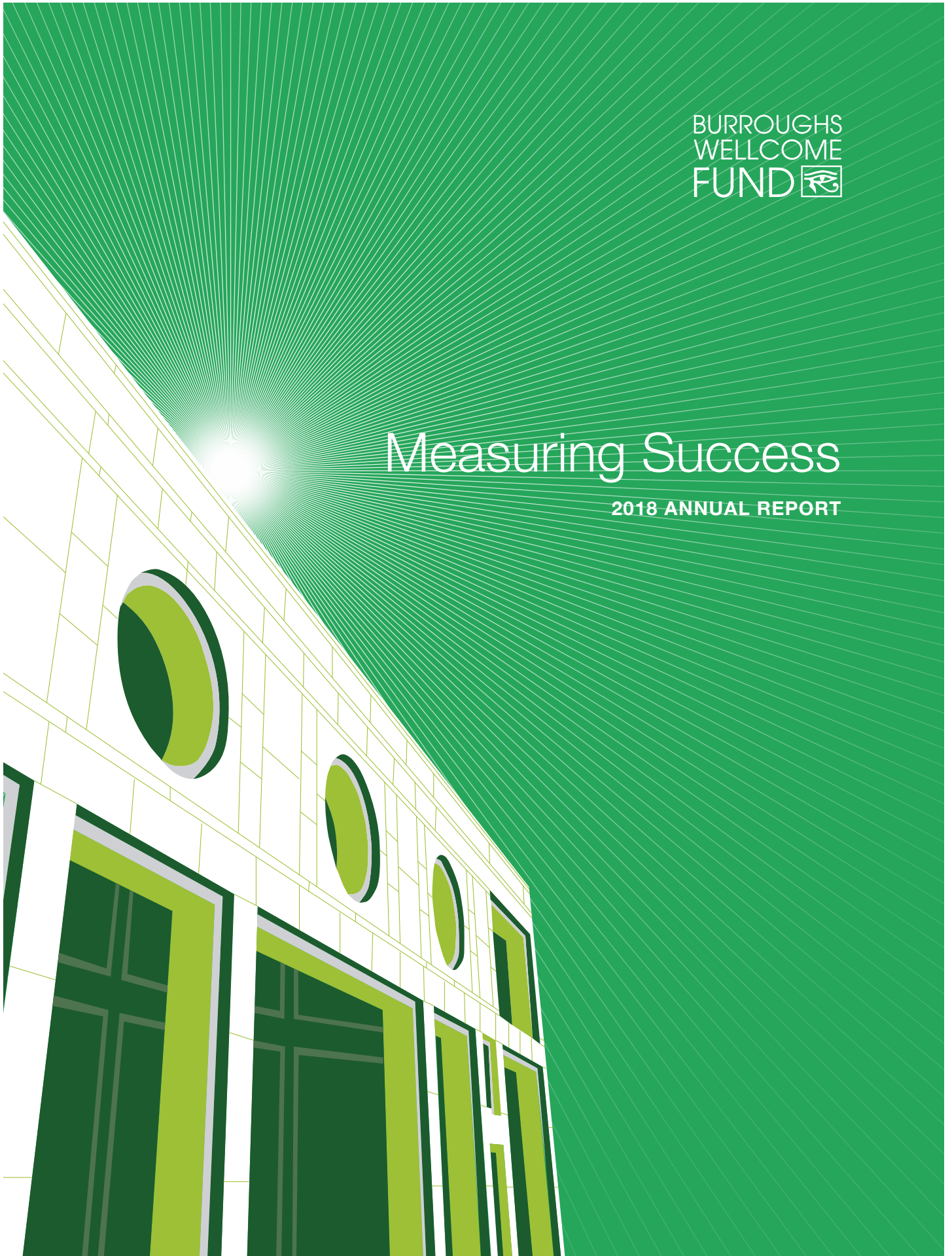
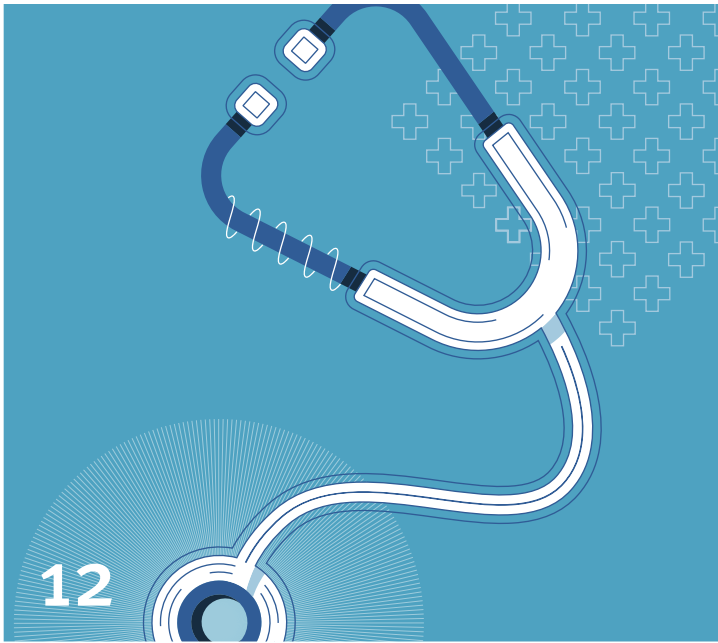
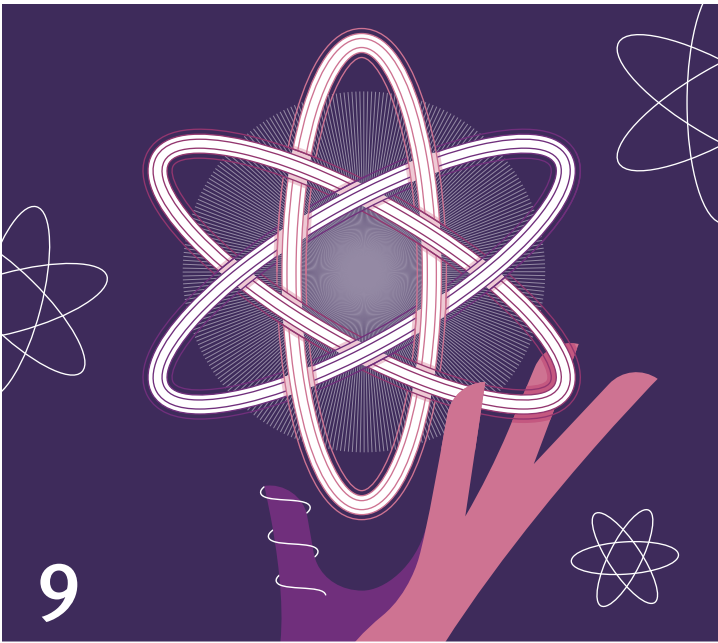


BURROUGHS
WELLCOME
FUND 

Measuring Success

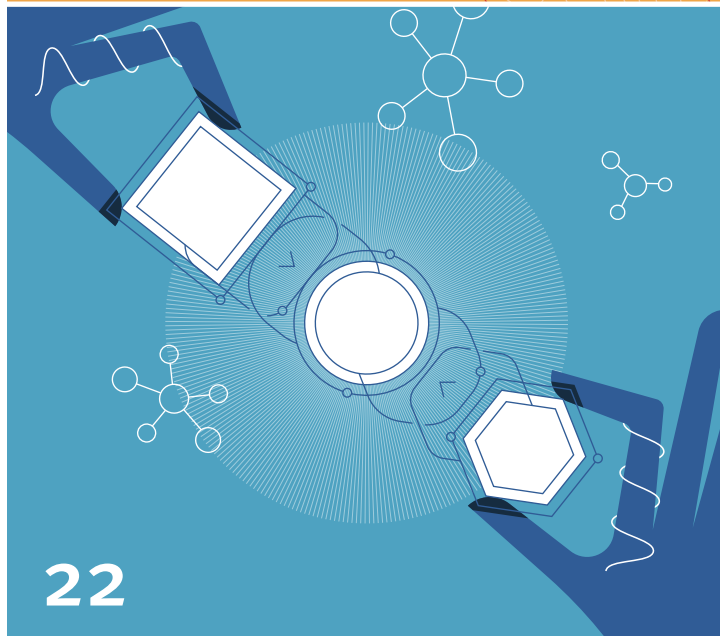
2018 ANNUAL REPORT



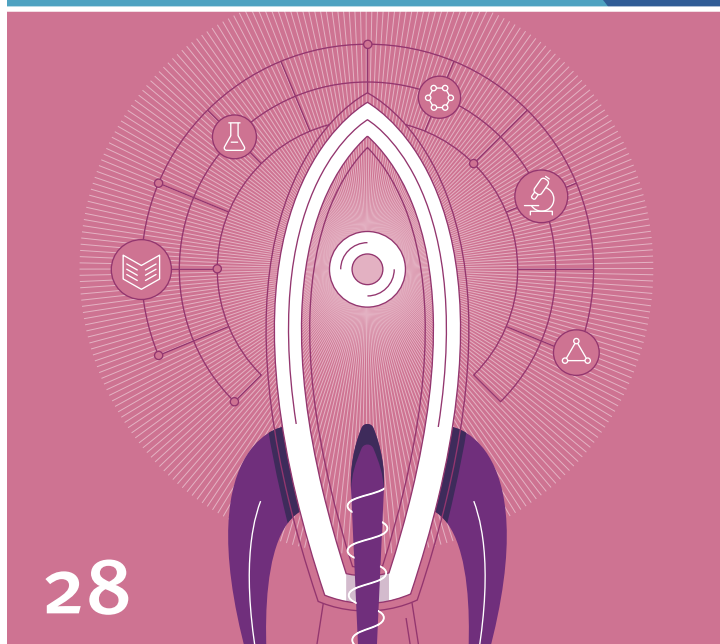




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28

2018 ANNUAL REPORT

Measuring Success

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Burroughs Wellcome Fund

21 T. W. Alexander Drive
P. O. Box 13901
Research Triangle Park, NC 27709-3901
919.991.5100
www.bwfund.org

Investing in Biomedical Research and Career Development

More than 60 years of Investing in Scientists and Biomedical Science

Founded in 1955, the Burroughs Wellcome Fund is an independent private foundation dedicated to advancing the biomedical sciences by supporting research and other scientific and educational activities.

Within this broad mission, BWF seeks to accomplish two primary goals—to help scientists early in their careers develop as independent investigators, and to advance fields in the biomedical sciences that are undervalued or in need of particular encouragement.

BWF's primary approach is to target individual researchers at degree-granting institutions in the United States and Canada, providing financial support through our competitive, peer-reviewed award programs. In complement to our support of academic research, we also make grants to nonprofit organizations whose missions improve the overall environment for scientific activities and careers.

Above all, BWF establishes relationships and invests in the person. We prioritize the researcher's individual development—designing awards that enhance opportunities for training, collaboration, and idea-sharing. We then facilitate networks, gatherings, and conversations to further provide awardees with a diverse community of expertise, mentorship, and inspiration.

BWF believes that a diverse scientific workforce is essential to the process and advancement of research innovation, academic discovery, and public service.

Our investment in the person ensures that each award has life beyond any single grant—that creative, original, and unique solutions to biomedical problems will continue to rise throughout an investigator's career—and in turn, confer good health and strength for all humankind.

BWF believes that a diverse scientific workforce is essential to the process and advancement of research innovation, academic discovery, and public service.







Interfaces in Science
(\$6.45 million)



Infectious Diseases
(\$7.31 million)



Biomedical Sciences
(\$23.55 million)

President's Message

Each year I highlight the successes of the Burroughs Wellcome Fund, mentioning the great early career scientists we support in training and research, the educational opportunities we provide for the young people of in North Carolina, and the institutional and scientific policies we have advanced by supporting key initiatives in underfunded areas of science.

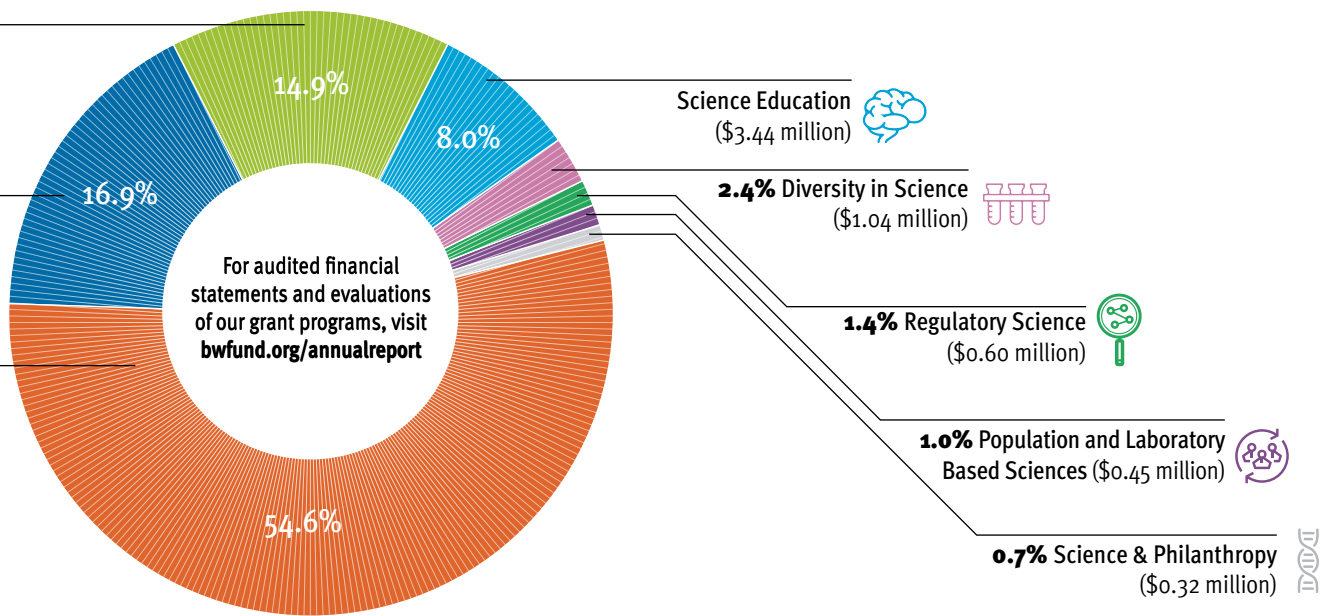


I am confident of the importance of what we, as a private foundation, do and will continue to do. The challenge that many foundations face is to prove our positive outcomes in a scientific and statistically valid fashion. At the Fund we have thus begun a careful examination of the outcomes of our grant funding programs to see if we are fulfilling our mission to advance biomedical research and education.

In developing such proof, we need a control group against which to measure the successes/failures of our awardees. Finding such as control has never been easy, but we now have several possibilities. Our initial results are based on publications and their impacts, grants, promotions, and awards and we find that we are funding individuals who outperform the controls. While we have done a careful examination for a few of our programs, much work remains to determine the success of our investments. We also continue to look at what we should consider success, what should we measure as outcomes? How are we defining success? What does success look like? I am certain that as we refine these criteria, we will strengthen the validity of our controls.

