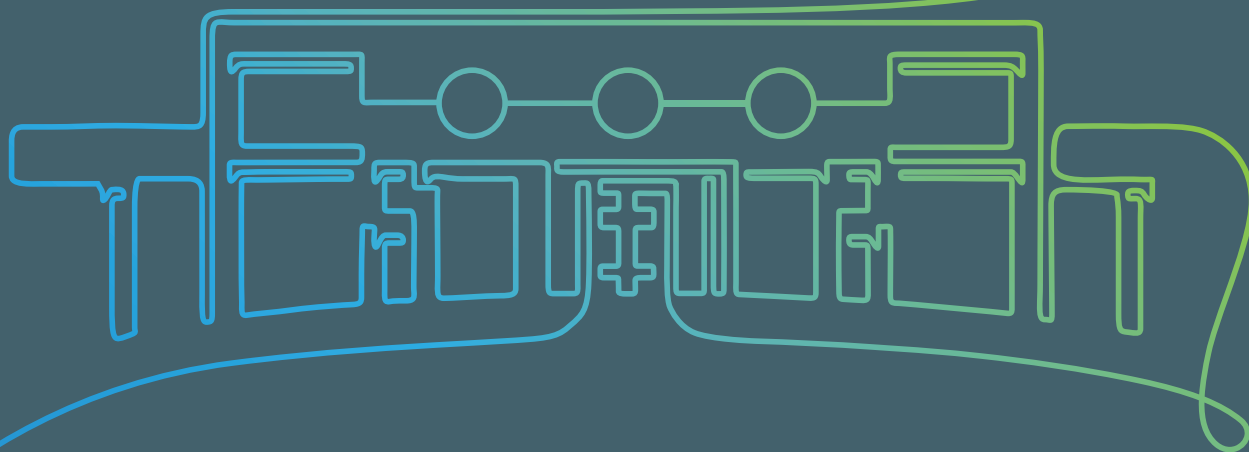
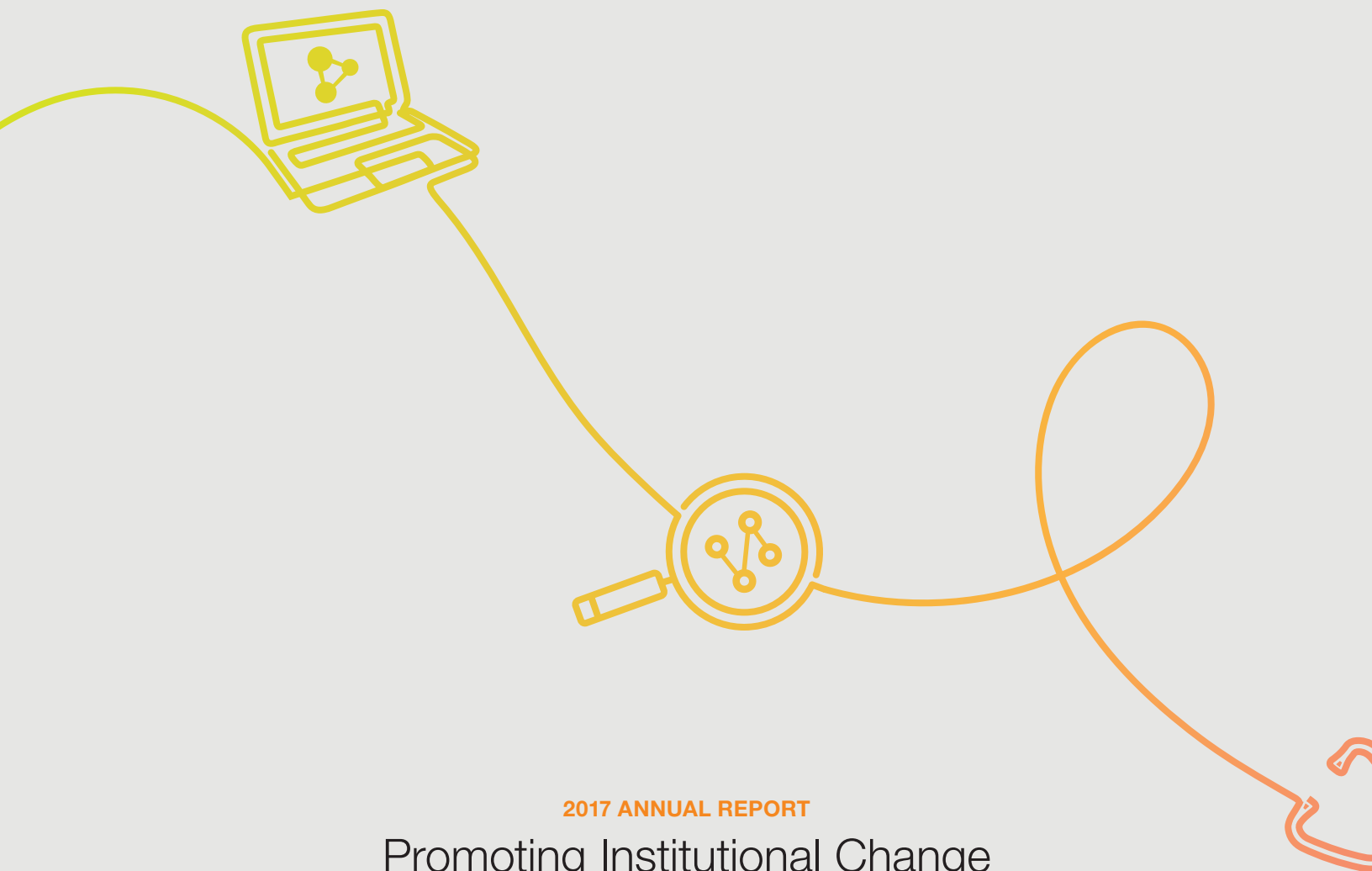


2017 ANNUAL REPORT

Promoting Institutional Change and Individual Success



BURROUGHS
WELLCOME
FUND 



2017 ANNUAL REPORT

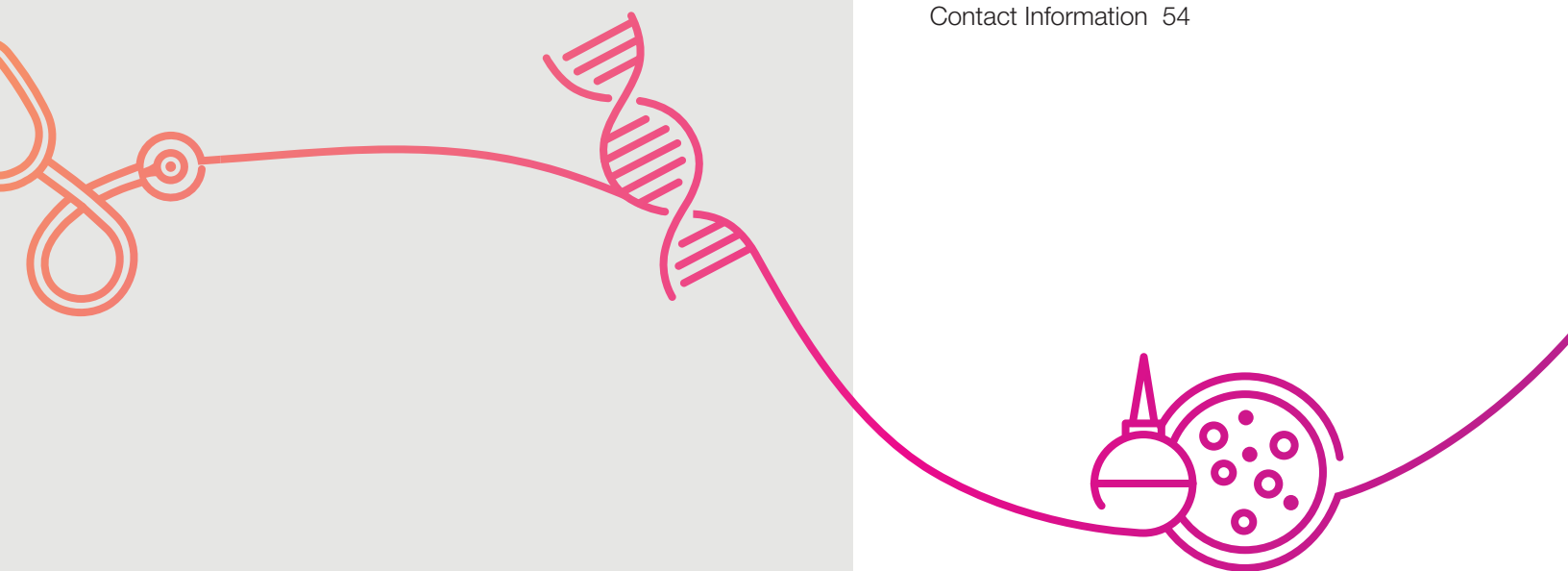
Promoting Institutional Change and Individual Success

Burroughs Wellcome Fund

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P. O. Box 13901
Research Triangle Park, NC 27709-3901
919.991.5100
www.bwfund.org

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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.

