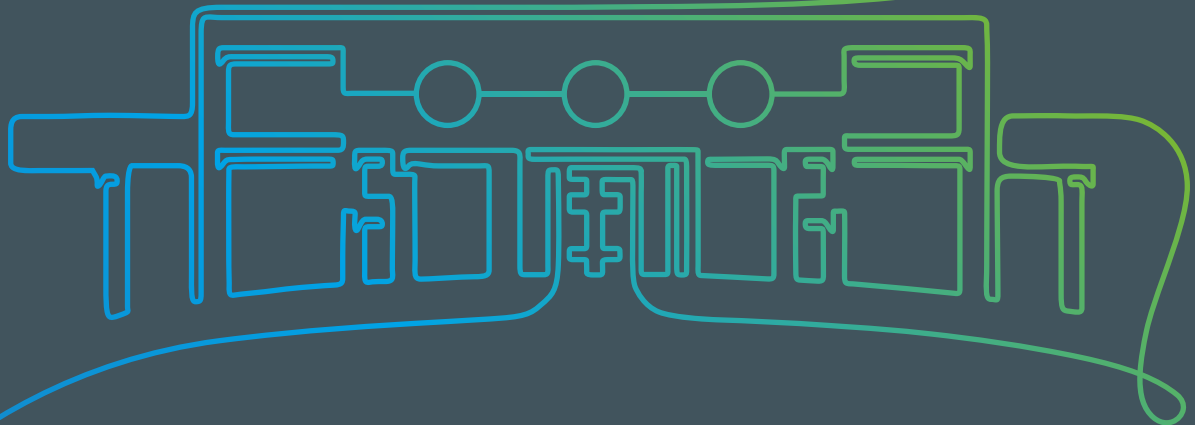


2017 ANNUAL REPORT

Promoting Institutional Change  
and Individual Success



BURROUGHS  
WELLCOME  
FUND 

# Grant Programs

## Biomedical Sciences

### **Career Awards for Medical Scientists:**

Five-year awards for physician-scientists provide \$700,000 to bridge advanced postdoctoral/fellowship training and the early years of faculty service. This award addresses the on-going challenge of increasing the number of physician-scientists and will help facilitate the transition to a career in research.

### **Collaborative Research Travel Grants:**

Provide up to \$15,000 in support for interdisciplinary biomedical researchers from degree-granting institutions to travel to a laboratory to acquire a new research technique or to facilitate collaboration.

### **Physician-Scientist Institutional**

**Program:** Supports institutional programs designed to increase the number of MD's who enter careers in research (physician-scientists). Up to 10 institutions will receive awards of \$2.5 million (\$500,000/year over 5 years) to institute their proposed activities.

## Career Guidance

### **Career Guidance for Trainees:**

Provides up to \$50,000 over a one-year period to support demonstration projects that will model affordable approaches to improving trainees' readiness for stable, fulfilling careers.

## Diversity in Science

### **Postdoctoral Enrichment Program:**

Provides \$60,000 over three years to support the development of underrepresented minority postdoctoral fellows in biomedical research.

## Infectious Diseases

### **Investigators in the Pathogenesis of Infectious Disease:**

Five-year awards provide \$500,000 to support accomplished investigators at the assistant professor level in the study of infectious disease pathogenesis, with a focus on the intersection of human and microbial biology. The program aims to improve our understanding of how human hosts handle infectious challenges.

## Interfaces in Science

### **Career Awards at the Scientific**

**Interface:** Five-year awards provide \$500,000 to bridge advanced postdoctoral training and the early years of faculty service. These awards are intended to foster the early career development of researchers with backgrounds in the physical/mathematical/ computational/ engineering sciences whose work addresses biological questions.

## Regulatory Science

### **Innovation in Regulatory Science**

**Awards:** Provides up to \$500,000 over five years to academic investigators developing new methodologies or innovative approaches in regulatory science that will ultimately inform regulatory decisions.

## Reproductive Science

**Preterm Birth Initiative:** \$600,000 over a four-year period to bring together a diverse interdisciplinary group within the more traditional areas of parturition research to address the myriad questions related to preterm birth.

## Science Education

### **Career Awards for Science and**

**Mathematics Teachers:** Five-year awards provide \$175,000 each to eligible science or mathematics teachers in the North Carolina's public primary and secondary public schools. This award recognizes teachers who have demonstrated solid knowledge of science or mathematics content and have outstanding performance records in educating children. The award is a partnership between the North Carolina State Board of Education and BWF.

### **Student STEM Enrichment Program:**

Three-year awards provide up to \$180,000 to North Carolina nonprofit organizations, including public/private schools, universities, colleges, and museums. This program supports creative inquiry-based STEM enrichment activities that occur outside the typical school day for K-12 students. The program's goals are to nurture students' enthusiasm for science and mathematics, expose them to the excitement of scientific discovery, and interest them in pursuing careers in research or other science-related areas.