In measuring our impact in STEM education at the K-12 levels, it is even more difficult to determine success. Not only do we not have controls, we do not have the long-term longitudinal data on the program participants, most of whom we only have contact with during the actual program activity. We have, though, measured changes in attitudes toward science as well as improved science understanding by the young people in the program in pre- and post- programmatic surveys. Here we see greatly increased enthusiasm from the beginning to the end of





BWF awarded more than \$43 million in grants during fiscal year 2018

the program, as well as a greater understanding of STEM material. We will continue to refine our measures, but because of the short-term contact with most of these young people we may never be able to show that the programs have a long-term impact on career choices or appreciation of science. I am content to know that we may have planted a seed for a love of STEM regardless of career choice.

Last year I introduced you to a new institutional program designed to increase the number of MD-only physician-scientists. We made our first five awards and are pleased with the excitement and activity that was generated around the award, so much so that we are running a second award cycle to make five more \$2.5 million awards. The long-term outcome of this program — more physician-scientists — is straightforward, but that outcome is still many years in the future. We need to assess short-term outcomes to determine whether the grants are making a difference and if adjustments are needed. Here measurements have been built into the programs that range from number of individuals in the program to research residencies and fellowships to participant feedback to provide an interim idea of how the programs are proceeding and the short-term outcomes.

Although private foundations and voluntary health organizations provide less than 10% of funding for biomedical research, the recent government shutdown highlighted again the importance of the relative stability of our funding. It also demonstrated how the flexible risk capital of the Fund provides the opportunity for our scientists to try exciting and innovative research, free from the politics that can surround Federal funding.

Although the comments of our awardees are difficult to quantify, the almost universal appreciation and testimonials from them that our funding and support and networking opportunities have made, and are continuing to make, a difference in their careers clearly demonstrates to me that even when we don't have the perfect control or know precisely how to measure an outcome, the Burroughs Wellcome Fund is on the right track in fulfilling its mission of advancing biomedical research and education.

John E. Burris, PhD
President
Burroughs Wellcome Fund

Fiscal Year 2018 Major Competitive Grant Awardees

CAREER AWARDS AT THE SCIENTIFIC INTERFACE

Gozde Durmus, DPhil, PhD
Stanford University

Kirsten L. Frieda, PhD
California Institute of Technology

Walter Gabriel Gonzalez, PhD
California Institute of Technology

Brandon Helfield, PhD
University of Toronto

Daniel R. Hochbaum, PhD
Harvard Medical School

Chiamaka Denise Okafor, PhD
Emory University

Nicolas Christian Pegard, PhD
University of California-Berkeley

Calin Plesa, PhD
University of California-Los Angeles

Silvia Rouskin, PhD
Massachusetts Institute of Technology

Geoffrey Schiebinger, PhD
Massachusetts Institute of Technology

Shahrazad Yazdi, PhD
Massachusetts Institute of Technology

CAREER AWARDS FOR MEDICAL SCIENTISTS

Samuel F. Bakhom, MD, PhD
Memorial Sloan-Kettering Cancer Center

Elizabeth Joyce Bhoj, MD, PhD
University of Pennsylvania

Hsiao-Tuan Chao, MD, PhD
Baylor College of Medicine

Keira Alexis Cohen, MD
Johns Hopkins University School of Medicine

John Gordan, MD, PhD
University of California-San Francisco

Sarah Emily Henrickson, MD, PhD
University of Pennsylvania

Benjamin Izar, MD, PhD
Harvard Medical School

Corrine RaShelle Kliment, MD, PhD
Johns Hopkins University

Albert Russell Powers, MD, PhD
Yale University School of Medicine

Deepak Angara Rao, MD, PhD
Harvard Medical School

Ansuman Satpathy, MD, PhD
Stanford University

Mark A Sellmyer, MD, PhD
University of Pennsylvania

Tanya Sippy, MD, PhD
New York University

CAREER GUIDANCE FOR TRAINEES

American Society for Pharmacology and Experimental Therapeutics

Boston University

Clemson University

Iowa State University

Ohio State University

Western Ontario University

Vanderbilt University

INVESTIGATORS IN THE PATHOGENESIS OF INFECTIOUS DISEASE

Jan E. Currence, PhD
Stanford University

James J. Collins, PhD
University of Texas Southwestern Medical Center-Dallas

Jorge Henao-Mejia, MD, PhD
University of Pennsylvania Perelman School of Medicine

Ivan Marazzi, PhD
Icahn School of Medicine at Mount Sinai

John-Demian Sauer, PhD
University of Wisconsin-Madison

Aimee Shen, PhD
Tufts University School of Medicine

Michael Shiloh, MD, PhD
University of Texas Southwestern Medical Center-Dallas

Gregory F. Sonnenberg, PhD
Weill Medical College of Cornell University

Peter J. Turnbaugh, PhD
University of California-San Francisco

David Veessler, PhD
University of Washington

Gabriel D. Victora, PhD
Rockefeller University

Sebastian E. Winter, PhD
University of Texas Southwestern Medical Center-Dallas

POSTDOCTORAL ENRICHMENT PROGRAM

Oscar Alberto Aguilar, PhD
University of California-San Francisco

Kylie Ariel Bemis, PhD
Northeastern University

Oscar Carrasco-Zevallos, PhD
Massachusetts Institute of Technology

Sabena Conley, PhD
Mayo Clinic-Rochester

D’Juan Tyree Farmer, PhD
University of Southern California

Tikvah Katheryn Hayes, PhD
Harvard University

Bobby Brooke Herrera, PhD
Harvard Medical School

Frankie Darryn Heyward, PhD
Harvard Medical School

Francisco Jose Luongo, PhD
California Institute of Technology

Melanie R. McReynolds, PhD
Princeton University

Sean N. Natoli, PhD
University of California-Berkeley

Justin Shaun Arnold Perry, PhD
University of Virginia

Elizabeth Marie Ransey, PhD
Duke University

Naima Gabriela Sharaf, PhD
California Institute of Technology

Michael Frederick Wells, PhD
Harvard University

Kimberly Sade Williams, PhD
University of Pennsylvania

PHYSICIAN-SCIENTIST INSTITUTIONAL AWARD

Duke University Medical Center

Stanford University

University of Pittsburgh

University of Texas Southwestern Medical Center

Vanderbilt University

STUDENT STEM ENRICHMENT PROGRAM

Alamance Community College

Digi-Bridge, Inc.

East Carolina University

Elizabeth City State University

North Carolina State University

Orange County Schools

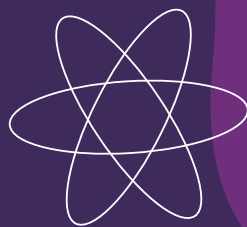
Pfeiffer University

SouthEastern Regional Vision for Education

University of North Carolina-Pembroke

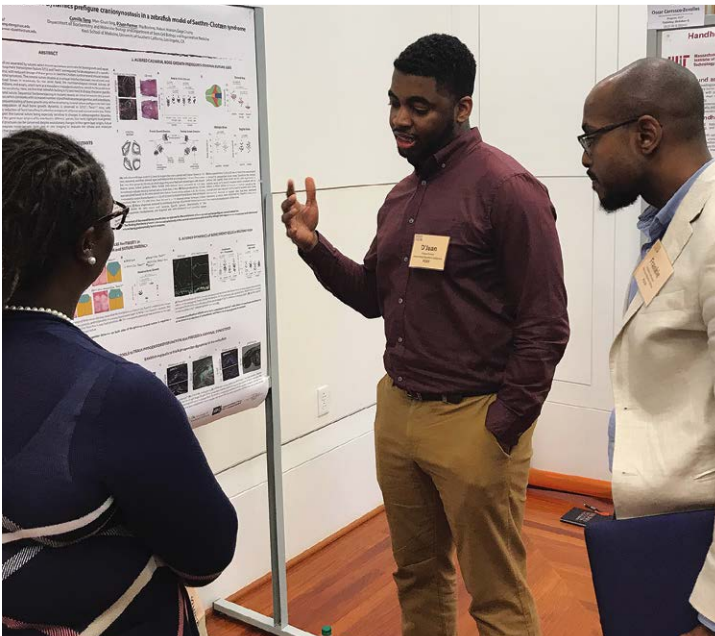
Wake Forest University School of Medicine

2018 Highlights



Each year the Burroughs Wellcome Fund gathers the recent cohort of grant recipients at the Fund's headquarters in Research Triangle Park, NC. This provides an opportunity for introduction to the Fund's staff and to peers and colleagues across scientific disciplines. The Fund invites past awardees to share their experience and discuss the scientific career path.

On these pages are photos from the new awardee meeting, which is certainly one of our highlights from the past year. Throughout the annual report are highlighted Tweets from the past year, a medium through which we have slowly gained traction. You can follow us on Twitter at @bwfund.



@BWFUND



Cancer Researchers ID 'Achilles Heel' of Drug-Resistant Tumors
Discovery Points the Way
Towards New Strategy for
Precision Cancer Therapy
buff.ly/2BGDvue

29 Nov 2018

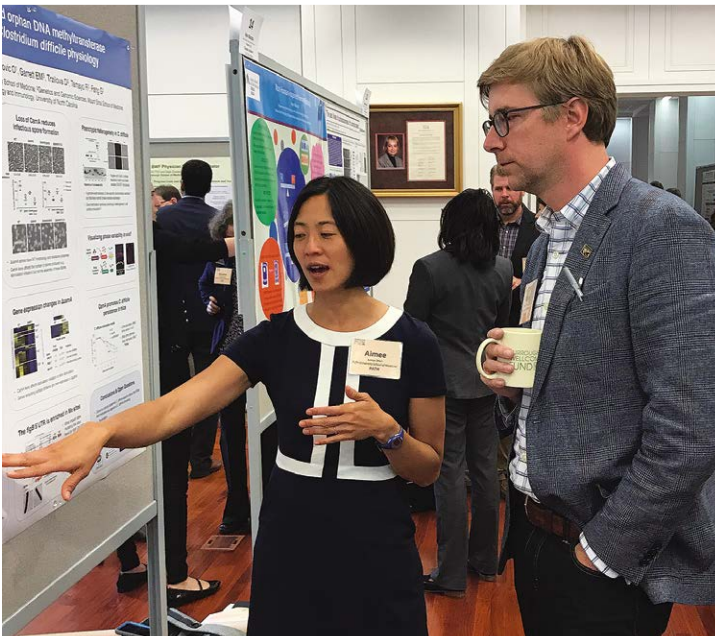


@BWFUND



Congratulations to Dr. Michael Diamond and all the new members of the National Academy of Medicine
buff.ly/2Opokxg

16 Oct 2018



@BWFUND



Seven Harvard researchers receive NIH funding for high-risk, high-reward research
buff.ly/2POcGcb

1 Nov 2018



The background features a stylized graphic of a blue medical tube with white sensors and a circular base. The tube is curved and has several white square sensors attached to it. The base is a circular structure with concentric rings and a central blue circle. The background is a solid blue color with a pattern of white plus signs in the upper right and a pattern of white lines radiating from the base in the lower left.

Biomedical Sciences

CAREER DEVELOPMENT OF BIOMEDICAL SCIENTISTS

The biomedical sciences provide a firm foundation for improving human health. But to advance biomedical science, we have to close gaps in developing biomedical research talents.

The Burroughs Wellcome Fund is committed to fostering the development of the next generation of academic research scientists. Through our Biomedical Sciences portfolio, we identify and invest in talent pathways and career development elements that best benefit the current needs of the biomedical research landscape.

Our major focus in this area is the Career Awards for Medical Scientists (CAMS). Since 2007, the CAMS program has addressed the on-going need to increase and sustain the number of physician-scientists within the ranks of biomedical researchers, and to build synergy between basic research and clinical practice. BWF believes that physician-scientists bring unique perspectives to solving biomedical problems, given their dual experience in clinical training and hypothesis-based research. As such, the CAMS program was designed to help medical doctors transition into research careers, as they complete postdoctoral fellowship training and early years of faculty service.

In 2017, the Physician Scientist Institutional Award was created to tap an overlooked pool of potential research scientists. The program was developed to seek novel and creative ideas to attract, train, and provide support for MDs to launch a research career.

Career Awards for Medical Scientists (CAMS)

The declining participation of the physician-scientist in biomedical research is an on-going problem.

Physician-scientists offer unique perspectives that bridge real-world practice with the lab bench: their synergy of clinical training and research thinking can bring new insights to solving biomedical challenges. We need to increase the number of physician-scientists, keep them in research, and sustain their presence among research communities and institutional leadership.

The Burroughs Wellcome Fund wants to help more physician-scientists become established in academic careers. To facilitate a physician's transition from medical service commitments towards active research, we have reformulated our successful Career Awards in the Biomedical Sciences (CABS) program into the Career Awards for Medical Scientists (CAMS).

CAMS is tailored for physician-scientists who are still in a mentored, non-faculty position such as a residency, fellowship, or postdoc. The award provides \$700,000 in funding over five years for a physician-scientist to bridge the final years of their advanced postdoctoral or fellowship training, and their early years of faculty service and independent research.

Our hope is to steer more physician-scientists towards tenure-track academic appointment in basic biomedical, disease-oriented, or translational research, with at least 75-percent protected time for research activities. We also seek out applicants whose specialties align with emerging gaps in biomedical science, such as the interface of neuroscience and the practice of psychiatry.

@BWFUND



Krishna V. Shenoy to receive Andrew Carnegie Prize in Mind and Brain Sciences. Dr. Shenoy received the Career Award in Biomedical Sciences.

buff.ly/2xWIUKv

28 Sept 2018

Physician Scientist Institutional Award

To advance biomedical sciences, we have to narrow the gaps in developing biomedical research talents. Increasing and sustaining physician-scientists in biomedical research careers will ensure the continued contributions of these unique talents and strengthen our overall prospects for improving human health.

In 2019, the Burroughs Wellcome Fund offered a second round of the Physician-Scientist Institutional Awards (PSIA) program which was instituted in 2017 to increase the number of single degree MDs who enter research. In total, the Fund has made 10 grants for an investment of \$25 million to institutions that have created programs with the intent to increase opportunities for physicians interested in a research career.

The Fund also created the Physician-Scientist Resource Center (bwfphysicianscientist.org) as a means to curate important information pertaining to physician-scientists.

Collaborative Research Travel Grant (CRTG)

The Burroughs Wellcome Fund understands that science is a process best shared. But often in biomedical research, prospective colleagues or cutting-edge equipment are located at distant institutions, and funding limitations may preclude these exploratory, enriching visits.

BWF helps researchers make those trips. Our Collaborative Research Travel Grants (CRTG) provide up to \$15,000 for domestic or international travel for one year—helping investigators and postdoctoral trainees to visit labs at other institutions to learn new research techniques, or to begin or continue research collaboration.

CRTG funds can be applied towards airfare, accommodations, meals, ground transportation, and other travel expenses—as well as lab supplies and other materials required for the visit. Researchers can make multiple visits to one collaborator or visit multiple collaborators. Those with doctorate-level training in the physical, mathematical, or engineering sciences have been especially encouraged to apply.

BWF knows that the best brainstorming and innovation happens when researchers can collaborate and share ideas in person. The CRTG program lets our awardees visit a colleague—and grow their skills, their collaboration, and their career. We want them to meet up, and make science happen.

@KMYERSLAB / @BWFUND RETWEETED



Thanks to the @BWFUND for the post doc travel award to get a mechanical engineer into a reproductive science lab for preterm birth research.