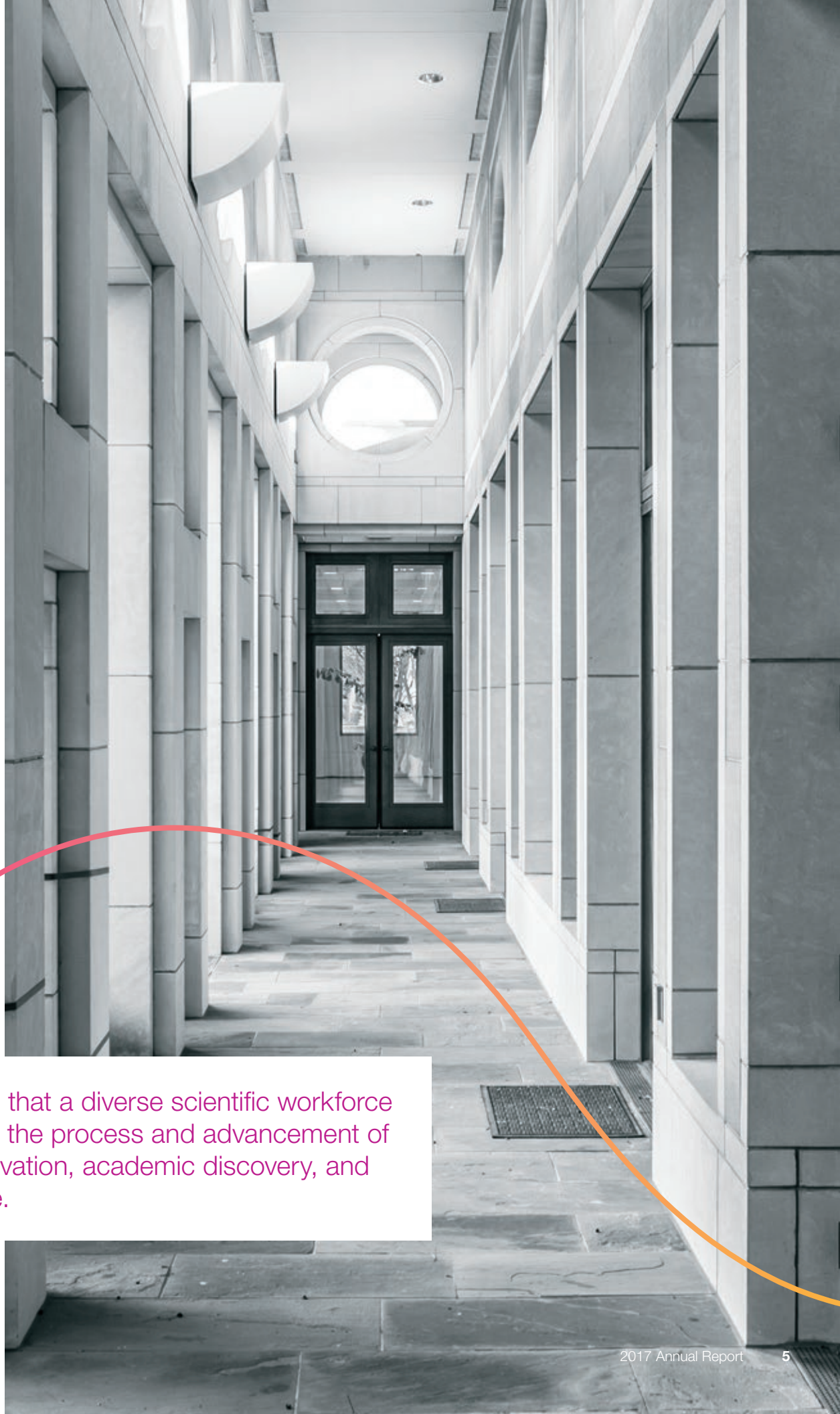
Within this broad mission, BWF seeks to accomplish two primary goals—to help scientists early in their careers develop as independent investigators, and to advance fields in the biomedical sciences that are undervalued or in need of particular encouragement.

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.

President's Message



Funding individual scientists and researchers is a large part of the Burroughs Wellcome Fund's identity. Over the years, you have heard me talk about funding the future leaders in biomedical research and having them join the Burroughs Wellcome Fund family. Impact is a frequent topic of discussion in the foundation sector—how do we measure the effect of our support? Of particular interest to the

Burroughs Wellcome Fund is the question, “can funding an individual scientist move an entire field forward?”

We are confident that choosing and supporting high-potential researchers does move science forward. Through the years, we have watched Burroughs Wellcome Fund researchers become leaders in their field, receive prestigious awards, and help bridge the gap between science and the public. Although we do so less often, we also see the wisdom in funding initiatives at institutions that provide models of excellence for others to replicate in helping a field advance.

Two decades ago, the Fund began exploring the intersection of quantitative science and biological science. The Fund invested in 10 interdisciplinary training programs based at U.S. academic institutions, offering three rounds of awards between 1996 and 2000, called Institutional Awards at the Scientific Interface. Once these centers were established, the Fund shifted its ongoing investment to individual awards targeted at the postdoc-to-faculty transition, Career Awards at the Scientific Interface (CASI).

In 2008, we developed an institutional program to increase interaction and the level of understanding between population scientists and bench scientists. Ten funded institutions have successfully participated in this career-training program.

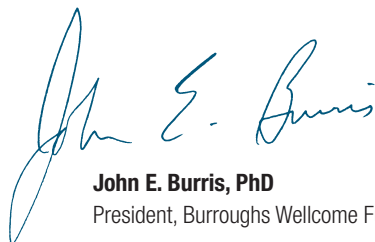
This year we again surveyed biomedical science and determined that a vast reservoir of potential researchers was being left behind—individuals with MD's only. Fewer than 1.5 percent of the nation's MD's are doing research, yet they often have the best insight and understanding of problems to tackle and the research

“In the years ahead we will continue to focus our funding on individual researchers, but must be willing to take advantage of opportune moments to fund institutional programs.”

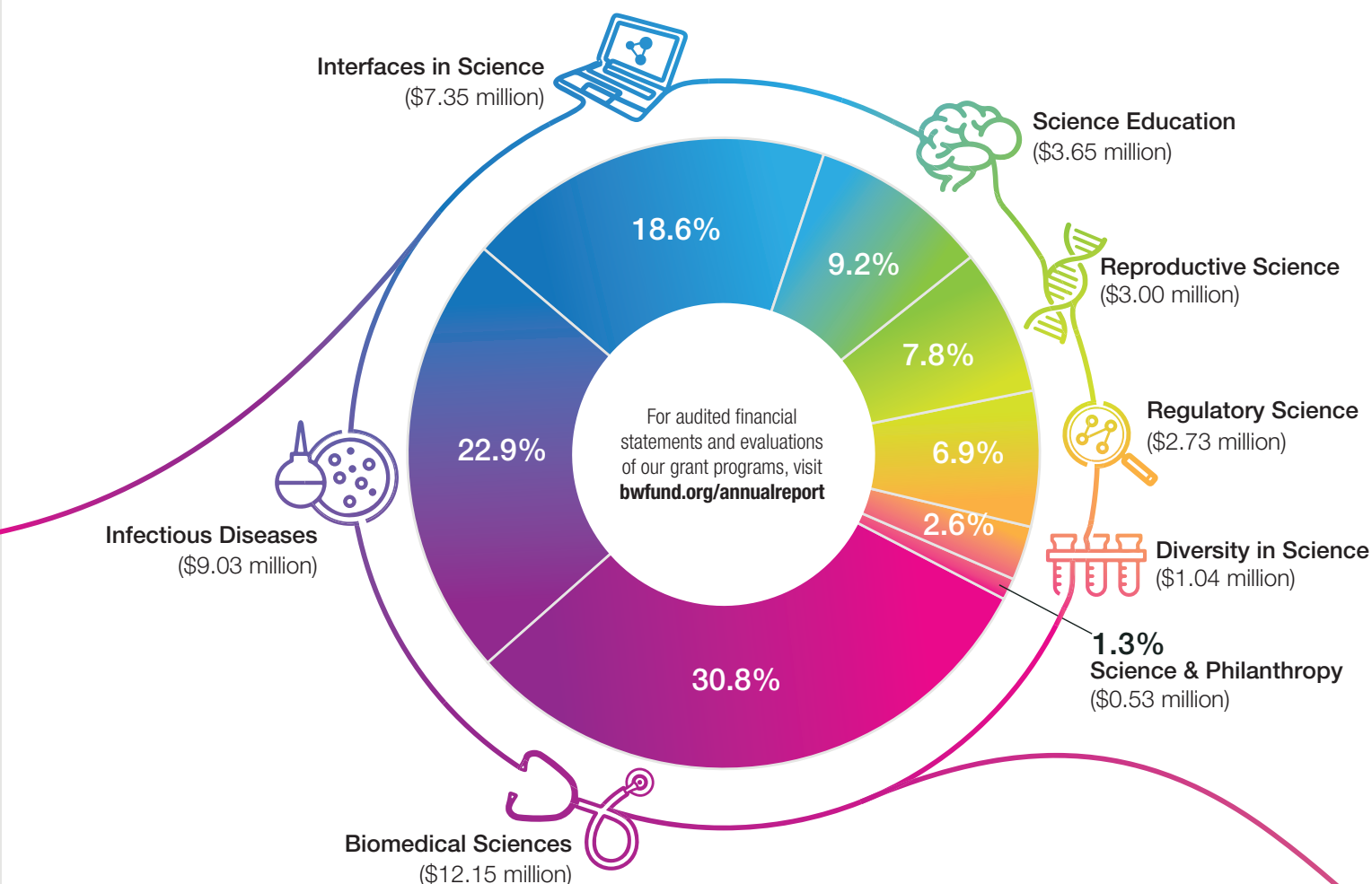
needed to do just that. Three decades ago, the former director of the National Institutes of Health called the physician-scientist an endangered species, and the number of these uniquely-trained researchers has only fallen since then.

To try to reverse the continuing decline in physician-scientists, we have established an institutional award of \$2.5 million for medical schools to engage and prepare MD's for a research career. We do not know yet whether our program will help reverse this trend. We are, however, excited by the large number of applicants this year (more than 90), and the many novel ideas they have proposed.

In the years ahead we will continue to focus our funding on individual researchers, but must be willing to take advantage of opportune moments to fund institutional programs. All funding contains an element of risk, and we appreciate that as a foundation we have the luxury of taking chances, for only then can we hope to help push biomedical research and education forward.