### **Promoting Innovation in Science and**

**Mathematics:** Awards up to \$4,500 provide teachers with funding for materials, equipment, and training to conduct hands-on, inquiry-based science and mathematics projects in the North Carolina public schools.

For complete program information, including deadlines, please visit [bwfund.org](http://bwfund.org)

# 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 needed to do just that. Three decades ago, the former director of the National Institutes of Health called

“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.”

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.

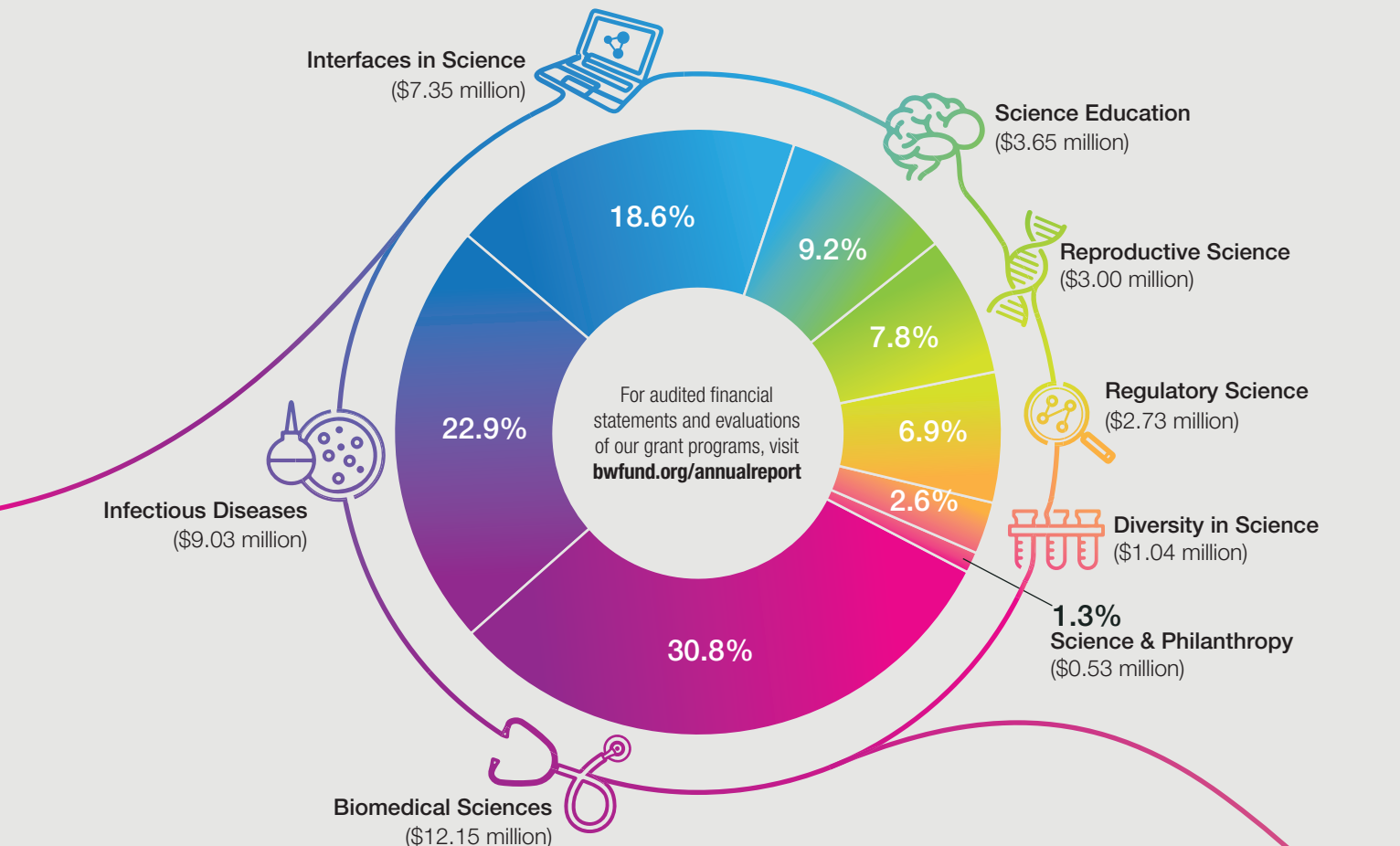
In the years ahead we will continue to focus our funding on individual researchers, but must be

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**



**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 basic biomedical sciences that are undervalued or in need of particular encouragement.

BWF's financial support is channeled primarily through competitive peer-reviewed award programs to degree-granting institutions in the U.S. and Canada on behalf of individual researchers. To complement these competitive award programs, BWF also makes grants to nonprofit organizations conducting activities intended to improve the general environment for science.

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

Governed by a Board of Directors composed of distinguished scientists and business leaders, BWF was founded in 1955 as the corporate foundation of the pharmaceutical firm Burroughs Wellcome Co. In 1993, a generous gift from the Wellcome Trust, enabled BWF to become fully independent from the company, which was acquired by Glaxo in 1995.

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