12 Dec 2018







Career Guidance

**PROVIDING PROFESSIONAL GUIDANCE
FOR BIOMEDICAL RESEARCHERS**

The Burroughs Wellcome Fund primarily invests in trainees and early-career investigators who have tremendous potential to become leaders and innovators in the biomedical sciences. However, we realize that the skills scientists need to transform from employment to professional success are not always taught at the lab bench.

Graduate programs classically provide PhD trainees with deep knowledge, hands-on experience, and the ability to ask meaningful questions and find answers to them. But for many employers, the most desirable job candidates also have experience managing projects and people; the capacity to think independently, with initiative and entrepreneurialism; and advanced practice in communicating clearly about complex ideas.

Yet, emphasis on this comprehensive mentoring approach may fall short in some research training environments. At the same time, students, postdocs, and mid-life career-changers often report frustrations in attempting to translate their full skill set to tasks within and beyond the academic realm.

The Burroughs Wellcome Fund will continue to invest in pilot projects that demonstrate practical approaches to prepare scientists for career transitions, through our Career Guidance for Trainees award. We want to assess approaches that help trainees acquire and hone the skills expected of knowledgeable workers and institutional leaders. We also want to help scientists find their optimal path within the research landscape—whether as principal investigators, in non-tenure track positions, in industrial careers, or in scientific careers away from the bench.

In all other professional training environments—commercial, legal, spiritual, among others—there is an intentional emphasis on leadership, management, and career guidance. So let's improve how we prepare biomedical scientists for jobs at and away from the lab bench, and give research professionals the professional guidance they deserve.

Career Guidance for Trainees (CGT)

Planning for careers is difficult in any field—yet this is one facet that academic bodies often neglect when cultivating scientific talents.

To give research professionals the professional guidance they deserve, the Burroughs Wellcome Fund conducts the CGT award.

The program provides one-year grants up to \$50,000 for academic institutions, professional societies, and other nonprofit organizations to demonstrate affordable projects that help individual scientists assess their personal growth and effectively pursue career paths.

BWF aims to advance innovative proposals that have the potential to be deployed on a larger scale. An idea should augment the basic “PhD-level” skills already offered by institutions—by helping research trainees discover and match their skills and interests with potential employers, or by providing them the tools to critically assess their vocational strengths with professional options.

As institutional leaders training future professionals in science—our future colleagues—we have a responsibility to ensure a certain caliber and educated strategy in the mentorship we provide.

So we are encouraging innovations in scientific career counseling. Our goal is to help researchers navigate their vocational journey—and guide them to fulfilling professional paths matching their individual strengths with scientific challenges.



Career Development Guides The Fund developed a series of career development guides that focus on a number of issues scientists face. They explore giving talks, staffing your lab, team science, intellectual property, and others. Email news@bwhfund.org for a full offering.

Diversity in Science

**ENRICHING BIOMEDICAL RESEARCH
WITH NEW VOICES AND FACES**



The Burroughs Wellcome Fund believes that racial, ethnic, and cultural diversity is essential to the process and advancement of scientific innovation, academic discourse, and public service. In 2012, we launched the Diversity in Science program with the specific goal of supporting trainees from communities of color currently underrepresented in biomedical research.

Molding a diverse research community begins with mentoring diverse talents. To address this foundational issue, BWF has created the Postdoctoral Enrichment Program to support early career scientists and engineers of Latino, Native-American, Pacific Island, and African-American descent. The grant provides postdoc-mentor pairs in the United States and Canada with funding to enhance research productivity and career counseling resources—to help early-career scientists develop as independent investigators.

The Burroughs Wellcome Fund makes personal investments in biomedical research and careers. Enriching biomedical and medical research with new voices and faces is simply fundamental to the BWF ethos of supporting researchers who hold promise for creative, original, and unique solutions to biomedical problems.

When we invest in diversity in science, the perspectives and innovations in biomedical research will grow to match the diversity of the peoples and communities we seek to heal and serve—and the trainees we invest in today will form a diverse mentorship for trainees to come.

Postdoctoral Enrichment Program (PDEP)

The Burroughs Wellcome Fund wants to help advance the biomedical careers of underrepresented researchers from communities of color. We believe that racial, ethnic, and cultural diversity is essential to the process and advancement of scientific innovation, academic discourse, and public service.

BWF has created the PDEP to support early career scientists and engineers of Latino, Native-American, Pacific Island, and

African-American descent, through training and mentoring support. PDEP awards a total of \$60,000 over three years to postdoc-mentor pairs in biomedical or medical research, who are citizens of the United States or Canada, and hosted at a degree-granting institution in the United States or Canada.

Funding through PDEP supports participation in the following activities:

Opportunities for the PDEP postdoctoral fellow to enhance their research productivity. Examples include travel and attendance to workshops, courses, and trainings in new techniques; or meetings and events that launch new collaborations and knowledge transfer.

Opportunities for the PDEP mentor to develop and provide mentoring resources at their home institution, to increase the research productivity and long-term career success of the postdoctoral fellow. Examples include career guidance discussions, research management trainings, or professional development in grant writing, communication, and other skills demanded of future principal investigators.

Opportunities for the PDEP mentor to attend an annual meeting of PDEP mentors hosted by the Burroughs Wellcome Fund.

Opportunities for the PDEP postdoc-mentor pair to participate in a national peer network of underrepresented minority postdoctoral scholars to foster inter-institutional collaboration and greater community engagement.

We need to enrich biomedical and medical research with new voices and faces. But molding a diverse research community begins with mentoring diverse talents. The Burroughs Wellcome Fund wants to hear from underrepresented postdocs and mentors working at the frontlines of scientific discovery, and invites their application for the PDEP fellowship.

We want help in identifying these exciting scientists—and help in—mentoring diverse voices and faces to advance biomedical research careers.



Infectious Diseases

**ANSWERING PERSISTING QUESTIONS ON THE
MECHANISMS AND NATURE OF HUMAN PATHOGENS**

Investigations into infectious diseases have been in the Burroughs Wellcome bloodline for more than a century, ever since Henry Wellcome established his first tropical disease laboratory in the Sudan in 1902. Today, we still need new answers to fundamental questions on human infectious diseases.

The Burroughs Wellcome Fund has supported an Infectious Diseases program since 1981, when it began funding modern molecular approaches to understanding what have been called the great neglected diseases—malaria, the pathogenic fungi, and human parasites—that affect people in countries around the world. Then, as more institutions focused their attention to the prevention and treatment aspects of these diseases, BWF shifted its aim towards the research questions and angles still in dire need of investigation.

Since 2000, we have directed our resources through our Investigators in the Pathogenesis of Infectious Disease award. PATH encourages seasoned investigators at the assistant professor level to explore how specific pathogens—be they of bacterial, viral, fungal, eukaryotic, or other physiologies—interact with the human body to damage human health.

We want investigators to apply their own expertise to daring, multidisciplinary approaches, blending the biochemical, pharmacological, immunological, and molecular—and test creative ideas for answering the persisting questions on the mechanism and nature of human pathogens.

Investigators in the Pathogenesis of Infectious Disease (PATH)

How do human hosts handle infectious challenge? How can we shed light on the interplay between human and microbial biology, and explain how human health can be damaged by these encounters?

To answer these persisting questions, we need to be daring in our investigations into the mechanisms and nature of human pathogens.

Through our highly competitive PATH award, the Burroughs Wellcome Fund provides \$500,000 over a period of five years for investigators at the assistant professor level to study pathogenesis.

PATH seeks investigators still early in their careers, who want to apply their own expertise to daring, multidisciplinary approaches blending the biochemical, pharmacological, immunological, and molecular.

We encourage proposals explaining how specific pathogens—be they of bacterial, viral, fungal, eukaryotic, or other physiologies—interact with the human body to damage human health. What affects the outcomes of these encounters? How do colonization, infection, commensalism, and other relationships play out at levels, from molecular interactions to systemic ones?

BWF wants to give these accomplished investigators the freedom and flexibility to pursue daring avenues of inquiry and higher-risk research projects—and advance their careers as innovators in infectious disease research.

@BWFUND



Congratulations to Dr. Xiaorong Lin, a BWF Investigator in the Pathogenesis of Infectious Disease buff.ly/2BH1KZ9

29 Nov 2018

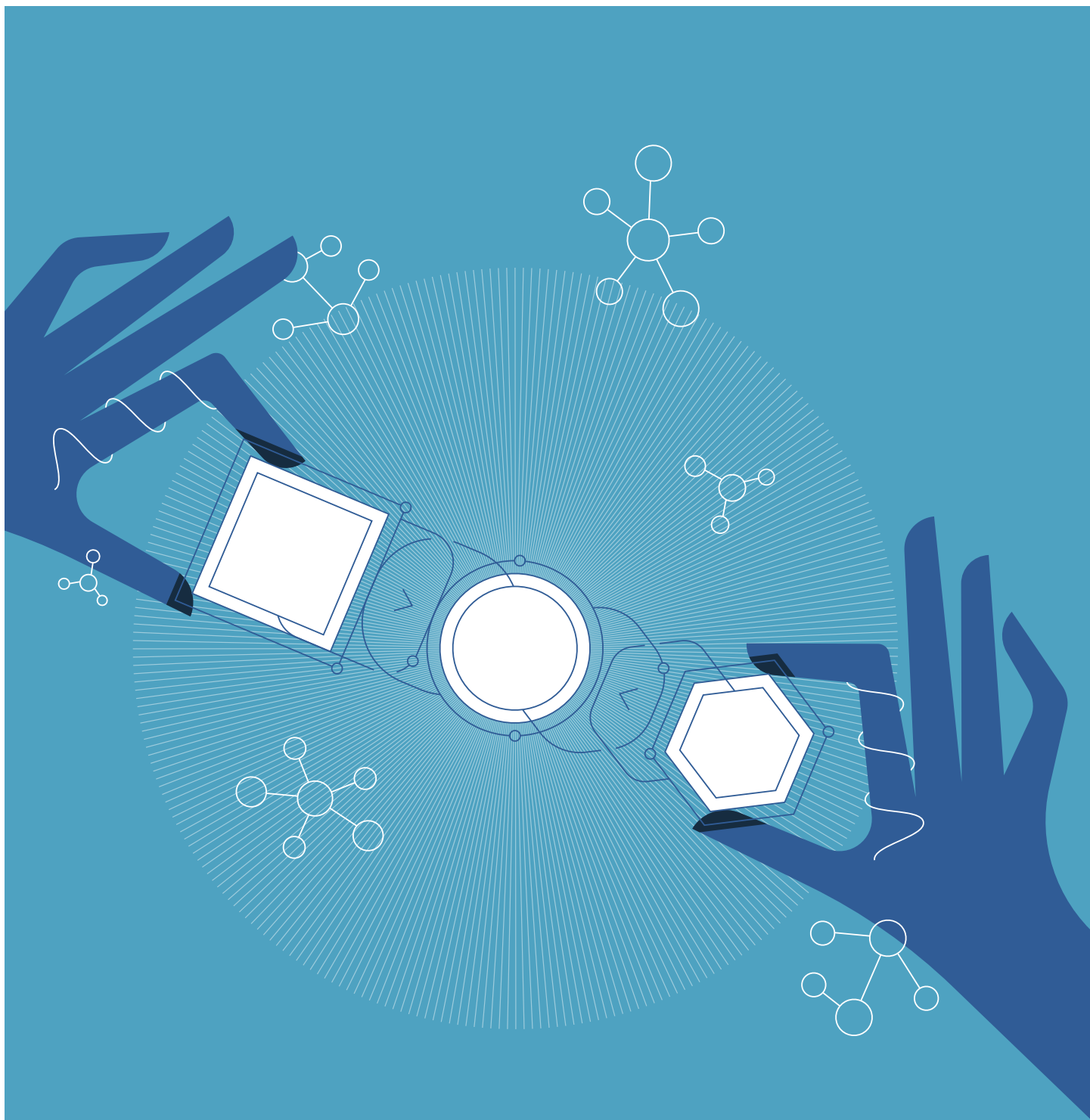
@BWFUND



Learning from Ebola failures is key for crafting better plans for public health emergencies buff.ly/2zljzpy

1 Nov 2018





Interfaces in Science

**INVESTING IN CROSS-TRAINED RESEARCHERS TO
MAKE TRANSDISCIPLINARY BREAKTHROUGHS**

The biological sciences are changing. Advances in genomics, quantitative structural biology, modeling of complex systems, and nanotechnology have opened up new realms of research especially for ambitious investigators with backgrounds in physics, mathematics, computer science, and engineering who want to explore these new frontiers of biology. The promise of an exciting research career at this scientific interface is undeniable.

In recognition of the vital role such cross-trained researchers will play in furthering biomedical science, the Burroughs Wellcome Fund is making major investments in early-career researchers with undergraduate and graduate training in the physical, chemical, or computational sciences.

BWF has formed the Career Awards at the Scientific Interface award to catalyze the future careers of these creative, transdisciplinary talents. We believe that their unique perspective and expertise—and their career potential as faculty members and institutional leaders—will spark the exploration of toolkits, lenses, and machinery previously unimaginable in biomedical research.

From cell theory to DNA, great leaps in the biological sciences have always resulted from advances in how researchers detect, visualize, and manipulate the mechanisms of life.

We now stand at a new frontier where great changes in biological sciences await again. We are investing in cross-trained researchers who can navigate this interface of sciences—so they can make transdisciplinary breakthroughs for the benefit of human health.

Career Awards at the Scientific Interface (CASI)

Possibilities at the interface of biological, physical, computational, and engineering sciences have never been more exciting. Biomedical researchers are now blending technologies and inspirations transcending varied disciplines—giving us toolkits, lenses, and machinery previously unimaginable, and with the potential to advance human health.

The Burroughs Wellcome Fund wants to cultivate investigators who are pushing the frontiers of these exciting possibilities. To do so, we have formed the CASI program as a career catalyst for creative, cross-trained researchers in biomedicine and biophysics.

CASI grants are open to researchers in the U.S. and Canada. The program provides \$500,000 over five years—as well as job placement mentoring and professional networking resources—to help early-career researchers bridge their advanced postdoctoral training with their first three years of faculty service.

Through CASI, the Fund hopes to encourage scientists and engineers whose pre-doctoral work in chemical, physical, mathematical, and computational fields now prepares them to make grand leaps as postdoctoral and faculty researchers in biomedicine. Past awardees have explored programming paradigms for controlling robotic human limbs; imaging techniques to resolve intercellular dynamics or neural circuit function; biomagnetic matrices for stem cell cultures; chemical and evolutionary bases of circadian rhythms; spatiotemporal controls of embryonic tissue arrangement; and many other scientific interfaces.

We need more transdisciplinary talent who can break through these biomedical frontiers. The Burroughs Wellcome Fund is willing to invest in researchers whose beginnings today will flourish into creative, original, and unique solutions to biomedical problems throughout their career—and advance new possibilities in human health in return.