John E. Burris, PhD
 President, Burroughs Wellcome Fund

BWF AWARDED \$39.5 MILLION IN GRANTS DURING FISCAL YEAR 2017



FISCAL YEAR 2017 MAJOR COMPETITIVE GRANT AWARDEES

CAREER AWARDS FOR MEDICAL SCIENTISTS

Vijay Garud Bhoj, MD, PhD

University of Pennsylvania

Lindsay Catherine Burrage, MD, PhD

Baylor College of Medicine

Aaron Foster Carlin, MD, PhD

University of California-San Diego

Alejandro Chavez, MD, PhD

Harvard Medical School

Whitney Elizabeth Harrington, MD, PhD

University of Washington

Tamia Alisha Harris-Tryon, MD, PhD

University of Texas Southwestern Medical Center-Dallas

Kara Noelle Maxwell, MD, PhD

University of Pennsylvania

Kent William Mouw, MD, PhD

Harvard Medical School

Anoop Patel, MD

University of Washington

Tamer Sallam, MD, PhD

University of California-Los Angeles

Zuzana Tothova, MD, PhD

Harvard Medical School

Craig Brian Wilen, MD, PhD

Washington University

POSTDOCTORAL ENRICHMENT PROGRAM

Brian Aguado, PhD

University of Colorado-Boulder

Christopher Barnes, PhD

California Institute of Technology

Daniel Dominguez, PhD

Massachusetts Institute of Technology

Nicholas Gomez, PhD

Rockefeller University

Theanne Dugger Griffith, PhD

Columbia University

Antentor Hinton, Jr., PhD

University of Iowa

Kellie Jurado, PhD

Yale University

Christopher Lopez, PhD

Vanderbilt University Medical Center

Ciera Martinez, PhD

University of California-Berkeley

Derrick Morton, PhD

Emory University

Shamsideen Ojelade, PhD

Baylor College of Medicine

Manuel Ortega, PhD

Massachusetts Institute of Technology

Melody Smith, MD

Memorial Sloan-Kettering Cancer Center

Max Staller, PhD

Washington University

Tomeka Suber, MD, PhD

University of Pittsburgh

CAREER GUIDANCE FOR TRAINEES

Jackson Laboratory

Johns Hopkins University

Northwestern University-Evanston Campus

Society for the Advancement of Chicanos and Native Americans in Science

Thomas Jefferson University

University of California-Irvine

University of Washington Bothell

INVESTIGATORS IN THE PATHOGENESIS OF INFECTIOUS DISEASE

Catherine Blish, MD, PhD

Stanford University

Caroline Buckee, PhD

Harvard School of Public Health

Jason M. Crawford, PhD

Yale University

Elizabeth A. Grice, PhD

University of Pennsylvania

Stacy M. Horner, PhD

Duke University Medical Center

Adam S. Lauring, MD, PhD

University of Michigan-Ann Arbor

Andrew Mehle, PhD

University of Wisconsin

Marion Pepper, PhD

University of Washington

June Round, PhD

University of Utah

Mohammad R. Seyedsayamdost, PhD

Princeton University

Christina Stallings, PhD

Washington University

Harris Wang, PhD

Columbia University

CAREER AWARDS AT THE SCIENTIFIC INTERFACE

Scott E. Boyken, PhD

University of Washington

Gregg A. Duncan, PhD

Johns Hopkins University

Felipe Garcia Quiroz, PhD

Rockefeller University

Kelley Harris, PhD

Stanford University

Felix JH Hol, PhD

Stanford University

Ashok Litwin-Kumar, PhD

Columbia University

Po-Ru Loh, PhD

Harvard School of Public Health

Tatiana V. Mishanina, PhD

University of Wisconsin-Madison

Octavio Mondragon-Palomino, PhD

California Institute of Technology

Priya Moorjani, PhD

Columbia University

Amy Elizabeth Shyer, PhD

University of California-Berkeley

Amy M. Weeks, PhD

University of California-San Francisco

STUDENT STEM ENRICHMENT PROGRAM

Beaufort County Police Activities League

Graham County Schools

Martin Millennium Academy

Meadowview Middle School

Newton-Conover Middle School

North Carolina State University

Scotland County Schools

Student U

University of North Carolina-Asheville

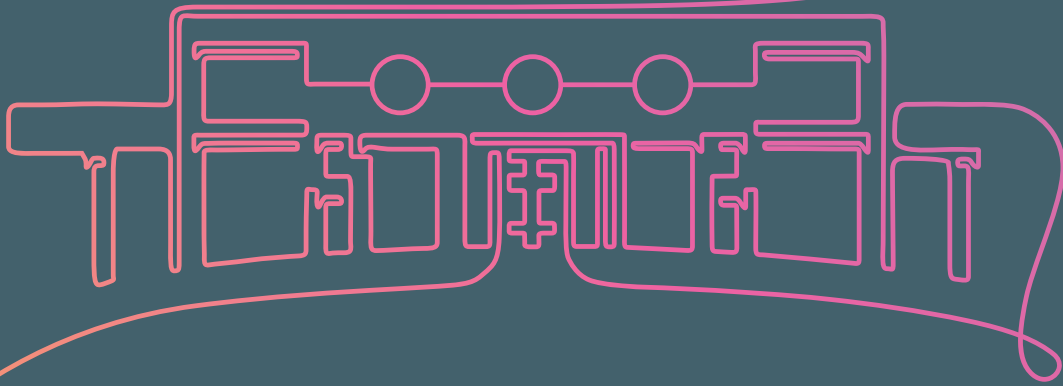
University of North Carolina-Chapel Hill

University of North Carolina-Wilmington

Wake Forest University Health Sciences

West Marion Elementary School

2017 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.

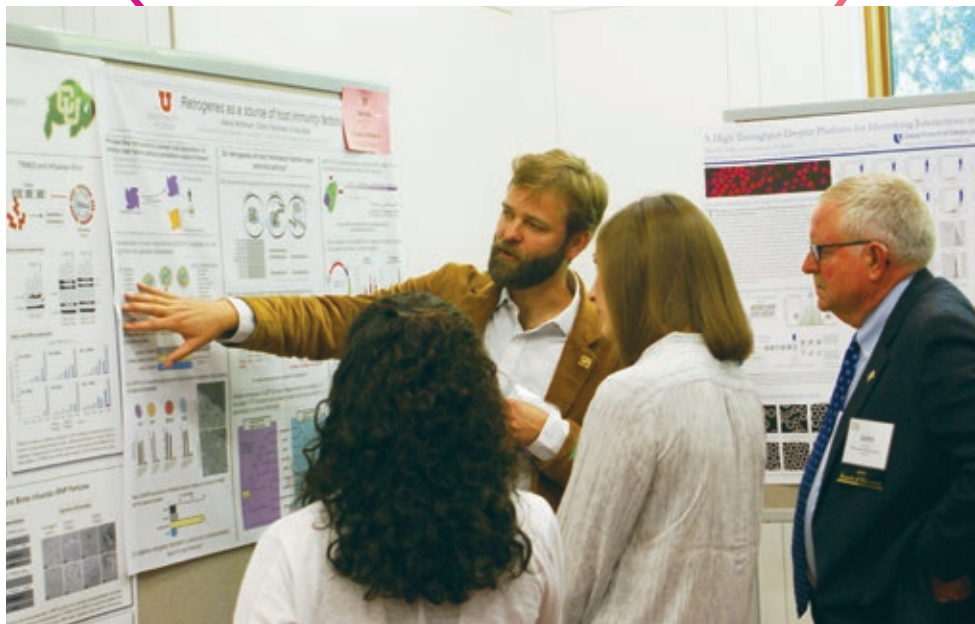
On these pages are photos from the new awardee meeting, which is certainly one of our highlights from the past year. Throughout the annual report are highlighted Tweets from the past year, a medium through which we have slowly gained traction. You can follow us on Twitter at @bwfund.

@BWFUND



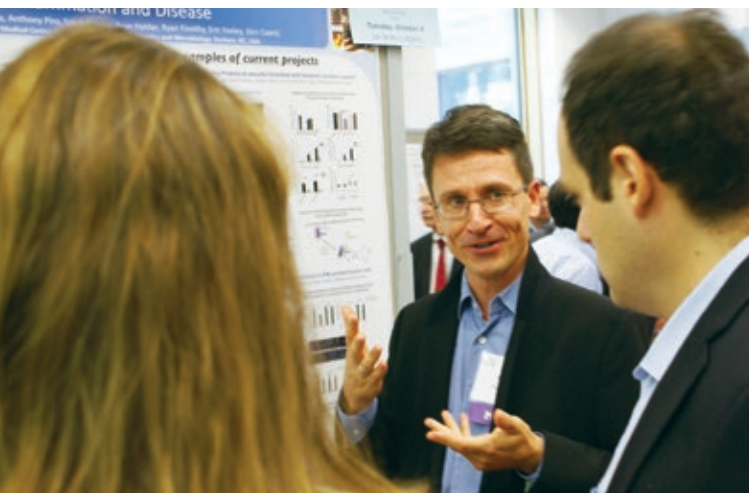
Our friend and colleague, Jean Kramarik, is retiring after 20 years with the Fund. We wish her the best in the new chapters of her life.

30 Aug 2017



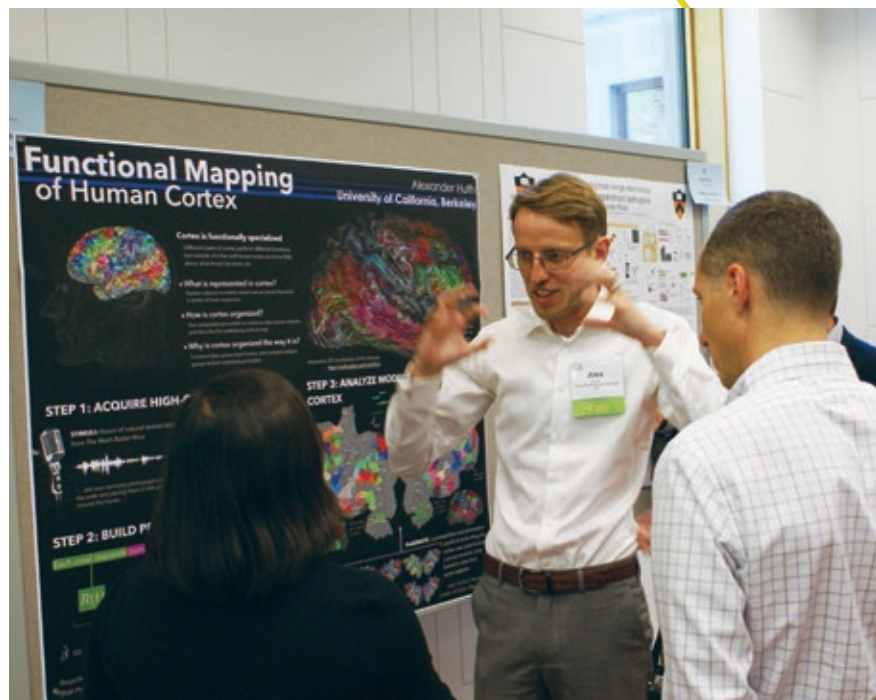
@BWFUND

🐦 Scientists reveal a new mechanism mediating environment-microbe-host interactions <http://buff.ly/2pbd9sp> #microbiome #metabolism
24 Apr 2017



@BWFUND

🐦 Dr. Jenny Ting joins the
@bwfund Board of Directors
<http://buff.ly/2k78gA7> #bwf
26 Jan 2017



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). CAMS addresses 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 these physician-scientists can bring unique perspectives to solving biomedical problems, given their dual experience in clinical training and hypothesis-based research. As such, the CAMS program is 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.