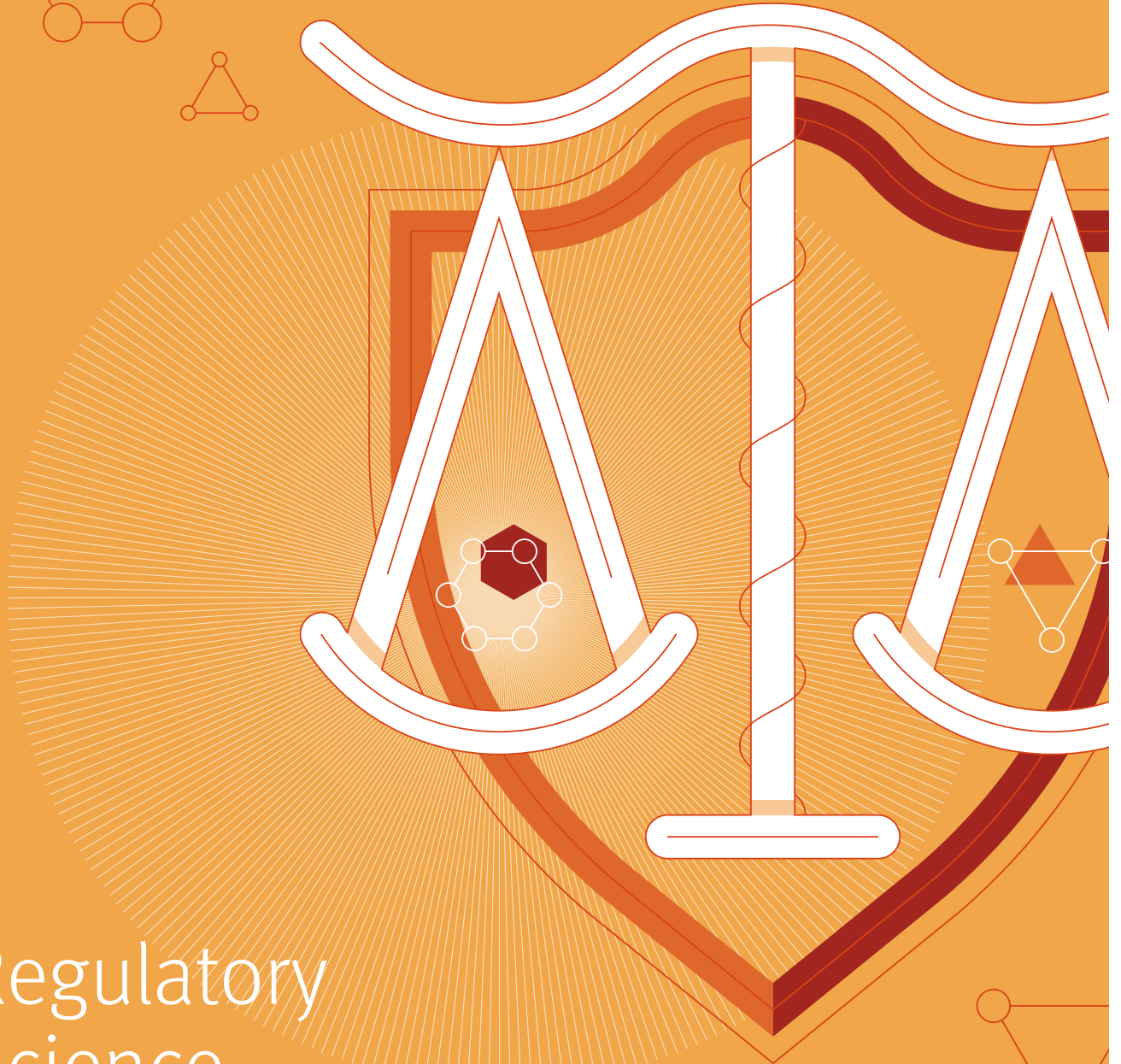
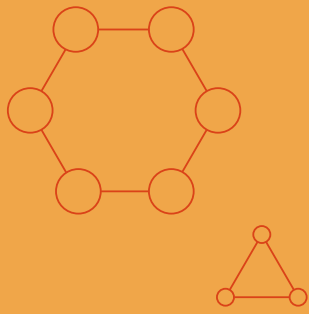
@BWFUND



Test tube chemistry using synthetic DNA molecules can be utilized in complex computing tasks to exhibit artificial intelligence

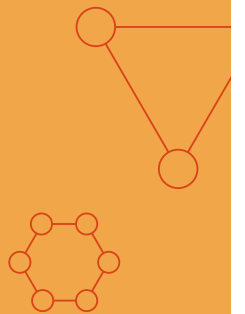
buff.ly/2J2l56e #bwfcasi

9 Jul 2018



Regulatory Science

**KEEPING GOVERNMENT REGULATIONS
APACE WITH BIOMEDICAL ADVANCES**



The U.S. Food and Drug Administration defines “regulatory science” as the science of developing new tools, standards, and approaches to assess the safety, efficacy, quality, and performance of FDA-regulated products.

But regulatory science itself is an underserved area of research. National policies and regulations on new biomedical therapies should be supported by state-of-the-science data—yet given the pace of innovation and fiscal realities, agencies often lack the resources to fully address each and every emerging regulatory question.

Academic researchers can help agencies meet this demand. Recognizing the need and the opportunity, the Burroughs Wellcome Fund has made Regulatory Science among its major initiatives for funding.

Our Innovation in Regulatory Science Award specifically funds academic investigators to assess the safety and efficacy of new therapies. We seek investigators who can leverage their multidisciplinary expertise and institutional resources towards new methodologies or approaches for vetting novel therapies—and produce timely knowledge and evidence that can directly assist U.S. and Canadian agencies in making regulatory decisions.

Regulations in biomedical therapies exist to balance public benefit with informed risk, and the demand for informed policymaking is as limitless as the frontier of medical therapies. To advance biomedical science and its promise for public good, the Burroughs Wellcome Fund will continue its encouragement of regulatory science—keeping government regulations apace with biomedical advances.

@BWFUND



Congratulations to Dr. Daniel Radar from @Penn for receiving a National Distinguished Investigator Award for Patient-Oriented Research. Dr. Radar received a Clinical Scientist award from the Burroughs Wellcome Fund.

buff.ly/2KGvGq3

21 May 2018

Innovations in Regulatory Science Award (IRSA)

Regulations in biomedical therapies exist to balance public benefit with informed risk. Appropriately, these national policies and regulations should be supported by state-of-the-art science data and evidence.

But given the pace of innovation and fiscal realities, agencies often lack the resources to fully address each and every emerging regulatory question.

To help the Food and Drug Administration (FDA) and other U.S. and Canadian agencies close this gap, the Burroughs Wellcome Fund created the IRSA.

IRSA offers investigators up to \$500,000 over five years to develop innovative and implementable solutions to regulatory questions. Applications are open to U.S. and Canadian citizens or permanent residents who have a faculty or adjunct faculty appointment at a North American degree-granting institution.

Applicants must explain how their research will have direct implications for regulatory policy—including the strategy and timeline for an agency to receive and consider the findings in their regulatory decision-making, as well as any potential pitfalls and the major validation steps required.

Beyond this, the possibilities are as limitless as the frontier of medical therapies. We invite collaborations and talents spanning mathematics, computer science, applied physics, medicine, engineering, toxicology, epidemiology, and systems pharmacology, and any other field spanning biomedical, biophysical, and biostatistical disciplines.

The Burroughs Wellcome Fund recognizes that regulatory science is an important, underserved area of research. We want to fund investigators who can anticipate and assess the future of health therapies and technologies—and strengthen the biomedical knowledge informing national regulatory decisions.

Reproductive Science

**NOURISHING NEW RESEARCH
INTO PARTURITION SCIENCE**



The action of birth is shrouded in elegant complexity. It is the culmination of biomedical chain reactions, cellular differentiation, and other physiological, behavioral, and environmental mechanisms. Individually, they are measurable—together, much remains a mystery.

For years, the Burroughs Wellcome Fund has recognized reproductive sciences as an undervalued and underfunded area of research. Via our ad hoc grants, we provided early-career development funding for reproductive scientists and for OB/GYN physician-scientists.

In 2008, we began to formally invest in Reproductive Sciences as a major funding program. Today, our focus is to seek new ideas and partnerships to increase research into human parturition.

The program's first efforts were a series of biannual conferences on preterm birth research. Together with the March of Dimes, the Burroughs Wellcome Fund hosted the Biannual Symposium on Preventing Prematurity in 2008, 2010, 2012, and 2014.

Our Reproductive Sciences program is currently headlined by the Preterm Birth Initiative, an award aimed to increase our understanding of the mysteries and mechanisms of spontaneous preterm births—the leading cause of neonatal morbidity and mortality in children. Through these awards, BWF hopes to invigorate multidisciplinary collaborations and attract new investigators towards this area of research.

The triggers and factors of birth—however shrouded and complex—can impart mortal and lasting impacts on human life and well-being. The Burroughs Wellcome Fund intends to rally new talent and new approaches to explore these mysteries—nourishing new research into parturition science.

Preterm Birth Initiative

As part of our mission to support underserved fields of biomedical research, the Burroughs Wellcome Fund has created a grant to stimulate new insights into the mechanisms underlying spontaneous preterm birth.

Despite medical and technological advances, the rate of preterm births in the United States remains higher today than 20 years ago. Approximately 12 percent of births in the U.S. are considered preterm, and many physiological and behavioral health problems can be attributed to preterm delivery. Worse, preterm birth is currently the leading cause of neonatal morbidity and mortality in children.

For a medical phenomenon with such grave health and social consequences, little is known about preterm birth and its causes. The Burroughs Wellcome Fund intends to change this through its Preterm Birth Initiative.

Through this competitive award, BWF provides sole- or multi-investigator teams up to \$500,000 over a four-year period. Principal investigators must be postdoctoral fellows in their final two years of training, or hold a faculty appointment at a degree-granting institution in the U.S. or Canada. Principal investigators must be citizens or permanent residents of the U.S. or Canada.

We want awarded teams to consider approaches in both basic and translational research, linking expertise within and outside of reproductive science. Molecular and computational approaches such as genetics and genomics, immunology, microbiology, evolutionary biology, mathematics, engineering, and other sciences should be interwoven with insights from more traditional aspects of parturition research such as maternal-fetal medicine, obstetrics, and pediatrics.

Uncovering the mysteries of preterm births will advance reproductive science and impact human lives.

@BWFUND

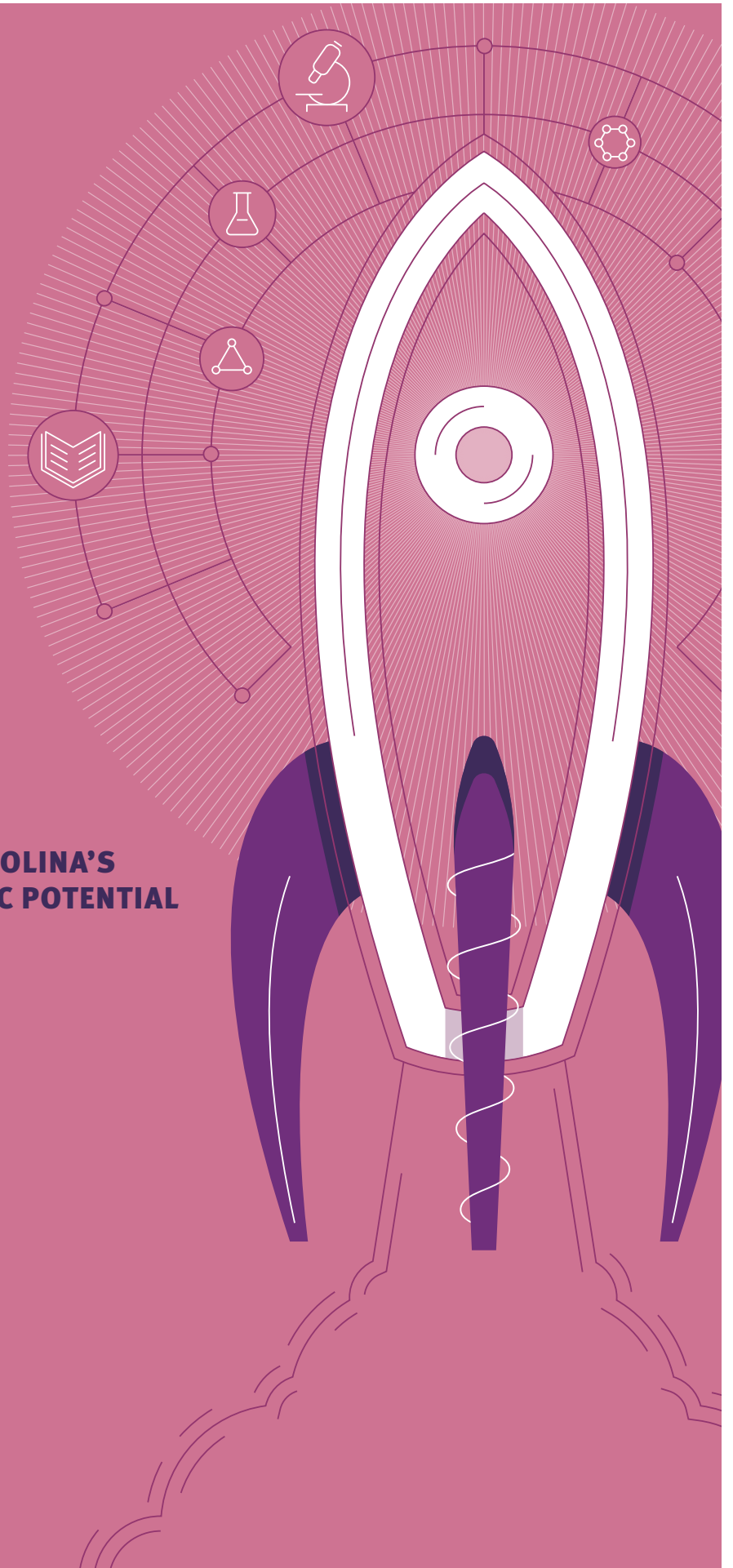


Blood vessels are key to building a strong heart. Doctors haven't known why some babies are born with thin, spongy heart muscles. New research links the disease to poorly developed blood vessels around the heart. buff.ly/2DPJpYw

1 Feb 2018

Science Education

**EMPOWERING NORTH CAROLINA'S
CHILDREN WITH SCIENTIFIC POTENTIAL**



At the heart of all that we do to support biomedical science in the U.S. and Canada, one particular ideal drives our intentions: establish relationships and invest in the person.

It is this same philosophy that drives our decision to invest in science education in North Carolina.

When the Burroughs Wellcome Fund became a fully independent, philanthropic foundation in 1994, we established our headquarters in the Research Triangle of North Carolina—a powerhouse of scientific innovation in the Nation and the world. In making North Carolina our home state, we also recognized our responsibility to invest in the people and community here.

Looking at the Fund’s own strengths and looking at the Research Triangle’s academic advantage—a microcosm of the disparity and potential present throughout the Tar Heel State—our imperative was clear. Our science education investment begins with North Carolina’s students and educators.

The Burroughs Wellcome Fund is proud to invest in Science Education as one of its major programs. Our goal is to establish relationships and invest in individual access to STEM education—science, technology, engineering, and mathematics—for communities in all 100 counties of North Carolina.

- Through our Student Science Enrichment Program, we are giving K-12 students in North Carolina added opportunities to experience critical thinking and the excitement of discovery—by investing more than \$3 million annually for schools, organizations, and institutions to create and deliver science education activities outside the classroom.

- Through our Career Awards for Science and Mathematics Teachers, we look for proven public school teachers in North Carolina whose vision and effort for STEM access in their community serve as shining examples—and we further buoy that teacher’s influence and impact with a \$175,000 grant for salary, supplies, and professional development opportunities.
- Through our Promoting Innovation in Science and Mathematics awards, we want to give public school teachers with ingenious, classroom-ready ideas for stimulating STEM learning the chance to put their ideas into play—with one-time grants up to \$4500 for materials, equipment, and training.
- Finally, we founded the North Carolina Science, Mathematics, and Technology Education Center (SMT). Since 2004, this non-profit organization has amplified our goal of advancing meaningful STEM opportunities in our classrooms—centralizing materials, equipment, and professional development resources for educators to easily access.

Empowering North Carolina’s children with scientific potential—that is how we believe the Burroughs Wellcome Fund can best give back to our home state. We can harness the financial and material resources of our many established partnerships to improve public policy, teacher training, the informal science community, and scientist-educator collaborations. We can invest in individual educators whose natural talents can ignite that one student’s curiosity and engage them in the scientific process.

If we are successful in these investments, we will have imparted an even greater gift for North Carolina: that our children, regardless of their future career path, have the science literacy to participate fully in civic life—and advance the potential of our state and our Nation.

@BWFUND



“We want to show them that science is done in the field by people just like them. We’re building this network of little scientists.”

Jonathan Marchal @TheNCARBoretum buff.ly/2kr5tkc

25 May 2018

Student Science Enrichment Program (SSEP)

As part of our Science Education initiative, the Burroughs Wellcome Fund wants to empower North Carolina's children with scientific potential. This means supporting the good work of talented, licensed educators in our K-12 schools—but it also means connecting our students with STEM enrichment opportunities outside the schoolyard.

Fortunately, some of the best universities, museums, and scientific organizations in the Nation are right in North Carolina—and they are ideal partners for SSEP.

The Burroughs Wellcome Fund created SSEP specifically to fund and support out-of-school STEM activities for K-12 students in North Carolina. SSEP awards provide up to \$60,000 per year for three years for the creation and implementation of after-school, weekend, or summer science programs.

SSEP recipients are limited to non-profit institutions within North Carolina, such as colleges, museums, zoos, as well as public and private schools and community groups. Proposed programs must be designed in consideration of school curricula; implemented by well-trained staff; and structured with learning objectives and post-participation assessments.

Since the program's inception in 1996, BWF has awarded 201 grants totaling \$33.7 million to 103 organizations that reach more than 43,000 North Carolina students across all 100 counties. In 2015 alone, funded proposals were received from UNC campuses, NC State, Duke, Wake Forest, and Elon; Cape Fear Community College Foundation; Burke County Public Schools; Marbles Kids Museum; Beaufort County Police Activities League; the Cherokee Boys Club; and many other Tribal, state, municipal, and community groups.

North Carolina has a wealth of natural treasures, technology hubs, and great universities—a veritable haven for experiential learning in STEM fields. We are pleased that the community leaders and STEM institutions of North Carolina are connecting our children with opportunities for STEM enrichment.

Career Awards for Science and Mathematics Teachers (CASMT)

North Carolina has one of the Nation's top scientific economies. And our continued competitiveness in research, medicine, technology, agriculture, and manufacturing relies on a workforce inspired and mentored by a special cadre of equally hardworking professionals: the science and math educators in our public schools.

In our support of science education in North Carolina and in all of our philanthropic activities, the Burroughs Wellcome Fund is guided by one particular ideal: establish relationships and invest in the person.

Just as we prioritize the development of individual scientists, we also created an award program that enhances the professional development of a promising science or mathematics educator to reward the best teachers to inspire our children in the classroom.

The Burroughs Wellcome Fund is proud to recognize through CASMT mid-career, K-12 teachers in North Carolina public schools who have proven their command of science or mathematics subject matters, demonstrated outstanding consistency and success in pedagogy, and are ready to emerge as mentors and innovators within the STEM community of our state.

@BWFUND



Congratulations Freebird McKinney on being named the 2018 @BWFUND N.C. Teacher of the Year
buff.ly/2HiHgdC #nceducation

22 Apr 2018



These star teachers are awarded \$175,000 over a period of five years to support their professional development, augment their equipment needs, and supplement their public salary. Awardees are also encouraged to reach beyond their school to build collegial learning communities within their district or region, and to develop strategies for their personal growth as teaching professionals and leaders of practice.

Our belief in “investing in the person” ensures that each award has life beyond any single grant. That creative, original, and unique ideas will continue to rise throughout an awardee’s career—and in turn, strengthen the greater teaching community and empower the scientific potential of North Carolina’s children—those are our ultimate reasons for investing in North Carolina’s best science and math educators.

Promoting Innovation in Science and Mathematics (PRISM)

Here’s a question for STEM teachers: “What great lesson plan could you finally try out if you had up to \$4,500 in hand?”

If you’re a professional educator licensed to teach in a North Carolina K-12 public school—and you have an ingenious, classroom-ready idea for inducing student learning in STEM—you just might be able to turn it into reality.

The Burroughs Wellcome Fund created the Promoting Innovation in Science and Mathematics (PRISM) grant to help North Carolina public school teachers create exciting, hands-on learning experiences in class or after school.

The award provides up to \$3,000 for one year to cover the costs of equipment, materials, and supplies for instructional use—with an additional \$1,500 if additional training is required to implement the new equipment or curriculum. The grant cannot go towards basic classroom technology equipment such as laptops and projectors, nor can it be used for field trips and guest speakers.

As part of our Science Education initiative, the Burroughs Wellcome Fund wants to empower North Carolina’s children with scientific potential. We want to see more students engaged in innovative lessons and activities that spark their enthusiasm and guide them through critical inquiry—positive experiences that help instill a life-long hunger for science and math learning.

We know every brilliant, passionate teacher has a great idea saved away and our goal is to put your great STEM lesson plan into action.

@MRS_HARKEY / @BWFUND RETWEETED



Thanks to a PRISM grant through @BWFUND and @yesIMADE3D my 2nd graders were able to design and print in 3D to demonstrate their understanding of animal life cycles!

@BelmontCentral #gcsk12

22 May 2018

Science and Philanthropy

The Burroughs Wellcome Fund makes noncompetitive grants for activities and career development opportunities for scientists that fall outside of our competitive award programs, but are closely related to our targeted areas.

We place special priority on working with nonprofit organizations, including government agencies, to leverage financial support for our targeted areas of research, and on encouraging other foundations to support biomedical research. Proposals should be submitted to BWF by email. Mailed requests should be no more than five pages.

Applicants should describe the focus of the activity, the expected outcomes, and the qualifications of the organization or individuals involved; provide certification of the sponsor's Internal Revenue Service tax-exempt status; and give the total budget for the activity, including any financial support obtained or promised. Proposals are given careful preliminary review, and those deemed appropriate are presented for consideration by BWF's Board of Directors.

Applications are accepted throughout the year.

Report on Finance

The Burroughs Wellcome Fund's investments totaled \$789.1 million at August 31, 2018, the end of our fiscal year. BWF's primary financial goal is to pursue an investment strategy that will support annual spending needs and maintain a constant real level of assets over the long term. To achieve this goal, a high percentage of our investments are placed in strategies that derive the bulk of their returns from exposure to U.S. and international capital markets. Hence, fluctuations in BWF's investment results will be due largely to variability in capital market returns.

BWF's investment policies are developed with the recommendations and review of the Investment Committee, which is appointed by and reports to BWF's Board of Directors. The committee, which meets three times a year, has seven voting members, including five representatives from outside BWF and two representatives of our board. The board's chair, BWF's president, and BWF's vice president for finance also serve on the committee as nonvoting members.

As part of BWF's investment strategy, we have established "allocation targets"—that is, percentages of our total assets to be invested in particular asset classes. Investment managers hired by BWF pursue more focused mandates within each sector. As of the end of the fiscal year, BWF's asset mix and market values were:

- U.S. large capitalization equity assets had a market value of \$174.9 million. The sector's target allocation was 25 percent, and actual holdings stood at 22.2 percent.
- U.S. small capitalization equity assets had a market value of \$135.0 million. The sector's target allocation was 18 percent, and actual holdings stood at 17.1 percent.
- International equity assets had a market value of \$200.4 million. The sector's target allocation was 32 percent, and actual holdings stood at 25.4 percent.
- Fixed income assets had a market value of \$128.0 million. The sector's target allocation was 22 percent, and actual holdings stood at 16.2 percent.
- Cash equivalent assets had a market value of \$15.9 million. The sector's target allocation was 3 percent, and actual holdings stood at 2.0 percent.
- Alternative assets had a market value of \$134.9 million. The sector did not have a target allocation, and actual holdings stood at 17.1 percent. The maximum permitted allocation to alternative assets stood at 20.0 percent at cost.

The total market value of BWF's investments increased by \$34.4 million, or 4.6 percent, from the end of the previous fiscal year. This increase in assets was due mainly to strong returns for U.S. equities during the year. BWF's total investment return before investment management fees for the fiscal year was +10.9 percent. The U.S. large capitalization equity sector returned +21.1 percent, the U.S. small capitalization equity sector had a +23.3 percent result, the international equity sector gained +5.7 percent for the fiscal year, and fixed income produced a +0.7 percent result.

As of August 31, 2017, BWF employed 14 marketable securities investment managers. In the U.S. large capitalization equity sector, the managers were Brown Advisory; LSV Asset Management; and Martingale Asset Management. BMO Asset Management managed U.S. small capitalization equities. Camden Asset Management; C.S. McKee; Rimrock Capital Management; Barings; and Amundi Pioneer were the fixed income managers. Capital Guardian Trust Company; Northern Cross; Hardman Johnston Global Advisors; Acadian Asset Management; and Hansberger Growth Investors managed international equities. BWF also held investments in six venture capital funds: Intersouth Partners IV, V and VI, Spray Venture Funds I and II and Mission Ventures II. Winston Partners managed a fund of equity oriented hedge funds. Blackrock Alternative Advisors managed a fund of absolute return strategies. Hamilton Lane Advisors managed three funds of private equity strategies and three private debt strategies. Finally, the Fund internally managed a diversified portfolio of mainly passive investments which was named the Tactical Portfolio. The Tactical Portfolio included investments in U.S. equities, international equities and global bonds.



Statements of Financial Position

August 31, 2018 and 2017

(All dollar amounts presented in thousands)

	2018	2017
ASSETS		
Cash and cash equivalents	\$ 1,838	\$ 2,229
Investments	788,201	758,201
Accrued interest and dividends receivable	1,461	1,303
Other assets	100	146
Property and equipment, net	7,351	7,667
Total assets	\$ 798,951	\$ 769,546
LIABILITIES AND NET ASSETS		
Transactions payable, net	\$ 1,714	\$ 5,562
Accounts payable and other liabilities	1,019	676
Excise tax payable	1,504	444
Deferred federal excise taxes	2,680	2,215
Unpaid awards	103,876	101,117
Total liabilities	110,793	110,014
Unrestricted net assets	688,158	659,532
Total liabilities and net assets	\$ 798,951	\$ 769,546

Statements of Activities

August 31, 2018 and 2017

(All dollar amounts presented in thousands)

	2018	2017
REVENUES		
Interest and dividends, less investment expenses of \$3,382 and \$2,398 in 2018 and 2017, respectively	\$ 8,075	\$ 8,163
Net realized gain on sale of investments	45,372	41,444
<u>Total revenues and realized gains</u>	<u>\$ 53,447</u>	<u>\$ 49,607</u>
EXPENSES		
Program services	\$ 39,699	\$ 34,243
Management and general	7,598	6,875
<u>Total expenses before net unrealized appreciation and deferred federal excise tax</u>	<u>42,297</u>	<u>41,118</u>
Net unrealized appreciation (depreciation) of investments, net of provision for deferred federal excise tax expense \$465 and \$769 in 2018 and 2017, respectively	22,476	36,699
Change in net assets	28,626	45,188
Net assets at beginning of year	659,532	614,344
<u>Net assets at end of year</u>	<u>\$ 688,158</u>	<u>\$ 659,532</u>

Grants Index

BWF makes all grants to nonprofit organizations. For most of the programs, the name of the individual on whose behalf the grant is made is listed first, the title of the award recipient's project is listed second, and the name of the organization that received the money is listed third.

For programs that may have coaward recipients, the award recipients and their organizations are listed first, followed by the project title. For grants made directly to organizations and not on behalf of an individual, the name of the organization is listed first, followed by the title of the project or a brief description of the activity being supported.

In addition to making competitive awards, BWF makes noncompetitive grants—Ad Hocs—for activities that are closely related to our major focus areas. These grants are intended to enhance the general environment for research in the targeted areas.

For full audited financials visit bwfund.org/annualreport

Program Summary

August 31, 2018

	Awarded Net of Cancelled	Amount Paid	Percentage of Total Paid
BIOMEDICAL SCIENCES			
Career Awards in the Medical Sciences	\$ 9,292,875	\$ 8,072,106	
Physician-Scientist Institutional Award	13,400,000	900,000	
Research Travel Grant	396,255	422,755	
Ad Hoc	451,500	757,500	
Total	\$ 23,540,630	\$ 10,152,361	27.4%
DIVERSITY IN SCIENCE			
Graduate Diversity Enrichment Program	\$ –	\$ 15,000	
Postdoctoral Enrichment Program	962,906	857,710	
Ad Hoc	14,000	9,000	
Total	\$ 976,906	\$ 881,710	2.4%
INFECTIOUS DISEASES			
Career Guidance	\$ 317,457	\$ 317,457	
Investigators in Pathogenesis of Infectious Disease	6,090,922	6,940,861	
Ad Hoc	906,000	1,263,000	
Total	\$ 7,314,379	\$ 8,521,318	23.0%
INTERFACES IN SCIENCE			
Career Award at the Scientific Interface	\$ 5,447,410	\$ 5,284,820	
Ad Hoc	194,500	327,000	
Total	\$ 5,641,910	\$ 5,611,820	15.1%
POPULATION SCIENCES			
Curriculum Development in Quantitative Thinking	\$ 450,000	\$ –	
Institutional Program Unifying Population and Laboratory-Based Sciences	\$ –	\$ 3,323,624	
Total	\$ 450,000	\$ 3,323,624	9.0%



Program Summary

August 31, 2018

	Awarded Net of Cancelled	Amount Paid	Percentage of Total Paid
REGULATORY SCIENCE			
Innovation in Regulatory Science Awards	\$ –	\$ 2,400,000	
Ad Hoc	147,500	147,500	
Total	\$ 147,500	\$ 2,547,500	6.9%
REPRODUCTIVE SCIENCES			
Preterm Birth Initiative	\$ –	\$ 1,725,000	
Total	\$ –	\$ 1,725,000	4.7%
SCIENCE AND PHILANTHROPY			
Ad Hoc	\$ 324,460	\$ 356,600	
Total	\$ 324,460	\$ 356,600	1.0%
SCIENCE EDUCATION			
Career Award for Science and Mathematics Teachers	\$ 119,460	\$ 474,461	
PRISM Award	201,317	196,817	
Student Science Enrichment Program	2,054,484	2,088,985	
Ad Hoc	990,145	1,115,145	
Total	\$ 3,215,407	\$ 3,875,408	10.5%
TRANSLATIONAL RESEARCH			
Clinical Scientist Award in Translational Research	\$ –	\$ 75,000	
Total	\$ –	\$ 75,000	0.2%
GRAND TOTAL	\$ 41,611,192	\$ 37,070,341	100%