Physician Scientist Institutional Award

To advance biomedical science, 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.

The Burroughs Wellcome Fund sought planning grant proposals from medical schools in the United States and Canada to create programs with the intent of increasing opportunities for the physician interested in a research career.

Finalists will receive awards of \$2.5 million (\$500,000/year over five years) to institute their proposed activities.

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BWF launches \$25m initiative to help institutions with physician-scientist shortage <http://icont.ac/3NwUM>

21 Jun 2017

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.

@BWFUND



Brain flexibility changes the way
we remember and learn

22 Aug 2017

@BWFUND



Congrats to Dr. Clark Chen who is heading the
UMN Medical School Department of Neurosurgery
<http://buff.ly/2q2OYg1> #bwfcams

9 May 2017





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 transition 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@bwfund.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.

@BWFUND



Congrats to 2015 #BWFPDEP Awardee @IshmailSaboor, who accepted a tenure-track asst prof position <http://buff.ly/2i3nyWr> HT @amays_bwfund

20 Dec 2016



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



Vaccine progress against Lassa virus, cause of Ebola-like disease <http://buff.ly/2qKZOGp> #bwf path

1 Jun 2017

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



Caltech researchers harness the power of MRI to see genetic activity <http://buff.ly/2i9K7FD> via @caltech @EurekAlert

23 Dec 2016

Regulatory Science

KEEPING GOVERNMENT REGULATIONS APACE WITH BIOMEDICAL ADVANCES

The Institute of Medicine 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.

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.

@BWFUND



Who informs the regulations of the regulators?
buff.ly/2ldcrYN

23 Feb 2017



Reproductive Science

NOURISHING NEW RESEARCH INTO PARTURITION SCIENCE

The action of birth is shrouded in elegant complexity. It is the culmination of biochemical 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 \$600,000 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



Malaria drug protects fetal mice from Zika virus,
NIH-funded study finds <http://buff.ly/2uaPltW> #bwfptbi

10 Jul 2017

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



Science teacher's prestigious award will help Winston-Salem school rebuild www.journalnow.com... via @JournalNow

19 Mar 2017

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.

To-date, BWF has awarded \$31.5 million in SSEP funding, supporting STEM enrichment programs across all 100 counties in the state. 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.

The State of North Carolina is blessed with natural beauty, 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. Let your scientific playground be their classroom.

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.

@BWFUND



Melaine Rickard receives a 2017 Career Award for Science and Math Teachers <http://buff.ly/2oNv5w4>
#bwfcasmt ht @jessicawtn

30 Apr 2017

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.

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.

@BWFUND



Don't wait to be a scientist

<http://buff.ly/2noGfFI>

via @EducationNC #nced2china

26 Mar 2017

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.

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 \$754.7 million at August 31, 2017, 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 \$162.6 million. The sector's target allocation was 25 percent, and actual holdings stood at 21.6 percent.
- U.S. small capitalization equity assets had a market value of \$118.0 million. The sector's target allocation was 18 percent, and actual holdings stood at 15.6 percent.
- International equity assets had a market value of \$210.1 million. The sector's target allocation was 32 percent, and actual holdings stood at 27.8 percent.
- Fixed income assets had a market value of \$129.3 million. The sector's target allocation was 22 percent, and actual holdings stood at 17.1 percent.
- Cash equivalent assets had a market value of \$10.9 million. The sector's target allocation was 3 percent, and actual holdings stood at 1.5 percent.
- Alternative assets had a market value of \$123.8 million. The sector did not have a target allocation, and actual holdings stood at 16.4 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 \$51.0 million, or 7.2 percent, from the end of the previous fiscal year. This increase in assets was due mainly to strong returns for U.S. and international equities during the year. BWF's total investment return before investment management fees for the fiscal year was +13.3 percent. The U.S. large capitalization equity sector returned +15.4 percent, the U.S. small capitalization equity sector had a +14.2 percent result, the international equity sector gained +20.7 percent for the fiscal year, and fixed income produced a +3.0 percent result.

As of August 31, 2017, BWF employed 15 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 and Numeric Investors managed U.S. small capitalization equities. Camden Asset Management; C.S. McKee; Rimrock Capital Management; Babson Capital; and Smith Breeden Associates were the fixed income managers. Capital Guardian Trust Company; Northern Cross; Johnston Asset Management; 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 two funds of private equity strategies and two 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, 2017 and 2016

(All dollar amounts presented in thousands)

	2017	2016
ASSETS		
Cash and cash equivalents	\$ 2,229	\$ 20,304
Investments	758,201	688,870
Accrued interest and dividends receivable	1,303	1,317
Other assets	146	75
Federal excise tax receivable	–	333
Property and equipment, net	7,667	8,050
Total assets	\$ 769,546	\$ 718,949
LIABILITIES AND NET ASSETS		
Transactions payable, net	\$ 5,562	\$ 4,430
Accounts payable and other liabilities	676	989
Excise tax payable	444	–
Deferred federal excise taxes	2,215	1,446
Unpaid awards	101,117	97,740
Total liabilities	110,014	104,605
Unrestricted net assets	659,532	614,344
Total liabilities and net assets	\$ 769,546	\$ 718,949

STATEMENTS OF ACTIVITIES

August 31, 2017 and 2016

(All dollar amounts presented in thousands)

	2017	2016
REVENUES		
Interest and dividends, less investment expenses of \$2,398 and \$3,219 in 2017 and 2016, respectively	\$ 8,163	\$ 8,620
Net realized gain on sale of investments	41,444	9,693
<u>Total revenues and realized gains</u>	<u>\$ 49,607</u>	<u>\$ 18,313</u>
EXPENSES		
Program services	\$ 34,243	\$ 26,273
Management and general	6,875	5,873
<u>Total expenses before net unrealized appreciation and deferred federal excise tax</u>	<u>41,118</u>	<u>32,146</u>
Net unrealized appreciation (depreciation) of investments, net of provision for deferred federal excise tax expense \$769 and \$120 in 2017 and 2016, respectively	36,699	8,563
Change in net assets	45,188	(5,270)
Net assets at beginning of year	614,344	619,614
<u>Net assets at end of year</u>	<u>\$ 659,532</u>	<u>\$ 614,344</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 Hoc—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, 2017

	Awarded Net of Cancelled	Amount Paid	Percentage of Total Paid
BIOMEDICAL SCIENCES			
Career Awards in the Medical Sciences	\$ 8,400,000	\$ 6,430,821	
Research Travel Grant	373,790	374,090	
Ad Hoc	643,000	639,000	
Total	\$ 9,416,790	\$ 7,443,912	24.2%
DIVERSITY IN SCIENCE			
Graduate Diversity Enrichment Program	\$ 30,000	\$ –	
Postdoctoral Enrichment Program	\$ 934,803	\$ 680,000	
Ad Hoc	18,000	18,000	
Total	\$ 982,803	\$ 698,000	2.3%
INFECTIOUS DISEASES			
Career Guidance	\$ 319,000	\$ 355,166	
Investigators in Pathogenesis of Infectious Disease	6,099,940	5,125,000	
Ad Hoc	1,834,000	1,205,000	
Total	\$ 8,252,940	\$ 6,685,166	21.7%
INTERFACES IN SCIENCE			
Career Award at the Scientific Interface	\$ 5,618,016	\$ 3,765,503	
Ad Hoc	578,476	370,976	
Total	\$ 6,196,492	\$ 4,136,479	13.4%
POPULATION SCIENCES			
Institutional Program Unifying Population and Laboratory-Based Sciences	\$ –	\$ 3,245,327	
Total	\$ –	\$ 3,245,327	10.5%

PROGRAM SUMMARY

August 31, 2017

	Awarded Net of Cancelled	Amount Paid	Percentage of Total Paid
REGULATORY SCIENCE			
Innovation in Regulatory Science Awards	\$ 2,500,000	\$ 2,000,000	
Ad Hoc	230,500	230,500	
Total	\$ 2,730,500	\$ 2,230,500	7.2%
REPRODUCTIVE SCIENCES			
Preterm Birth Initiative	\$ 3,000,000	\$ 2,400,000	
Total	\$ 3,000,000	\$ 2,400,000	7.8%
SCIENCE AND PHILANTHROPY			
Ad Hoc	\$ 533,710	\$ 346,210	
Total	\$ 533,710	\$ 346,210	1.1%
SCIENCE EDUCATION			
Career Award for Science and Mathematics Teachers	\$ 875,000	\$ 480,000	
Student Science Enrichment Program	2,133,527	2,159,106	
Ad Hoc	617,580	942,580	
Total	\$ 3,626,107	\$ 3,581,686	11.6%
GRAND TOTAL	\$34,739,341	\$30,767,279	100%

Biomedical Sciences

CAREER AWARDS FOR MEDICAL SCIENTISTS

Vijay Garud Bhoj, MD, PhD

University of Pennsylvania

Development of CAR T-cell immunotherapy for prevention and eradication of FVIII inhibitors in Hemophilia A

Lindsay Catherine Burrage, MD, PhD

Baylor College of Medicine

Impaired glycogen metabolism and chronic liver disease in urea cycle disorders

Aaron Foster Carlin, MD, PhD

University of California-San Diego

Deciphering human innate immune responses to Zika virus infection

Alejandro Chavez, MD, PhD

Harvard Medical School

Novel technologies and their application to neurodegenerative diseases

Whitney Elizabeth Harrington, MD, PhD

University of Washington

Defining the role of maternal cells in fetal and infant immunity to malaria

Tamia Alisha Harris-Tryon, MD, PhD

University of Texas Southwestern Medical Center-Dallas

The Function of Resistin Like Molecule alpha (RELMalph) in Cutaneous Host Defense

Kara Noelle Maxwell, MD, PhD

University of Pennsylvania

A genotype-phenotype study of tumors from patients with inherited mutations in DNA repair genes

Kent William Mouw, MD, PhD

Harvard Medical School

Investigating the effect of ERCC2 mutations on DNA repair capacity and chemo-radiotherapy response in muscle-invasive bladder cancer

Anoop Patel, MD

University of Washington

Deep interrogation and modeling of intratumoral heterogeneity, plasticity, and tumor evolution in glioblastoma

Tamer Sallam, MD, PhD

University of California-Los Angeles

Spatial control of nuclear receptor regulatory circuits in cardiovascular disease

Zuzana Tothova, MD, PhD

Harvard Medical School

Elucidating the mechanisms of cohesinopathy in myelodysplastic syndromes

Craig Brian Wilen, MD, PhD

Washington University

Role of virus-receptor interactions in determining norovirus tropism and pathogenesis

COLLABORATIVE RESEARCH TRAVEL GRANT

Marghaleray Amini, PhD

University of British Columbia

Jonathan Barnes, PhD

Washington University

Oya Bermek, PhD

University of North Carolina-Chapel Hill

Kim Blackwell, D.V.M., PhD

George Mason University

Lorenzo Brancaleon, PhD

University of Texas-San Antonio

Emily Chang, MD

University of North Carolina-Chapel Hill

Yu-Chung Cheng, PhD

Wayne State University

Ekaterina Dadachova, D.Phil.