Biomedical Sciences

CAREER AWARDS FOR MEDICAL SCIENTISTS

Samuel F Bakhom, MD, PhD
Memorial Sloan-Kettering Cancer Center

Elizabeth Joyce Bhoj, MD, PhD
University of Pennsylvania

Hsiao-Tuan Chao, MD, PhD
Baylor College of Medicine

Keira Alexis Cohen, MD
Johns Hopkins University School of Medicine

John Gordan, MD, PhD
University of California-San Francisco

Sarah Emily Henrickson, MD, PhD
University of Pennsylvania

Benjamin Izar, MD, PhD
Harvard Medical School

Corrine RaShelle Kliment, MD, PhD
Johns Hopkins University

Albert Russell Powers, MD, PhD
Yale University School of Medicine

Deepak Angara Rao, MD, PhD
Harvard Medical School

Ansuman Satpathy, MD, PhD
Stanford University

Mark A Sellmyer, MD, PhD
University of Pennsylvania

Tanya Sippy, MD, PhD
New York University

COLLABORATIVE RESEARCH TRAVEL GRANT

Ernesto Abel-Santos D.Phil., PhD
University of Nevada-Las Vegas

George W Agak, PhD
University of California-Los Angeles

Argel Aguilar Valles, PhD
Carleton University

Yoko Miyamoto Ambrosini, D.V.M., PhD
Iowa State University

Manuela Aseye Ayele Aye, PhD
Dordt College

Wadie F Bahou, MD
State University of New York-Stony Brook

Joseph Carrion, PhD
Feinstein Institute for Medical Research

Chun-An Chou, PhD
Northeastern University

Rebecca C Christofferson, PhD
Louisiana State University

Heather A Clark, PhD
Northeastern University

Ke Du, PhD
Rochester Institute of Technology

Erik Engeberg, PhD
Florida Atlantic University

Amal Isaiah, MD, PhD
University of Maryland-Baltimore

Adrian Jinich, PhD
Weill Medical College of Cornell University

Jesse Vincent Jokerst, PhD
University of California-San Diego

Louis Kang MD, PhD
University of California-Berkeley

Oleg K Karaduta, MD
University of Arkansas for Medical Sciences

Budhachandra Khundrakpam, PhD
McGill University

KiBum Lee, PhD
Rutgers, The State University of New Jersey

Patty J. Lee, MD
Duke University

Michael G Lerner, PhD
Earlham College

Jianing Li, PhD
University of Vermont

Steven Alexander Lopez, PhD
Northeastern University

Diane LaVern-Lyette Nelson, PhD
Carnegie Mellon University

Dao Nguyen, MD
McGill University

Zakaria Orfi, PhD
University of Montreal

Erica Cho Brown Peters, PhD
University of North Carolina-Chapel Hill

Tomas Pluskal, PhD
Massachusetts Institute of Technology

Elizabeth Marie Ransey, PhD
Duke University

Barbara Rivera, PhD
McGill University

Maha Saber, PhD
University of Arizona

Grigoriy Sereda, PhD
University of South Dakota

Kai-tak Wan, PhD
Northeastern University

Meni Wanunu, PhD
Northeastern University

Kate Lynn White, PhD
University of Southern California

PHYSICIAN-SCIENTIST INSTITUTIONAL AWARD

Duke University Medical Center

Stanford University

University of Pittsburgh

University of Texas Southwestern Medical Center

Vanderbilt University

Career Guidance

CAREER GUIDANCE FOR TRAINEES

American Society for Pharmacology and Experimental Therapeutics

Coaching for Career Development via the ASPET Mentoring Network

Boston University

Training Opportunities To Augment Learning (TOTAL)

Clemson University

Math in Medicine: Developing Depth and Breadth of Knowledge in Math Sciences PhD Students at Clemson University

Iowa State University

Graduate Students Gaining Practical Experience Through Short-Term Team Consulting Projects

Ohio State University

Researcher, Mentor, and Teacher: Preparing well rounded scholars

Western University

Market validation Laboratory and Business Training

Vanderbilt University

Data Science Essentials: Transitioning Biomedical Scientists from the Bench to the Cloud

Diversity in Science

POSTDOCTORAL ENRICHMENT PROGRAM

Oscar Alberto Aguilar, PhD

University of California-San Francisco

Kylie Ariel Bemis, PhD

Northeastern University

Oscar Carrasco-Zevallos, PhD

Massachusetts Institute of Technology

Sabena Conley, PhD

Mayo Clinic-Rochester

D’Juan Tyree Farmer, PhD

University of Southern California

Tikvah Kathryn Hayes, PhD

Harvard University

Bobby Brooke Herrera, PhD

Harvard Medical School

Frankie Darryn Heyward, PhD

Harvard Medical School

Francisco Jose Luongo, PhD

California Institute of Technology

Melanie R. McReynolds, PhD

Princeton University

Sean N. Natoli, PhD

University of California-Berkeley

Justin Shaun Arnold Perry, PhD

University of Virginia

Elizabeth Marie Ransey, PhD

Duke University

Naima Gabriela Sharaf, PhD

California Institute of Technology

Michael Frederick Wells, PhD

Harvard University

Kimberly Sade Williams, PhD

University of Pennsylvania

Infectious Diseases

INVESTIGATORS IN THE PATHOGENESIS OF INFECTIOUS DISEASE

Jan E. Carette, PhD
Stanford University

James J. Collins, PhD
University of Texas Southwestern Medical
Center-Dallas

Jorge Henao-Mejia, MD, PhD
University of Pennsylvania Perelman School
of Medicine

Ivan Marazzi, PhD
Icahn School of Medicine at Mount Sinai

John-Demian Sauer, PhD
University of Wisconsin-Madison

Aimee Shen, PhD
Tufts University School of Medicine

Michael Shiloh, MD, PhD
University of Texas Southwestern Medical
Center-Dallas

Gregory F. Sonnenberg, PhD
Weill Medical College of Cornell University

Peter J. Turnbaugh, PhD
University of California-San Francisco

David Veessler, PhD
University of Washington

Gabriel D. Victora, PhD
Rockefeller University

Sebastian E. Winter, PhD
University of Texas Southwestern Medical
Center-Dallas

Interfaces in Science

CAREER AWARDS AT THE SCIENTIFIC INTERFACE

Gozde Durmus, DPhil, PhD
Stanford University

Kirsten L. Frieda, PhD
California Institute of Technology

Walter Gabriel Gonzalez, PhD
California Institute of Technology

Brandon Helfield, PhD
University of Toronto

Daniel R. Hochbaum, PhD
Harvard Medical School

Chiamaka Denise Okafor, PhD
Emory University

Nicolas Christian Pegard, PhD
University of California-Berkeley

Calin Plesa, PhD
University of California-Los Angeles

Silvia Rouskin, PhD
Massachusetts Institute of Technology

Geoffrey Schiebinger, PhD
Massachusetts Institute of Technology

Shahrazad Yazdi, PhD
Massachusetts Institute of Technology



Science Education

STUDENT STEM ENRICHMENT PROGRAM

Alamance Community College

Medical Bridge for Minority Males
(Minority Males in Medicine)

Digi-Bridge, Inc.

Programming & Robotics Across North Carolina

East Carolina University

The World We Live In: Geology, Hydrology,
Climatology, Biology, Chemistry of the
Environment of Northeastern North Carolina

East Carolina University

Renewable Energy and Green Manufacturing
Academy for Rural Middle School Students in
Eastern North Carolina

East Carolina University

Discoveries in Earth Science (DES) for Students
with Blindness or Visual Impairments

Elizabeth City State University

Drone Exploration Academy: Engaging
Students in Real-World Engineering Design
and Scientific Investigation Using Drones

Elizabeth City State University

IMMERSE (Innovating, Mentoring,
and Managing Emergency Response
through STEM Enrichment)

North Carolina State University

Falls Lake Partners in Forensic Science

Orange County Schools

Engineering Solutions

Pfeiffer University

Project GENES: Genetics Education
for the Next Era of Science

SouthEastern Regional Vision for Education

AASTC Scholarships for Students Experiencing
Homelessness

University of North Carolina-Pembroke

The Kids in the Garden:
Bees and Pollen Studies

Wake Forest University School of Medicine

Girls in STEM: A Piedmont Triad Initiative

Ad Hoc

BIOMEDICAL SCIENCES

Career Development

American Physician Scientists Association (APSA)

Support for the APSA Undergraduate Mentorship Program

American Society for Cell Biology

Support for the Minorities Affairs Committee (MAC) and Women in Cell Biology (WICB) activities at the annual meeting

Baylor College of Medicine

Support for the Alexander R. Matzuk 2018-2019 speaker series and meeting support in lieu of honorarium for CAMS advisory member Martin M. Matzuk, MD, PhD

Federation of American Societies for Experimental Biology

Support for a FASEB conference on Microbial Glycobiology

Gordon Research Conferences

Support for the 2019 Dendrites: Molecules, Structure and Function Gordon Research Conference

Gordon Research Conferences

Support for the GRC on Molecular Mechanisms at the Streptococcal-Host Interface

International Society for Antiviral Research

Support for the 2018 Gertrude Elion Memorial Lecture Award

Society for Neuroscience

Support for trainee professional development awards to the Society of Neuroscience's annual meeting

Medical Sciences

American Foundation for Suicide Prevention

Support for AFSP's mission to save lives and bring hope to those affected by suicide in lieu of honorarium for CAMS advisory committee member Sarah H. Lisanby, MD

American Physician Scientists Association (APSA)

Support for the APSA annual meeting

Association for Clinical and Translational Science

Support for young investigators' travel to the 2018 Translational Science meeting

Baylor College of Medicine

Support for the Alexander R. Matzuk 2017-2018 speaker series in lieu of honorarium for CAMS advisory member Martin M. Matzuk, MD, PhD

Chordoma Foundation

Support for the 2018 International Chordoma Research Workshop, Cambridge

Codman Academy

Gift on behalf of Burroughs Wellcome Fund's Physician-Scientist Institutional Award program advisory committee member, Emery N. Brown, MD, PhD

Federation of American Societies for Experimental Biology

Support for the FASEB conference on Phospholipids: Dynamic Lipid Signaling in Health and Disease

Gordon Research Conferences

Support for the 2019 Mammalian DNA Repair Gordon Research Conference

Keystone Symposia

Support for 2018 underrepresented early career scientist travel awards and fellows program

University of North Carolina-Chapel Hill

Support for the 42nd annual UNC Lineberger Comprehensive Cancer Center Symposium: Genome Instability in Cancer: Mechanisms and Therapeutic Opportunities

University of North Carolina-Chapel Hill

Support for the multiple sclerosis research meeting, UNC Lineberger Comprehensive Cancer Center

University of Toronto

Support for the 2017 annual general meeting of CITAC and CSCI

Virginia Polytechnic Institute and State University

Support for a research proposal entitled: Multi-method approach to understand interventions that reduce infant mortality

DIVERSITY IN SCIENCE

Gordon Research Conferences

Support for the Gordon Research Seminar, Post-Transcriptional RNA Processing: Surveys, Mechanisms and Disease

Sisters of the Academy Institute

Support for the 2018 Intensive Grantsmanship Workshop hosted by the Sisters of the Academy Institute (SOTA)

Society for the Advancement of Chicanos and Native Americans in Science

Support for leadership activities for the period of 2018-2019, in lieu of honorarium for Clifton Poodry, PhD for his service on the Burroughs Wellcome Fund Postdoctoral Enrichment Program Award Committee

University of North Carolina-Chapel Hill

Support for the Diversity in STEM Conference and GRE Preparation Course

INFECTIOUS DISEASES

Career Development

Canadian Association of Postdoctoral Administrators

Support for the Canadian Association of Postdoctoral Administrators at their 2017 Annual Conference

Children's Science Center

Support for the Children's Science Center in Fairfax, Virginia in lieu of 2018 honorarium to Dr. Maryrose Franko

National Postdoctoral Association

Support for the 2018 National Postdoctoral Annual Conference

University of Chicago

Support for a GREAT Group Meeting Post-Conference Workshop focused on Institutional Efforts to Optimize Mentoring Relationships for Graduate Students and Postdocs

University of Massachusetts Medical School

Support for the start up phase of the establishment of a National Center for Advancing the Career Development of Scientists

General

Albert Einstein College of Medicine, Inc.

Support for PATH awardee Jan Carette, PhD of Stanford University to present a seminar at Albert Einstein College of Medicine

American Society for Microbiology

Support for the American Society for Microbiology Conference Vibrio2017: The Biology of Vibrios

American Society for Microbiology

Support for the American Society for Microbiology's 14th Conference on Candida and Candidiasis

American Society for Microbiology

Support for graduate trainees and fellows in experiences to increase their understanding around the profession of microbiology

American Society for Microbiology

Support for the 8th American Society for Microbiology Conference on Biofilms

American Society for Virology

Support for the 37th Annual Meeting of the American Society for Virology

American Society of Tropical Medicine and Hygiene

Support for the annual American Society of Tropical Medicine & Hygiene meeting

American Society of Tropical Medicine and Hygiene

Support for the American Committee of Molecular, Cellular and Immunoparasitology scientific program at the October 2018 Annual Meeting of the American Society of Tropical Medicine and Hygiene

Anaerobe Society of the Americas

Support for the 2018 Congress of the Anaerobe Society of the Americas

Association of American Veterinary Medical Colleges

Support for the "Becoming Faculty: a short course on launching a scientific career" at the 20th annual National Veterinary Scholars Symposium to be held at Texas A&M College of Veterinary Medicine & Biomedical Sciences

Boston Children's Hospital Trust

Support for a seminar to be presented at Harvard Medical School by PATH awardee, Gregory Barton, PhD

Brown University

Support for the 4th International Conference on Model Hosts

Cornell University College of Veterinary Medicine

Support for the 13th International Double-Stranded RNA Virus Symposium (dsRNA2018)

Cornell University College of Veterinary Medicine

Support for the 2nd Colloquium for Combined DVM-PhD Scientists

Cornell University College of Veterinary Medicine

Support for organizing the 2018 Burroughs Wellcome Fund "Becoming Faculty Workshop"

Dartmouth College

Support for Li-Jun Ma, PhD, to present a seminar

Duke University

Support for Ellen Yeh, PhD, a CAMS awardee, to present a seminar

Emory University

Support for Investigator in the Pathogenesis of Infectious Disease awardee, Sunny Shin, PhD, to present a seminar

Emory University

Support for sponsorship of a conference given by the Institutional Research and Academic Career Development Award (IRACDA) postdoctoral program

Emory University

Support for PATH awardee's laboratory to travel to a collaborator's laboratory to obtain computational expertise in single particle cryo electron microscopy

Georgia Institute of Technology

Support for CASI awardee, Hesper Rego, PhD, to present a seminar

Gordon Research Conferences

Support for the 2018 Biology of Host-parasite Interactions Gordon Research Conference

Gordon Research Conferences

Support for the Biology of Spirochetes Gordon Research Conference and the Gordon Research Seminar