University of Saskatchewan

Corrella Detweiler, PhD

University of Colorado-Boulder

Nicholas Dotson, PhD

Montana State University

Mikhail Dozmorov, PhD

Virginia Commonwealth University

Elizabeth Draganova, PhD

Tufts University

Raymond Enke, PhD

James Madison University

Erika Espinosa-Ortiz, PhD

Montana State University

Brendan Fry, PhD

Metropolitan State University of Denver

Cyril Galitzine, PhD

Northeastern University

Jason Gleghorn, PhD

University of Delaware

Newton Hilliard, PhD

Arkansas Tech University

Kuangwen Hsieh, PhD

Johns Hopkins University

Charles Jayyosi, PhD

Columbia University

Martin Byung-Guk Jun, PhD

Purdue University

Anja Karlstaedt, MD, PhD

University of Texas Health Science Center-Houston

Shereen Katrak, MD

University of California-San Francisco

Mariana Kersh, PhD

University of Illinois-Urbana-Champaign

Jayoung Kim, PhD

Cedars-Sinai Medical Center

Woo Jae Kim, PhD

University of Ottawa

David Kuter, PhD

McGill University

Yang Lyu, PhD

University of Michigan-Ann Arbor

Oleg Makarenkov, PhD

University of Texas-Dallas

Sarah McMenamin, PhD

Boston College

Michelle Momany, PhD

University of Georgia

Parvin Mousavi, PhD

Queen's University

Roger Narayan, MD, PhD

North Carolina State University

Felicia Nowak, MD, PhD

Ohio University

Elizabeth Podlaha-Murphy, D.Phil., PhD

Clarkson University

Jerod Rasmussen, PhD

University of California-Irvine

Elle Roberson, PhD

University of Texas-Austin

Alison Sanders, PhD

Icahn School of Medicine at Mount Sinai

Nathan Schiele, PhD

University of Idaho

Thomas Martin Schmeing, PhD

McGill University

Susan Schroeder, PhD

University of Oklahoma

Carrie Shaffer, PhD

University of Kentucky Research Foundation

Tal Sharf, PhD

University of California-Santa Barbara

Kevin Slep, PhD

University of North Carolina-Chapel Hill

Laura Su, MD, PhD

University of Pennsylvania

Qadir Timerghazin, PhD

Marquette University

Yu-Chen Tsai, MD, PhD

Harvard Medical School

Neeta Vora, MD

University of North Carolina-Chapel Hill

Lori Wallrath, PhD

University of Iowa

Yang Zhang, PhD

Duke University

Dennis Zimmermann, PhD

Massachusetts Institute of Technology

Diversity in Science

POSTDOCTORAL ENRICHMENT PROGRAM

Brian Aguado, PhD

University of Colorado-Boulder

Development of a nanotherapy for aortic valve stenosis

Christopher Barnes, PhD

California Institute of Technology

Structural basis of HIV-1 envelope trimer conformational changes induced by receptors and antibodies

Daniel Dominguez, PhD

Massachusetts Institute of Technology

Systematic analysis of RBPs in controlling drug response in cancer cells

Nicholas Gomez, PhD

Rockefeller University

Stem cell reprogramming during oncogenesis and development

Theanne Dugger Griffith, PhD

Columbia University

Neuropeptidergic signaling mechanisms in peripheral sensory neurons

Antentor Hinton, Jr., PhD

University of Iowa

Mechanisms for insulin-dependent regulation of skeletal muscle mitochondria by OPA1

Kellie Jurado, PhD

Yale University

Type I interferon-mediated neuroimmunoprotection against Zika Virus

Christopher Lopez, PhD

Vanderbilt University Medical Center

Clostridium difficile responses to limited zinc during infection

Ciera Martinez, PhD

University of California-Berkeley

Revealing the underlying patterns and evolutionary pressures directing enhancer sequence divergence

Derrick Morton, PhD

Emory University

Exploiting Drosophila to examine RNA exosome-linked disease

Shamsideen Ojelade, PhD

Baylor College of Medicine

The Role of CD2AP in Alzheimer's Disease

Manuel Ortega, PhD

Massachusetts Institute of Technology

Structural and functional insights of human gut microbial enzymes involved in xenobiotic metabolism

Melody Smith, MD

Memorial Sloan-Kettering Cancer Center

CD19 targeted donor T cells improve GVT activity and reduce GVHD

Max Staller, PhD

Washington University

Massively parallel analysis of transcription factor activation domains

Tomeka Suber, MD, PhD

University of Pittsburgh

Regulation of GSK3 β degradation and its role in acute lung injury

Career Guidance

CAREER GUIDANCE FOR TRAINEES

Jackson Laboratory

Conference to Career

Johns Hopkins University

Clinical and Regulatory Affairs Fellowship Training

Northwestern University-Evanston

myDATA: Preparing Science PhDs for Careers in a Data-Driven World

Society for the Advancement of Chicanos and Native Americans in Science

Igniting Minority Professional Advancement and Career Training (IMPACT)

Thomas Jefferson University

Online Teaching Immersion Experience

University of California-Irvine

Public Policy Prep Program at UC Irvine

University of Washington Bothell

STEP Forward: a university-science center partnership through which postdocs communicate science with the general public and policymakers

Infectious Diseases

INVESTIGATORS IN THE PATHOGENESIS OF INFECTIOUS DISEASE

Catherine Blish, MD, PhD

Stanford University
Training natural killer cells to fight HIV

Caroline Buckee, PhD

Harvard School of Public Health
The impact of human red blood cell heterogeneities and dynamics on malaria parasite virulence

Jason M. Crawford, PhD

Yale University
A functional metagenomic screen to systematically identify human-bacteria interactions

Elizabeth A. Grice, PhD

University of Pennsylvania
Skin microbiome functions in colonization resistance to pathogens

Stacy M. Horner, PhD

Duke University Medical Center
Regulation of antiviral host response by RNA modifications

Adam S. Luring, MD, PhD

University of Michigan-Ann Arbor
The evolution of pathogen virulence and transmissibility

Andrew Mehle, PhD

University of Wisconsin
Defining the functional landscape between intracellular pathogens and the host

Marion Pepper, PhD

University of Washington
The development and function of Plasmodium-specific memory B cells

June Round, PhD

University of Utah
Influence of the microbiota on neuro-inflammation

Mohammad R. Seyedsayamdost, PhD

Princeton University
Deciphering the small molecule vocabulary of human microbiome Streptococci

Christina Stallings, PhD

Washington University
Consequences of neutrophil-mycobacteria interactions

Harris Wang, PhD

Columbia University
Mapping host-microbe and inter-microbial networks at ultra-high spatial resolution

Interfaces in Science

CAREER AWARDS AT THE SCIENTIFIC INTERFACE

Scott E. Boyken, PhD

University of Washington
Programmable protein interaction specificity to engineer and interrogate cellular signaling

Gregg A. Duncan, PhD

Johns Hopkins University
Microscale airway surface liquid interactions and their role in obstructive lung diseases

Felipe Garcia Quiroz, PhD

Rockefeller University
Repetitive elements of life: from genomes to proteins and material systems

Kelley Harris, PhD

Stanford University
Decoding the evolutionary history of DNA replication fidelity from whole genome sequences

Felix JH Hol, PhD

Stanford University
Eco-evolutionary dynamics of mosquito-borne viruses

Ashok Litwin-Kumar, PhD

Columbia University
Modeling distributed olfactory learning in rodents and insects

Po-Ru Loh, PhD

Harvard School of Public Health
Toward an early-warning system for leukemia: Characterizing mosaic copy number abnormalities

Tatiana V. Mishanina, PhD

University of Wisconsin-Madison
Visual-kinetic studies of pausing by bacterial RNA polymerase using time-resolved cryo-EM

Octavio Mondragon-Palomino, PhD

California Institute of Technology
In situ dissection of bacteria-bacteria interactions on the mucosa of the mammalian gut

Priya Moorjani, PhD

Columbia University
Learning about the rate and chronology of human evolution

Amy Elizabeth Shyer, PhD

University of California-Berkeley
Investigating mechano-chemical mechanisms of mesenchymal morphogenesis in skin and bone

Amy M. Weeks, PhD

University of California-San Francisco
Untangling the protease web: Chemical and enzymatic probes for dissection of proteolytic signaling in immune cells

Science Education

CAREER AWARDS FOR SCIENCE AND MATHEMATICS TEACHERS

Betsy Foreman

Holly Tree Elementary
New Hanover County Schools

Kirk M. Kennedy

East Duplin High School
Duplin County Schools

Brad Rhew

Cook Literacy Model School
Winston-Salem Forsyth County Schools

Melaine Rickard

Western Alamance Middle School
Alamance Burlington School System

Lauren McLeod Strickland

Four Oaks Elementary School
Johnson County Public Schools

STUDENT SCIENCE ENRICHMENT PROGRAM

Beaufort County Police Activities League

Youth Career and STEM Enrichment Program
Using Aviation and Robotics

Graham County Schools

SciGirls

Martin Millennium Academy

MMA Future Scientists Academy

Newton-Conover Middle School

Makerspace Challenges

North Carolina State University

Sustaining STEM Career Clubs in Rural North Carolina

Scotland County Schools

Passport to STEM

Student U

Explore Fearlessly Initiative

Surry County Schools

Mustang Biomedical and Engineering Science Scholars

University of North Carolina-Asheville

Science on the Move: Closing the Opportunity Gap for Migrant Youth with Science, Technology, and Multimedia

University of North Carolina-Chapel Hill

Young Innovators Program: an immersive research experiential program at the Eshelman School of Pharmacy

University of North Carolina-Wilmington

I-40 E.A.S.T.