Gordon Research Conferences

Support for the 2018 Gordon Research Conference on Cellular and Molecular Fungal Biology

Gordon Research Conferences

Support for Gordon Research Conferences "Bacterial Pathogenesis: From Pathogen Physiology to Interactions with Host Microbiota and Immune System"

Marine Biological Laboratory (MBL)

Support for Molecular Mycology: Current Approaches to Fungal Pathogenesis (MOMY) for three years 2018-2020

Memorial Sloan-Kettering Cancer Center

Support for Career in the Biomedical Sciences awardee, Kevin B. Urdahl, MD, PhD, to present a seminar

Midwest Microbial Pathogenesis Conference

Support for the 25th annual Midwest Microbial Pathogenesis Conference (MMPC)

Morgridge Institute for Research

Support for the International Planarian Meeting (IPM)

New England BioLabs

Support for the 10th Biennial International Wolbachia 2018 meeting

New York University School of Medicine

Support for PATH awardee, Nels Elde, PhD, to present a seminar at New York University

Northwestern University Feinberg School of Medicine

Support for travel costs for Professor Manfred Marschall to speak at the 2018 International Herpesvirus Workshop (IHW)

Parkland Foundation

Support for the Parkland Foundation in lieu of the 2018 honorarium for Dr. Robert Munford

Pennsylvania State University

Support for Investigators in the Pathogenesis of Infectious Disease awardee, Billy Tsai, Ph. D., to present a seminar

Pennsylvania State University

Support for regional (Pennsylvania) parasitology symposium as an outreach of the Penn State Huck Center for Malaria Research

Scripps Research Institute

Support for a collaboration meeting regarding understanding immune effectors in viral systems

Stanford University

Support for Investigator of the Pathogenesis of Infectious Disease awardee, David Weiss, PhD, to present a seminar

Stanford University

Support for Investigator in the Pathogenesis of Infectious Disease award, Kenneth Cadwell, PhD, to present a seminar

Tufts University

Support for Investigator in the Pathogenesis of Infectious Disease awardee, Nan Yan, D. Phil., to present a seminar

Tufts University

Support for PATH awardee, Gregory A. Smith, PhD, to present a seminar

University of California-Los Angeles

Support for Career Awards in the Medical Sciences (CAMS) awardee, Ellen Yeh, to present a seminar

University of California-Riverside

Support for the Fungal Cell Wall (FCW2017) Conference

University of California-San Diego

Support for renewal of funding for the Helminth Parasite Molecular Toolbox Travel Awards for 2017-2018

University of California-San Francisco

Support for PATH awardee, Andrew L. Goodman, PhD, to present a seminar

University of California-San Francisco School of Medicine

Support for the 21st annual Bay Area Microbial Pathogenesis Symposium in 2018

University of Colorado School of Medicine

Support for the 2018 Molecular and Cellular Biology of Helminth Parasites Conference

University of Illinois-Chicago

Support for Mohammad Seyedsayamdost, PhD of Princeton University to visit the University of Illinois-Chicago to present his work to Dr. Michael Federle's department

University of Massachusetts-Amherst

Support for Robert A. Cramer, PhD, to present a seminar

University of North Carolina-Chapel Hill

Support for the Association of Medical School Microbiology and Immunology Chairs (AMSMIC) annual meeting

University of Oxford

Support for the Genomic Epidemiology of Malaria (GEM) meeting

University of Pennsylvania

Support for transportation costs for 5 students to travel to the third annual MeBoP (Middle Eastern Biology of Parasitism) course

University of Pennsylvania

Support for retreat for four labs (Torres, Cadwell, Shin, Brodsky)

University of Pennsylvania School of Veterinary Medicine

Support for the 22nd annual Woods Hole Immunoparasitology (WHIP) Meeting

University of Rochester

Support for a DEAF-ROC conference

University of Rochester Medical Center

Support for PATH Awardee, Manuela Raffatellu, MD, to present a seminar

University of Texas Health Science Center-Houston

Support for "The 5th International Conference on Enterococci"

University of Texas Southwestern Medical Center-Dallas

Support for an Investigator in the Pathogenesis of Infectious Disease awardee, Nel Elde, to present a seminar

University of Texas Southwestern Medical Center-Dallas

Support for PATH Awardee, Matthew Evans, PhD, to present a seminar

University of Texas-Austin

Support for Aron Lukacher, MD, PhD, to present a seminar

University of Utah

Support for PATH awardee Jesse Bloom, PhD, to present a seminar

University of Washington

Support for Nels Elde, PhD, to present a seminar at the University of Washington's Immunology seminar series

University of Wisconsin

Support for Investigator in the Pathogenesis of Infectious Disease awardee Sara Sawyer, PhD, to present a seminar

University of Wisconsin-Madison

Support for the Graduate Career Consortium's Annual Conference

University of Wisconsin-Madison

Support for the 7th BMC (Beneficial Microbes Conference)

Washington University

Support for an Interactive Workshop on "Perspectives and Challenges in TB/HIV Innate Immunity"

INTERFACES IN SCIENCE**Aegean Conferences, Inc.**

Support for the 13th International Conference on Pathways, Networks, and Systems sponsored by Aegean Conference

American Society of Gene & Cell Therapy

Support for the American Society for Gene & Cell Therapy's 21st Annual Meeting

Biophysical Society

Support for the Biophysical Society Annual Meeting

Biophysical Society

Support for Biophysical Society Thematic Genomics Meeting

Cold Spring Harbor Laboratory

Support for Banbury April 2018 Workshop on Information Storage in Synthesized DNA

Cold Spring Harbor Laboratory

Support for the 1st International Ferroptosis Meeting



Computational and Systems Neuroscience (Cosyne)

Support for the 2018 Annual Computational and Systems Neuroscience (Cosyne) Meeting

Duke University

Support of the 2018 Evolutionary Medicine Summer Institute Workshop

Georgia Institute of Technology

Support for Reception for Robophysicists: Physics Meets Robotics Session Participants

Gordon Research Conferences

Support for Single Molecule Approaches to Biology Gordon Research Conference 2018

Gordon Research Conferences

Support for 2018 Enzymes, Coenzymes and Metabolic Pathways Gordon Research Seminar ("Enzymes GRS) for graduate students and postdocs

International Society for Cellular Therapy

Support for the International Society for Cellular Therapy (ISCT) 2018 Annual Meeting

New York Stem Cell Foundation

Support for two internships for New York City high school teachers who will participate in New York Stem Cell Foundation University, the New York Stem Cell Foundation Research Institute's internship program

New York University School of Medicine

Support for Dynamic Neuroscience: Statistics, Modeling, and Control: Symposium in Honor of Professor Emery Brown's 60th Birthday

Society for Biomaterials

Support for the Society for Biomaterials' 2018 Annual Meeting and the Cato T. Laurence, MD, PhD Travel Fellowship

University of North Carolina-Chapel Hill

Support for the Sophomore Orientation Program of the Joint Department of Biomedical Engineering at UNC Chapel Hill and NC State University

University of Pennsylvania

Support for "Bottom-Up Cell Biology", a subgroup meeting at the ASCB 2017 Annual Meeting

World Molecular Imaging Society

Support for the Synthetic Biology and Reporter Genes (SyBRG) Interest Group Meeting at the World Molecular Imaging Society in 2018

REGULATORY SCIENCE

American Society for Clinical Pharmacology & Therapeutics

Support of the Darrell Abernethy Young Investigator Award

American Thoracic Society

Support for the North Carolina Thoracic Society (NCTS) 2018 Annual Conference

Arkansas Research Alliance

Support for the 2018 Global Regulatory Summit

Human Vaccines Project

Support for the Universal Influenza Vaccine Summit on the Centennial of the 1918 Influenza Pandemic

International Society for Stem Cell Research

Support for sponsorship of the plenary session Stem Cell Based Disease Modeling at the International Society for Stem Cell Research 2018 Annual Meeting

LaunchBio, Inc.

Support for LaunchBio workshops in 2018

MidSouth Computational Biology and Bioinformatics Society (MCBIOS)

Support for the travel of young professionals to attend the MAQC Society (Massive Analysis and Quality Control) 2nd annual meeting

National Academies

Support for the National Academies' Forum on Drug Discovery, Development, and Translation in 2018

National Academy of Sciences/ Institute of Medicine

Support for the Forum on Regenerative Medicine in 2018

Society of Toxicology

Support for the 2018 Society of Toxicology Annual Meeting

REPRODUCTIVE SCIENCE

Marine Biological Laboratory (MBL)

Support for the 2018 FIR symposium

Rutgers, The State University of New Jersey

Support for Reproductive Scientists for Women's Health – from pre-conception to the cradle

Society for Reproductive Investigation

Support for the annual scientific meeting

Society for the Study of Reproduction

Support for travel fellowships and diversity committee activities at the annual meeting

Society for the Study of Reproduction

Support for SSR's golden anniversary to promote collaboration between reproductive science societies, advance research, and increase awareness of the reproductive sciences

Washington University

Support for RSDP scholars (Drs. Owen and Tsai) research related expenses from July 2017 to June 2018

Washington University

Support for the annual RSDP scholar retreat

Washington University

Support for the 2017-2018 SEED grant program for phase II RSDP scholars

SCIENCE AND PHILANTHROPY

Communications

American Association for the Advancement of Science

Support for the AAAS Mass Media Science & Engineering Fellowship

Center for Excellence in Health Care Journalism

Support for the global health track for World Conference of Science Journalists

North Carolina Community Foundation/ North Carolina Network of Grantmakers

Support for the N.C. Network of Grantmakers Communications Programming

North Carolina Community Foundation/ North Carolina Network of Grantmakers

Support for the NCNG Communications Training Initiative – Phase 1

North Carolina Community Foundation/ North Carolina Network of Grantmakers

Support for 2018-19

North Carolina Public Television Foundation

Support for the Sci-Tech Now North Carolina program

Open Notebook

Support for the Science Storytellers program at 2018 AAAS meeting

Open Notebook

Support for the TON/BWF Fellowship for Early-Career Science Journalists, as well as capacity-building

Research Triangle Institute

Support for Misinformation Solutions Forum

Science Cheerleaders, Inc.

Support for the Science Cheerleaders at the 2018 USA Science and Engineering Festival

General Philanthropy**American Documentary, Inc.**

Support for the project titled “The last O’o–A Virtual Reality Project on Species Extinction”

American Institute of Biological Sciences

Support for the 2018 meeting, the Next Gen International Biology

Association for Women in Science

Support for renewal of Burroughs Wellcome Fund Association for Women in Science partnership dues

Council on Foundations

General support for 2018

Foundation Center

Support for 2017

Health Research Alliance, Inc. (HRA)

Health Research Alliance (HRA) 2018 Dues

Innovative Genomics Institute

Support for general operating funds of CRISPR education initiative

National Academy of Sciences

Support for the Ralph J. and Carol M. Cicerone Endowment Fund for NAS Mission

National Academy of Sciences

Support for the international summit on human genome editing in Hong Kong

National Postdoctoral Association

Support for a best practices series focusing on the needs of 10 newer Postdoctoral Offices (PDOs) led by experienced postdoc leaders, along with National Postdoctoral Association (NPA) staff

PEAK Grantmaking

Support for 2018

University of North Carolina-Chapel Hill

Support for the work of a Puerto Rican Scientist

University of Victoria

Support for the Canadian Association of Postdoctoral Scholars’ 2017 Annual General Meeting

Science Policy**Queen’s University**

Support for the Conferences on Statistics, Science and Public Policy

Special Award**University of California-San Francisco Foundation**

Support for the Bruce M. Alberts Endowed Chair in Biochemistry and Biophysics for Science and Education (7900869) in honor of Dr. Bruce Alberts

University of Houston

Support for recovery efforts for laboratories damaged during Hurricane Harvey and the building of needed collaborations

University of Houston College of Pharmacy

Support for recovery efforts from Hurricane Harvey for the laboratory of Dr. Vincent Tam

New Ventures**Council for Entrepreneurial Development**

Support for Women-Focused Angel Investing Event

Council for Entrepreneurial Development

Support for the Council for Entrepreneurial Development’s 2018 Life Science Conference

General Education**Grantmakers for Education**

Support for 2018-19

SCIENCE EDUCATION**Science Education****Association of Science-Technology Centers Incorporated**

Support for the North Carolina STEM Center and the Connectory Exchange

Cumberland County Board of Education

Support for the Singapore Math Pilot project in Cumberland County schools, including Alderman Road Elementary School and Gray’s Creek Elementary School

Cumberland County Schools

Support for CCS Tech Camp 2018 – The Ultimate Destination

Durham Colored Library, Inc.

DCL’s Virtual Children’s STEM Magazine

EducationNC

Support for general operating support for EdNC’s focus on STEM

Mount Olive College

University of Mount Olive STEM on the Green

National Association of Academies of Science

Support for the American Junior Academy of Sciences to host pre-college STEM leaders at the annual AAAS meeting

National Girls Collaborative

Support for the North Carolina STEM Center and the Connectory Exchange

North Carolina Alliance for School Leadership Development

Support for the Emerging Trends/Future Focused Schools Network

North Carolina Alliance for School Leadership Development

Support for leadership awards



North Carolina Department of Public Instruction

Support for the STEM Recognition program

North Carolina School of Science and Mathematics Foundation

Support for the Summer Leadership and Research Experience (SLRE)

North Carolina Science Fair Foundation

Support for the North Carolina Science & Engineering Fair 2018

North Carolina Science Olympiad

Support for the 2020 National Science Olympiad Tournament

North Carolina Science Teachers Association

Support for the 2018 NC Science Teachers Association Professional Development Institutes

North Carolina Society of Hispanic Professionals

Support for 2018 sponsorship of NCSHP Educational Programs for Hispanic Youth

North Carolina State University College of Sciences Foundation

Support for Imhotep Academy's Quadracentennial (25th Anniversary Science, Technology, Engineering and Mathematics (STEM) Career Symposium

North Carolinas Northeast Economic Development Foundation

Support for STEM East: Science Action Clubs

Professional Engineers of North Carolina Education Foundation

Support for the North Carolina Future City Competition

Public School Forum of North Carolina

Support for the Education Policymakers

Research Triangle Institute

Support for the project "Supporting Implementation of Innovative Approaches to Collaborative Leadership in Mathematics"

University of North Carolina-Chapel Hill

Support for North Carolina DNA Day 2018

University of North Carolina-Chapel Hill School of Education

Support for 2017-2018 CASMT Evaluation

University of North Carolina-Wilmington

Support for the Fourth Annual PK-12 STEM Education Conference

Urban Community AgriNomics (UCAN)

Support for Naturally STEM

Science, Math, and Technology Science Champion**Isothermal Community College**

Support for the Isothermal Engineering Discovery Camp 2018

Isothermal Planning and Development Commission

Support for the STEM Education and Workforce Talent Strategic Planning Meeting

James B. Hunt Jr. Institute for Educational Leadership and Policy Foundation

Support for the project titled "Supporting College and Career Readiness in North Carolina"

North Carolina Alliance for School Leadership Development

Support for the third cohort of the Digital Leadership Institute for Superintendents

North Carolina Alliance for School Leadership Development

Support for the second cohort of the Aspiring Superintendent Program

North Carolina Association for Biomedical Research

Support for the Bridging the Gap 2017 STEM Education Conference

North Carolina Chamber Foundation

Support for the North Carolina Chamber Conference on Education

North Carolina School of Science and Mathematics Foundation

Support for the North Carolina Student Academy of Science Delegation to the AAAS/AJAS Annual Meeting

North Carolina Science Leadership Association

Support for the NCSLA Science Leadership Fellows Program

North Carolinas Northeast Economic Development Foundation

Support for the STEM Ecosystem: After-school STEM Programming Support

Public School Forum of North Carolina

Support for the North Carolina International Science Challenge

Western Piedmont Council of Governments

Support for 2018 STEM West Director Networking Expenses

Advisory Committees

The Burroughs Wellcome Fund uses advisory committees for each competitive award program to review grant applications and make recommendations to BWF's Board of Directors, which makes the final decisions. We select members of these committees for their scientific and educational expertise in the program areas. In addition, BWF uses a financial advisory committee to help in developing and reviewing the BWF's investment policies. This committee is appointed by and reports to the Board of Directors.