Wake Forest University Health Sciences

American Indian BioMedical Science Academy: Health and Biomedical Science Workforce Development for American Indian Students

West Marion Elementary School

Project Wild Thing

Ad Hoc

BIOMEDICAL SCIENCES

Career Development of Postdoctoral Scientists

American Society for Cell Biology

Support for the Minorities Affairs Committee and Women in Cell Biology activities at the annual meeting

International Society for Antiviral Research

Support for the 2017 Gertrude Elion Memorial Lecture Award

Marine Biological Laboratory

Support for the 2017-2019 Embryology course: Concepts & Techniques in Modern Developmental Biology

Society for Neuroscience

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

Tides Foundation

Support for the Gairdner National Program lecture series

University of Colorado-Boulder

Support for the 9th biennial Single Molecule Biophysics Workshop

Medical Sciences

American Foundation for Suicide Prevention

Support for AFSP's mission

American Physician Scientists Association

Support for the APSA annual meeting

Association for Clinical and Translational Science

Support for trainee travel to the 2017 Translational Science meeting

International Cell Research Organization

Support for the Frontiers in Stem Cells in Cancer course

Keystone Symposia

Support for 2017 underrepresented early career scientist travel awards and fellows program

University of North Carolina-Chapel Hill

Support for the sixth annual Oliver Smithies Nobel Symposium

University of North Carolina-Chapel Hill

Support for the 41st Annual UNC Lineberger Comprehensive Cancer Center Symposium, Developmental Signal Transduction Pathways in Cancer

University of Toronto Faculty of Medicine

Support for the 2016 annual general meeting of CITAC and CSCI

Vanderbilt University Medical Center

Support for the American Society of Matrix Biology/Vanderbilt workshop on Basement Membranes

Reproductive Science

American Society for

Reproductive Immunology

Support for the 36th annual American Society for Reproductive Immunology meeting

American Society of Andrology

Support for travel awards to junior investigators to the North American Testis Workshop and ASA meeting

Marine Biological Laboratory

Support for the 2017 FIR symposium

Society for Reproductive Investigation

Support for the 64th annual scientific meeting

Society for the Study of Reproduction

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

Washington University

Support for the 2016-2017 SEED grant program for phase II RSDP scholars

DIVERSITY IN SCIENCE

Friends of the North Carolina State Museum of Natural Sciences

Support for the speaker series for "Race: Are We So Different"

University of California-Santa Cruz Foundation

Support for diversity and activities within the Department of Molecular, Cellular, and Developmental Biology which may contribute to an excellent and inclusive workforce

University of North Carolina-Chapel Hill

Support for the Second Annual Diversity in STEM Conference

INFECTIOUS DISEASES

Career Development

Children's Science Center

Support for the Children's Science Center in Fairfax, Virginia

University of Alabama-Birmingham

Support for the Institutional Research and Academic Career Development Award conference

University of Western Ontario

Support for the 6th Annual General Meeting

Washington State University-Vancouver

Support for Science Talk NW, a 2-day science communication conference

General

American Society for Microbiology

Support for the inaugural American Society for Microbiology/American Society for Virology Conference on Intestinal Viruses, Bacteria, and the Host

American Society for Microbiology

Support for a new meeting of the American Society for Microbiology on Mechanisms of Interbacterial Cooperation and Competition

American Society for Microbiology

Support for the American Society for Microbiology Conference on Tuberculosis: Past, Present and Future

American Society of Tropical Medicine and Hygiene

Support for the 65th Annual Meeting of the American Society of Tropical Medicine and Hygiene

American Society of Tropical Medicine and Hygiene

Support for the Burroughs Wellcome Fund/American Society of Tropical Medicine and Hygiene fellowships for three years 2017-2020

American Society of Tropical Medicine and Hygiene

Support for the travel of the award-winning presenters from the Woods Hole Parasitology meetings who will present at the American Committee of Molecular, Cellular and Immunoparasitology (ACMCIP) scientific sessions at the annual ASTMH meeting

Association of American Veterinary Medical Colleges

Support for the Burroughs Wellcome Fund's Becoming Faculty Workshop

Boston Children's Hospital/Harvard Medical School

Support for PATH awardee, Sunny Shin, to present a seminar at Harvard Medical School

Case Western Reserve University

Support for the "Tool and Community Development in Helminth Parasite Research"

Cold Spring Harbor Laboratory

Support for the 2017 meeting "Microbial Pathogenesis and Host Response"

Cold Spring Harbor Laboratory

Support for a Banbury meeting entitled "NLRs Sans Frontieres"

Cornell University

Support for a seminar to be presented by Mary Estes

Cornell University College of Veterinary Medicine

Support for the Burroughs Wellcome Fund's Becoming Faculty Workshop

Environmental Mutagenesis and Genomics Society

Support for a special symposium titled "DNA Repair Mechanisms and Consequences: A Tribute to Philip C. Hanawalt" held September 13-14, 2017 in Raleigh, North Carolina sponsored by the Environmental Mutagenesis and Genomics Society

Federation of American Societies for Experimental Biology

Support for the Summer Research Conference "Molecular Pathogenesis: Mechanisms of Infectious Disease"

Genetics Society of America

Support for the Asilomar 29th Fungal Genetics Conference

Gordon Research Conferences

Support for the Gordon Research Conference titled "Viruses and Cells"

Gordon Research Conferences

Support for the Gordon Research Conference on "Tropical Infectious Diseases: Advances in Basic and Translational Research"

Gordon Research Conferences

Support for the Gordon Research Conference titled "Immunology on Fungal Infections"

Gordon Research Conferences

Support for the Gordon Research Conference on Phagocytes

Gordon Research Conferences

Support for the 2017 Gordon Research Conference on Staphylococcal Diseases

Gordon Research Conferences

Support for the Malaria Gordon Research Conference

Gordon Research Conferences

Support for the Gordon Research conference titled "Red blood cells: formation, genetics, physiology and disease mechanisms"

Harvard Medical School

Support for PATH awardee, Dr. Blossom Damania, to present a seminar at Harvard Medical School

Harvard T.H. Chan School of Public Health

Support for a course and symposium, MALBOP 2017, focused on training and leadership in infection and immunity

McGill University

Support for Nan Yan of the University of Texas Southwestern Medical Center to speak at the Excellence in Genetics & Immunology lecture series

Memorial Sloan-Kettering Cancer Center

Support for PATH awardee, Audrey Odom, MD, PhD, to present a seminar at Memorial Sloan-Kettering Cancer Center

National Academy of Sciences

Support for a proposed consensus study through "Mentoring in STEM Education"

New York University School of Medicine

Support for PATH awardee, Igor Brodsky, to present a seminar at New York University

New York University School of Medicine

Support for PATH awardee, Russell Vance, to present a seminar at the New York University School of Medicine

New York University School of Medicine

Support for PATH awardee, Joseph Mougous, to present a seminar at the New York University School of Medicine

North Carolina State University

Support for the 2017 Mid-Atlantic Microbial Pathogenesis Meeting

Pennsylvania State University

Support for a meeting on CRISPR/Cas for Plasmodium and other Apicomplexan parasites

Pennsylvania State University

Support for a seminar by Jonathan Kagan, of Boston Children's Hospital and Harvard Medical School

Research Foundation of the State University of New York

Support for the 10th International Conference on Cryptococcus and Cryptococcosis

Rutgers University-Rutgers Biomedical and Health Sciences-New Jersey Medical School

Support for PATH Advisory Committee member, Aaron Mitchell, to present a seminar at Rutgers University

Rutgers University-Rutgers Biomedical and Health Sciences-New Jersey Medical School

Support for a PATH awardee networking symposium in the Tri-State area of NY-NJ-PA

Stanford University

Support for PATH advisory committee member, Daniel Goldberg, to present a seminar

Stanford University

Support for PATH advisory committee member, Margaret Kilian, to present a seminar at Stanford University

Stanford University

Support for PATH awardee, Luciano Marraffini, to present a seminar at Stanford University

Stanford University Medical Center

Support for PATH awardee, Sara Sawyer, to present a seminar at Stanford University

University of California-Davis

Support for the one day meeting of the Biology and Mathematics in the Bay Area XI

University of California-San Francisco

Support for PATH awardee, Sunny Shin, to present a seminar at the University of California-San Francisco

University of California-San Francisco

Support for PATH awardee, Victor Torres, to present a seminar at the University of California-San Francisco

University of California-San Francisco School of Medicine

Support for PATH awardee, Dr. Erica Saphire, to present a seminar at the University of California-San Francisco

University of California-San Francisco School of Medicine

Support for the seventh Advanced Lecture Course "Human fungal pathogens (HFP): molecular mechanisms of host-pathogen interactions and virulence"

University of California-San Francisco School of Medicine

Support for the 20th anniversary of the Bay Area Microbial Pathogenesis Symposium

University of Colorado School of Medicine

Support for the 2017 Molecular and Cellular Biology of Helminth Parasites conference

University of Massachusetts-Amherst

Support for PATH awardee, Robb Cramer, to present a seminar at the University of Massachusetts-Amherst

University of Michigan Medical School

Support for BWF/HHMI partnership veterinary student training program fellow Katherine Turnbull

University of Michigan-Ann Arbor

Support for the International Conference on Molecular Biology and Pathogenesis of the Clostridia

University of North Carolina-Chapel Hill

Support for Investigator in the Pathogenesis of Infectious Disease awardee, Michael Fischbach, to present a seminar at the University of North Carolina

University of North Carolina-Chapel Hill

Support for PATH awardee, Andrew Goodman, to present a seminar at the University of North Carolina

University of North Carolina-Chapel Hill

Support for PATH awardee, Matt Evans, to present a seminar at the University of North Carolina

University of North Carolina-Chapel Hill

Support for PATH awardee, Russell Vance, to present a seminar at the University of North Carolina

University of Notre Dame

Support for the 24th annual Midwest Microbial Pathogenesis Conference

University of Notre Dame

Support for the Midwest Neglected Infectious Diseases meeting

University of Pennsylvania

Support for a joint lab retreat of the Scott Hensley lab and the Jesse Bloom lab

University of Pennsylvania School of Veterinary Medicine

Support for the 21st annual Woods Hole Immunoparasitology meeting

University of Pennsylvania School of Veterinary Medicine

Support for BWF/HHMI partnership veterinary student training program fellow Anna Rowland Martin

University of Pittsburgh School of Medicine

Support for the 17th International Congress of Virology

University of Rochester Medical Center

Support for Career Award in the Biological Sciences awardee, Laura Knoll, PhD, to present a seminar at the University of Rochester's newly formed host defense lecture series

University of Texas Health Science Center-San Antonio

Support for a meeting on Molecular Helminthology – An Integrated Approach

University of Texas Southwestern Medical Center-Dallas

Support for PATH awardee, Sun Hur, to present a seminar

University of Texas Southwestern Medical Center-Dallas

Support for PATH advisory committee member, John Boothroyd, to present a seminar at the University of Texas Southwestern Medical Center

University of Texas Southwestern Medical Center-Dallas

Support for PATH awardee, Marvin Whiteley, to present a seminar at the University of Texas Southwestern Medical Center's Micro series

University of Texas Southwestern Medical Center-Dallas

Support for PATH awardee, Andy Mehle, to present a seminar at the University of Texas Southwestern Medical Center

University of Texas-Austin

Support for PATH awardee, Christine Dunham, to present a seminar

Vanderbilt University

Support for the joint AAMC/BEST conference

Vanderbilt University Medical Center

Support for Preterm Birth Initiative awardee, Indira Mysorekar, to present a seminar at Vanderbilt University

Vanderbilt University School of Medicine

Support for PATH awardee, Andy Goodman, to present a seminar at Vanderbilt University

Virginia Commonwealth University

Support for US, Canada, and Latin America students to attend the European Molecular Biology Organization conference "Anaerobic protists: Integrating parasitology with mucosal microbiota and immunology"

Washington University School of Medicine

Support for PATH awardee, Kent Hill, to present a seminar

Yale University School of Medicine

Support for Clinical Scientist in Translational Research awardee, Mike Diamond, to present a seminar

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

Support for the 12th International Conference on Pathways, Networks and Systems Medicine

American Society for Cell Biology

Support for the inaugural "Bottom-Up Cell Biology" special interest subgroup at the American Society for Cell Biology

Biophysical Society

Support for the 2017 Annual Meeting of the Biophysical Society

Carnegie Mellon University

Support for the 8th International Workshop on Statistical Analysis of Neural Data

Case Western Reserve University

Support for Gordon Research Conference on Biomaterials and Tissue Engineering

Cold Spring Harbor Laboratory

Support for the "Ferroptosis: A Critical Review" meeting to be held by the Banbury Center

Computational and Systems Neuroscience (Cosyne)

Support for the 2016 Computational and Systems Neuroscience Annual Meeting (Cosyne 2016)

Computational and Systems Neuroscience (Cosyne)

Support for the 2017 Computational and Systems Neuroscience Annual Meeting (Cosyne 2017)

Duke University

Support for Triangle Center for Evolutionary Medicine Showcase Event

Georgia Institute of Technology

Support for Robophysics Meets Robotics Session at the 2017 APS March Meeting

Georgia Institute of Technology

Support for Georgia Tech Hands-on Quantitative Biosciences Modeling Workshop

International Society for Cellular Therapy

Support for the International Society for Cellular Therapy 2017 Annual Meeting

Marine Biological Laboratory

Support for the course Physiology: Modern Cell Biology Using Microscopic, Biochemical and Computational Approaches over three years (2017-2019)

New York Stem Cell Foundation

Support for a summer intern in New York Stem Cell Foundation's Laboratory in the summer of 2017

Society for Biomaterials

Support for Society for Biomaterials 2017 Annual Meeting

University of California-Berkeley

Support for the first USA-Cuba workshop on nanomedicine and drug delivery systems (NanoMEDD) to be held in December 2016 in Havana, Cuba at the Palacio de las Convenciones and the University of Havana

University of North Carolina-Chapel Hill

University of North Carolina/North Carolina State University Joint Department of Biomedical Engineering for general operational purposes

University of Utah

Support for the 2017 Society for Mathematical Biology meeting

Washington University

Support for the "Workshop on Brain Dynamics and Neurocontrol"

REGULATORY SCIENCE**Arkansas Research Alliance**

Support for the 2017 Global Regulatory Summit

Clemson University

Support for the 2017 Institute for Biological Interfaces of Engineering Annual Conference

Council for Entrepreneurial Development

Support for Headline Sponsorship at the Council for Entrepreneurial Development's 2017 Life Science Conference

Environmental Mutagenesis and Genomics Society

Support for the 47th Annual Meeting of the Environmental Mutagenesis and Genomics Society

Georgetown University

Support for RNA Processing Meeting at the Sanford Consortium for Regenerative Medicine Conference

Health Research Alliance, Inc. (HRA)

Health Research Alliance 2017 Annual Dues

International Society for Stem Cell Research

Support for the plenary session, Frontiers of Cell Therapy at the International Society for Stem Cell Research 2017 Annual Meeting

MidSouth Computational Biology and Bioinformatics Society (MCBIOS)

Support for travel to Massive Analysis and Quality Control Society Meeting at SAS

National Academies

Support for the National Academies of Sciences, Engineering and Medicine's consensus study on Ensuring Patient Access to Affordable Drug Therapies

National Academies

Support for the National Academies' Forum on Drug Discovery, Development, and Translation in 2017

National Academy of Sciences

Support for Increasing African American Males in the Medical Profession: A Workshop

National Academy of Sciences/Institute of Medicine

Support for the National Academy/Institute of Medicine's Forum on Regenerative Medicine

Society of Toxicology

Support for the Toxicogenetics

Society of Toxicology

Support for the Society of Toxicology 56th Annual Meeting

Termis-Americas

Support for TERMIS-AM 2017 Annual Conference

University of California-Los Angeles

Support for Toxics in Everyday Life Workshop

University of Rochester

Support for the Technology and Rare Neurological Diseases Symposium

SCIENCE AND PHILANTHROPY

Communications

American Association for the Advancement of Science

Support for the 2017 AAAS Mass Media Science and Engineering Fellowship

EducationNC

General support for 2017

Food and Environment Reporting Network (FERN)

Gastropod Coverage of Biomedical Research

National Academies

Support for the Arthur Sackler Colloquium

North Carolina Community Foundation

Communications Training Initiative Year 4

North Carolina Community Foundation/North Carolina Network of Grantmakers

NCNG Communications Networking Group Retreat

North Carolina Community Foundation/North Carolina Network of Grantmakers

Support for the Communications Training Initiative – One-on-One Coaching

Open Notebook

The Open Notebook/BWF Early-Career Science Journalism Fellowship

Sigma Xi, The Scientific Research Society

Science Communicators of North Carolina (SCONC) Education and Outreach Project

General Philanthropy

American Institute of Biological Sciences

Support for the meeting titled "The Role of Peer Review in Informed Decision-making"

Association for Women in Science

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

Council on Foundations

Support for 2017

Foundation Center

General Operating Support for 2016 - 2017

National Postdoctoral Association

Support for covering the cost of staff time and publishing costs for the 2016 iteration of the National Postdoctoral Association Institutional Policy Survey and Report

North Carolina Community Foundation/North Carolina Network of Grantmakers

Support for 2017-18

PEAK Grantmaking

Support for PEAK Grantmaking (aka Grants Managers Network (GMN)); the nationwide affinity group for grants managers, providing members with valuable opportunities for professional development

University of Western Ontario

Support for the 2016 Canadian Association of Postdoctoral Administrators (CAPA/ACAP) meeting

Science Policy

American Institute of Biological Sciences

Support for "Engaging Policymaking: Opportunities for Biology Organizations"

National Academies

Support for the study on sexual harassment in the science, engineering, and medical workplace

National Academies

Support for the symposium "Addressing the Challenges Faced By Refugees and Internationally Displaced Persons: the Role of the International Scientific Community"

Research!America

Support for the Research!America Internship Program

Special Award

Baptist Health South Florida Foundation

Support for the Miami Cancer Institute molecular research through the Center for Genomics for high-risk, high-gain research initiatives

Beloit College

Support for the Beloit College Biomedical Research Scholars Program

HHT Foundation International

Support for the Young Scholar Program at the national HHT Patient and Family Conference

HHT Foundation International

Support for travel awards to the HHT International Scientific Conference

Illinois Institute of Technology

Support for undergraduate research internships for underrepresented minority students in the College of Sciences

Marine Biological Laboratory (MBL)

Support for summer undergraduate research programs for underrepresented minorities

Triangle Community Foundation

Support for the Triangle Community Foundation's Collaboration Hub

SCIENCE EDUCATION

Science Education

American Association for the Advancement of Science

Support for the AAAS Mass Media Science & Engineering Fellowship Program

Bethany Community Middle School

Support for professional development activities

Cabarrus County Schools

Space Science Experiment Program

Cumberland County Board of Education

Cumberland County Schools' Singapore Math Pilot Project at Gallberry Farm Elementary School

East Forsyth High School

Support for professional development activities

Friends of the North Carolina State Museum of Natural Sciences

Support for livestreaming and discussion guides for RACE speaker series

Go Global NC

Regional TOYs Global Teachers to Germany 2017

Guilford County Schools

Singapore Math Pilot at Murphey Traditional Academy in Guilford County Schools

Lowe's Grove Magnet Middle School

Support for activities for the 2017-18 school year, in recognition of Senator Howard Lee's selection for the 2017 Jay Robinson Leadership Award

McDowell County Schools

Building a Strong Math Foundation Through Constructing, Drawing, and Solving, a proposal by Eastfield Global Magnet School, McDowell County Schools

National Association of Academies of Science

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

North Buncombe High School

Support for professional development

North Carolina School of Science and Mathematics Foundation

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

North Carolina Science Fair Foundation

Support for the North Carolina Science and Engineering Fair for 2017

North Carolina Science Teachers Association

Support for workshops on Science and Literacy at the National Science Teacher's Association Professional Learning Institute on October 19-20

North Carolina Society of Hispanic Professionals

Promotion of Participation/Enrollment of Hispanic Students in STEM Programs in NC

North Carolina State University

A Field Guide to Your Kitchen

Polk County High School

Support for professional development activities

Region O Council for the Advancement of Minorities in Engineering (ROCAME)