BIOMEDICAL SCIENCES

Career Awards for Medical Scientists

Derek Abbott, MD, PhD

Arline H. and Curtis F. Gavin Professor of Medicine
Department of Pathology
Case Western Reserve University

Leslie J. Berg, PhD

Professor, Department of Pathology
University of Massachusetts Medical School

Paul Buckmaster, D.V.M., PhD

Professor
Dept. of Comparative Medicine
Stanford University

Kathleen Caron, PhD (Co-Chair)

Professor of Cell Biology & Physiology and Genetics
Chair, Dept. of Cell Biology & Physiology
University of North Carolina-Chapel Hill

Aravinda Chakravarti, PhD

Director, Center for Complex Disease Genomics
McKusick – Nathans Institute of Genetic Medicine
Johns Hopkins University School of Medicine

Seth Field, MD, PhD

Professor of Medicine,
Division of Endocrinology and Metabolism
University of California-San Diego

Sarah H. Lisanby, MD

Director, Division of Translational Research
Director, Noninvasive Neuromodulation Unit,
Experimental Therapeutics and Pathophysiology Branch
National Institute of Mental Health

Martin M. Matzuk, MD, PhD

Stuart A. Wallace Chair and Professor
Dept. of Pathology and Molecular & Cellular Biology
Baylor College of Medicine

Elizabeth McNally, MD, PhD (Co-Chair)

Elizabeth J. Ward Chair and Director,
Center for Genetic Medicine
Northwestern University Feinberg School of Medicine

Heather C. Mefford, MD, PhD

Associate Professor, Pediatrics
Division of Genetic Medicine
University of Washington

Upinder Singh, MD

Division Chief, Infectious Diseases and Geographic Medicine
Associate Professor, Depts. of Internal Medicine, Microbiology and Immunology
Stanford University School of Medicine

Barry Sleckman, MD, PhD

Professor of Pathology and Laboratory Medicine
Weill Cornell Medical College, Cornell University

John York, PhD

Natalie Overall Warren Professor and Chair
Dept. of Biochemistry
Vanderbilt University Medical Center

Collaborative Research Travel Grants

Matthew Redinbo, PhD

Professor and Chair, Department of Chemistry
University of North Carolina at Chapel Hill

Keith Weninger, PhD

Associate Professor, Department of Physics
North Carolina State University

John York, PhD

Natalie Overall Warren Professor and Chair
Dept. of Biochemistry
Vanderbilt University Medical Center



DIVERSITY IN SCIENCE**Postdoctoral Enrichment Program****Joey V. Barnett, PhD**

Professor
Vanderbilt University

Kami Kim, MD

Professor
Albert Einstein College of Medicine

George M. Langford, PhD

Professor of Biology
Dean Emeritus of the College of Arts and Sciences
Syracuse University

Carla Mattos, PhD

Professor
Northeastern University

Gina R. Poe, PhD

Professor
University of California-Los Angeles

Michael Summers, PhD (Chair)

HHMI Investigator Professor of Chemistry
and Biochemistry
University of Maryland, Baltimore County

Blanton S. Tolbert, PhD

Associate Professor
Case Western Reserve University

INFECTIOUS DISEASES**Investigators in the Pathogenesis
of Infectious Disease****Maurizio Del Poeta, MD**

Professor, Department of Molecular Genetics
& Microbiology
Stony Brook School of Medicine

Michael S. Diamond, MD, PhD

Professor, Department of Medicine, Molecular
Microbiology, Pathology & Immunology
Washington University

Katherine A. Fitzgerald, PhD

Professor
University of Massachusetts Medical School

Akiko Iwasaki, PhD

HHMI Investigator
Professor of Immunobiology, and Molecular,
Cellular & Developmental Biology
Yale University School of Medicine

Aron Lukacher, MD, PhD

Professor of Microbiology and Immunology
Penn State College of Medicine

Harmit S. Malik, PhD

Member, Division of Basic Sciences
& HHMI Investigator
Fred Hutchinson Cancer Research Center

Julie Overbaugh, PhD (Chair)

Member: Human Biology Division
Member: Public Health Sciences Division
Fred Hutchinson Cancer Research Center

Eric G. Pamer, MD

Chief, Infectious Disease Service. Laboratory of
Antimicrobial Immunity, Department of Medicine
Memorial Sloan-Kettering Cancer Center

Barbara Papadopoulou, B.Pharm, PhD, FCAHS

Professor of Microbiology and Director,
Division of Infectious Diseases and Immunity
CHU de Quebec Research Center
Laval University School of Medicine

Vanessa Sperandio, PhD

Professor of Microbiology and Biochemistry
U.T. Southwestern Medical Center

E. John Wherry, PhD

Professor of Microbiology and
Director, Institute of Immunology
University of Pennsylvania Perelman School
of Medicine

INTERFACES IN SCIENCE

Career Awards at the Scientific Interface

Russ Altman, MD, PhD

Professor of Bioengineering, Genetics and Medicine

Director, Program in Biomedical Informatics
Stanford University

Anne Churchland, PhD

Associate Professor, Neuroscientist
Cold Spring Harbor Laboratory

Adrienne L. Fairhall, PhD

Associate Professor
University of Washington
Dept. of Physiology and Biophysics

Robert E. Kass, PhD

Maurice Falk Professor of Statistics and Computational Neuroscience
Department of Statistics, Machine Learning, and the Center for Neural Basis of Cognition
Carnegie Mellon University

Cato T. Laurencin, MD, PhD (Chair)

University Professor
Director, Institute for Regenerative Engineering & the Raymond and Beverly Sackler Center for Biomedical, Biological, Physical and Engineering Science
University of Connecticut Health Center

Alison Marsden, PhD

Associate Professor
Stanford University

Philip Nelson, PhD

Professor
University of Pennsylvania

Linda Petzold, PhD

Professor, Department of Computer Science and Department of Mechanical Engineering
University of California-Santa Barbara

Matthew R. Redinbo, PhD

Chair, Department of Chemistry
Departments of Chemistry, Biochemistry, Microbiology and Genomics
University of North Carolina-Chapel Hill

Aviv Regev, PhD

Chair of the Faculty and Core Member
Broad Institute of MIT and Harvard

Brent R. Stockwell, PhD

Associate Professor Biological Sciences and Chemistry
Early Career Scientist of the Howard Hughes Medical Institute
Columbia University

Shyni Varghese, PhD

Professor of Biomedical Engineering, Mechanical Engineering & Materials Science and Orthopaedic Surgery
Duke University

Michelle D. Wang, PhD

Investigator, Howard Hughes Medical Institute
Professor of Physics
Cornell University

REGULATORY SCIENCE

Innovation in Regulatory Science Awards

Sandy Allerheiligen, PhD

Senior Vice President of Health Economics & Education
Certara

David Acheson, MD

President and CEO
The Acheson Group, LLC

Robert Califf, MD

Vice Chancellor for Health Data Science
Duke University Health System

Andrea Leonard-Segal, MD

Associate Clinical Professor of Medicine
George Washington University School of Medicine

Christy L. Shaffer, PhD

General Partner, Hatteras Venture Partners
Managing Director, Hatteras Discovery

Alastair J.J. Wood, MD (Chair)

Professor of Medicine and Pharmacology
Weill Medical College of Cornell University
Partner, Symphony Capital, LLC



REPRODUCTIVE SCIENCES**Preterm Birth Initiative****Susan Fisher, PhD**

Professor
 Director, Translational Research in Perinatal
 Biology and Medicine
 University of California-San Francisco

Louis J. Muglia, MD, PhD (Chair)

Co-Director, Perinatal Institute
 Director, Center for the Prevention
 of Preterm Birth
 University of Cincinnati Children's Hospital
 Medical Center
 Director, Center for Preterm Birth Research
 Professor, UC Dept. of Pediatrics

Amy P. Murtha, MD

Chair, Dept. of Obstetrics, Gynecology
 and Reproductive Sciences
 University of California-San Francisco

D. Michael Nelson, MD, PhD

Virginia S. Lang Professor and Vice Chair
 Dept. of Obstetrics and Gynecology
 Washington University School of Medicine

Hyagriv N. Simhan, MD, MS

Professor, Obstetrics, Gynecology,
 and Reproductive Sciences
 Executive Vice Chair, Obstetrical Services
 Director, Patient Care Delivery Innovation
 and Technology, UPMC
 University of Pittsburgh School of Medicine

Jerome F. Strauss, III, MD, PhD

Dean, School of Medicine
 Executive Vice President for Medical Affairs
 Virginia Commonwealth University

Jeffrey A. Whitsett, MD

Co-Director, Perinatal Institute
 Chief, Section of Neonatology, Perinatal
 and Pulmonary Biology
 University of Cincinnati Children's Hospital

SCIENCE EDUCATION**Student Science
Enrichment Program****Honorable Hugh A. Blackwell**

Attorney
 Member, North Carolina House of Representatives

Yolanda Comedy, PhD

American Association for the Advancement
 of Science

Connie Locklear

Division of Indian Education
 Public Schools of Robeson County

Eric D. Pakenham

Principal Investigator, GEAR UP Grant,
 US Department of Education
 Senior Lecturer,
 Utah State University

Steve Saucier

Executive Director
 Grassroots Science Museum Collaborative

William Franklin Scott Sr.

Retired, High School and Middle School Principal

Marco Zarate

President and Co-founder
 North Carolina Society of Hispanic Professionals

**Career Awards for Science and
Mathematics Teachers****Enriqueta C. Bond, PhD**

Past President
 Burroughs Wellcome Fund

David Marsland

Science Content Specialist
 Discovery Education

Angela Quick, Ed. S.

RTI International

Pat Shane, PhD (Chair)

Executive Director
 North Carolina Science Leadership Association

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Assistant Director, Educator Effectiveness
 North Carolina Department of Public Instruction

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Alfred M. Mays
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Muno Sekhon
Senior Program Associate

Rolly L. Simpson Jr.
Senior Program Officer

Tiffany Taylor
Program Associate

Kendra Tucker
Senior Programs Assistant
and Data Specialist

Program Contact Information

BIOMEDICAL SCIENCES; REPRODUCTIVE SCIENCES

Rolly Simpson
Senior Program Officer
rsimpson@bwfund.org

Debra Holmes
Senior Program Associate
dholmes@bwfund.org

CAREER GUIDANCE; INFECTIOUS DISEASES; POPULATION AND LABORATORY BASED SCIENCES

Victoria P. McGovern, PhD
Senior Program Officer
vmcgovern@bwfund.org

Muno Sekhon
Senior Program Associate
msekhon@bwfund.org

DIVERSITY IN SCIENCE; SCIENCE EDUCATION

Alfred Mays
Program Officer
amays@bwfund.org

Tiffany Taylor
Program Associate
ttaylor@bwfund.org

INTERFACES IN SCIENCE; REGULATORY SCIENCE; TRANSLATIONAL RESEARCH

Kelly Rose, PhD
Program Officer
krose@bwfund.org

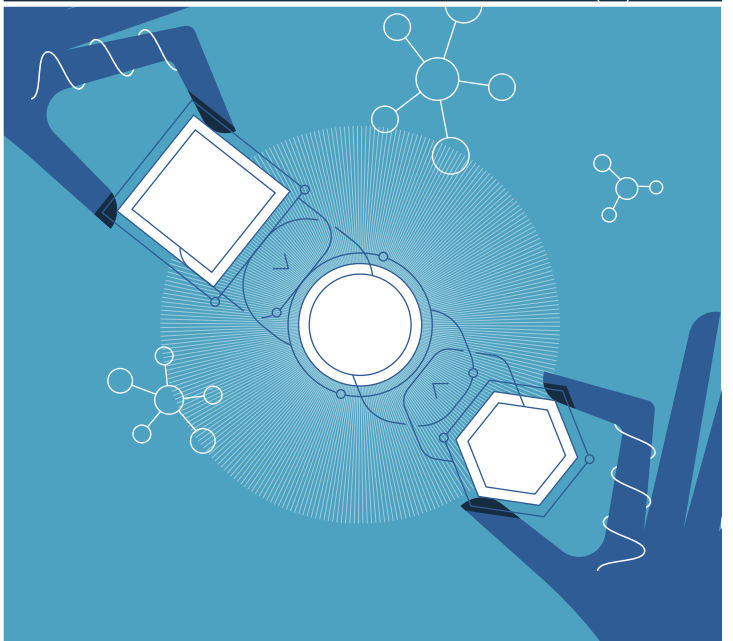
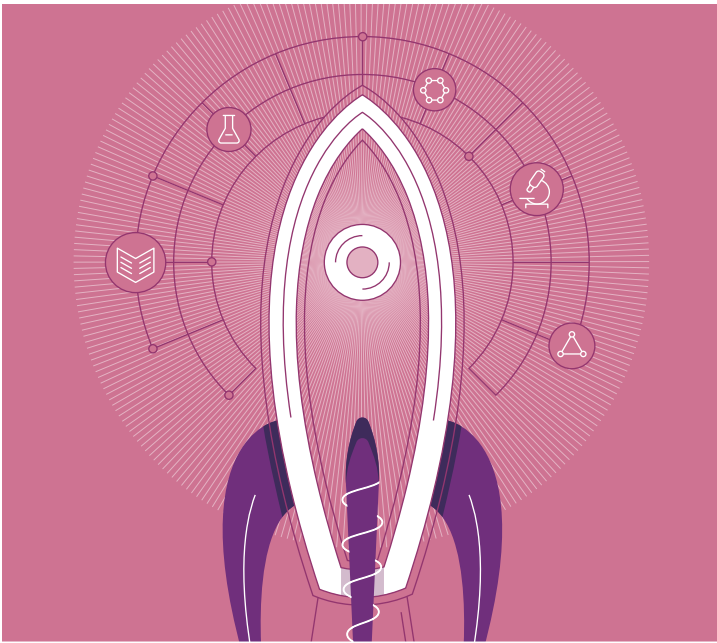
Melanie B. Scott
Senior Program Associate and
Database Specialist
mscott@bwfund.org

COMMUNICATIONS/MEDIA

Russ Campbell
Senior Communications Officer
news@bwfund.org

PROGRAM INFORMATION

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BURROUGHS
WELLCOME
FUND 

21 T. W. Alexander Drive
P. O. Box 13901
Research Triangle Park, NC 27709-3901
919.991.5100
@bwfund
www.bwfund.org