Support for a grant to update ROCAME Robotics Platform

Shaw University

Support for the Dr. Kim Leathers Legacy Endowment

TC Roberson High School

Support for professional development

University of North Carolina-Chapel Hill

Support for the CASMT evaluation

University of North Carolina-Chapel Hill

Support for North Carolina DNA Day 2017

University of San Diego

Full installment of a grant to support the STEM Learning Ecosystem Initiative

Western Piedmont Council of Governments

Support for the Betabox Expo

Western Piedmont Council of Governments

Support for STEM West networking for 2017

Wilkes County Schools

Singapore Math Project – North Wilkesboro Elementary School – Wilkes County School District

Science, Math, and Technology Science Champion

Johnston County Schools

Support for the Burroughs Wellcome-Johnston STEM Partnership Convocation

Morehead Planetarium and Science Center

Support for curation of the NC STEM Calendar

North Carolina Alliance for School Leadership Development

Support for the Aspiring Superintendent Program

North Carolina Alliance for School Leadership Development

North Carolina Emerging Trends Network and Future Focused Schools

North Carolina Alliance for School Leadership Development

Digital Leadership Institute for Superintendents – Cohort II

North Carolina Association for Biomedical Research

Bridging the Gap: Uniting North Carolina K-16 STEM Education

North Carolina Chamber Foundation

Support for the Conference on Education – Reversing North Carolina's Skills Gap via a Strong Education Continuum

North Carolina Public Television Foundation

UNC-TV: SciTech Now – North Carolina Underwriting Partnership

North Carolina School of Science and Mathematics Foundation

Support for the STEM Hall of Fame Gala

North Carolina State University Foundation

Support for the North Carolina Teacher Leadership Symposium

Professional Engineers of North Carolina Education Foundation

Support for the Future City Competition North Carolina Region

Public School Forum of North Carolina

North Carolina International Science Challenge

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

Tamara L. Doering, MD, PhD

Professor, Dept. of Molecular Microbiology
Washington 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****Jerry L. Bryant, PhD**

Former Director, Science Education Initiatives
United Negro College Fund

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

Lee Limbird, PhD

Professor of Biochemistry,
Department of Life and Physical Sciences
Dean, School of Natural Sciences,
Mathematics, and Business
Fisk University

Carla Mattos, PhD

Professor
Northeastern University

Clifton A. Poodry, PhD

Senior Fellow, Science Education
Howard Hughes Medical Institute

Michael Summers, PhD (Chair)

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

INFECTIOUS DISEASES**Investigators in the Pathogenesis of Infectious Disease****Michael S. Diamond, MD, PhD**

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

JoAnne L. Flynn, PhD

Professor of Microbiology and Molecular Genetics
University of Pittsburgh School of Medicine

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

Aaron P. Mitchell, PhD

Professor of Biological Sciences
Carnegie Mellon University

Robert S. Munford, MD

Senior Clinician and Deputy Director
Laboratory of Clinical Infectious Diseases
National Institute of Allergy and Infectious Diseases (NIAID)

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 Papadopoulos, 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

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 (Co-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

Alan S. Perelson, PhD

Senior Fellow
Los Alamos National Laboratory

Matthew R. Redinbo, PhD

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

Bernardo L. Sabatini, MD, PhD

Assistant Professor
Harvard Medical School
Dept. of Neurobiology

Brent R. Stockwell, PhD

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

Shankar Subramaniam, PhD (Co-chair)

Joan and Irwin Jacobs Endowed Chair in Bioengineering and Systems Biology
University of California-San Diego

Julie A. Theriot, PhD

Associate Professor
Department of Biochemistry
Department of Microbiology and Immunology
Stanford University School of Medicine

Michelle D. Wang, PhD

Investigator, Howard Hughes Medical Institute
Professor of Physics
Cornell University

REGULATORY SCIENCE

Innovation in Regulatory Science Awards

Darrell Abernethy, MD, PhD

Professor of Medicine and Pharmacology and Molecular Science, Johns Hopkins University School of Medicine
Associate Director for Drug Safety, Official of Clinical Pharmacology Food and Drug Administration

Sandy Allerheiligen, PhD

Vice President and Global Head
Modeling and Simulation
Merck Research Labs

David Acheson, MD

President and CEO
The Acheson Group, LLC

Garret FitzGerald, MD

Chair, Dept. of Pharmacology
Director, Institute for Translational Medicine and Therapeutics (ITMAT)
University of Pennsylvania Perelman School of Medicine

Dan Roden, MD

Professor of Medicine and Pharmacology
Assistant Vice Chancellor for Personalized Medicine
Vanderbilt University Medical Center

Christy L. Shaffer, PhD

General Partner, Hatteras Venture Partners
Managing Director, Hatteras Discovery

Paul Watkins, MD

Verne S. Caviness Distinguished Professor of Medicine
University of North Carolina-Chapel Hill
Director, Hamner-UNC Institute for Drug Safety Sciences

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

Jay D. Iams, MD

Frederick P. Zuppan Professor and Endowed Chair,
Division of Maternal Fetal Medicine
Vice Chair, Department of Obstetrics and Gynecology
Ohio State University Medical Center

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

D. Michael Nelson, MD, PhD

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

Jerome F. Strauss, III, MD, PhD

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

Jenny Ting, PhD

Alumni Distinguished Professor of Microbiology
and Immunology
Lineberger Comprehensive Cancer Center
University of North Carolina at Chapel Hill

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

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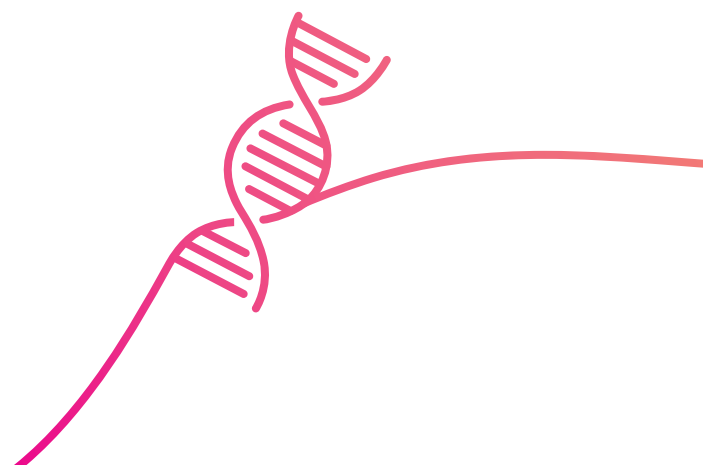
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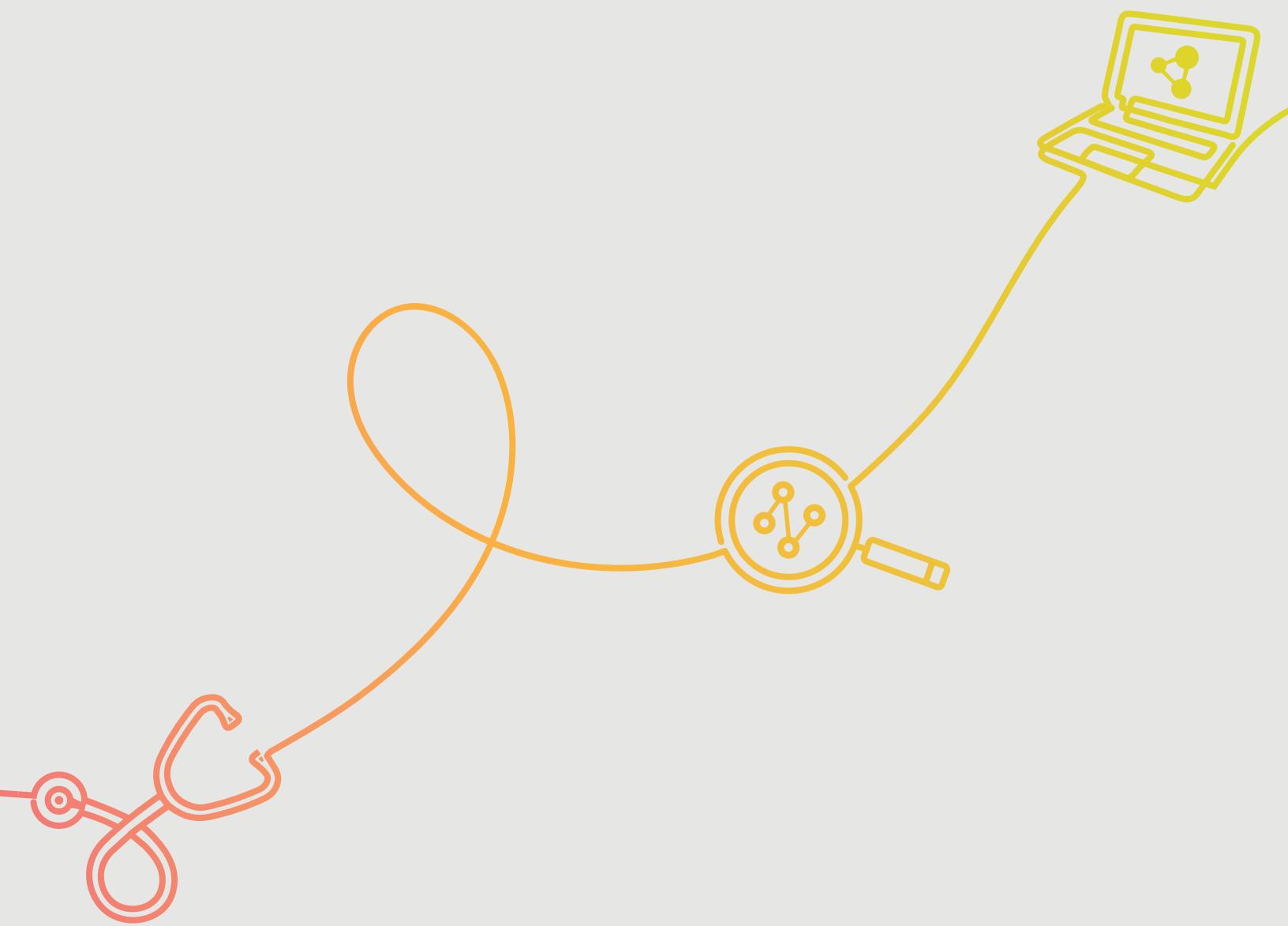
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PROGRAM INFORMATION

The most up-to-date information about our programs, including complete application information, can be found on our website at www.bwfund.org.





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