

Diversity Drives Discovery

2020 ANNUAL REPORT

BURROUGHS
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FUND 

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Burroughs Wellcome Fund

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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.



“

As Maya Angelou conveyed: Prejudice is a burden that confuses the past, threatens the future and renders the present inaccessible.

President's Message



As I began in my new role as President and CEO in January 2020, I recognized the enormous potential that BWF had for even greater scientific impact.

However, as it was for everyone on this planet, 2020 was a truly unprecedented year.

The challenges that the COVID-19 pandemic provided reinforced the unique capacity BWF has as an organization to address the issues of most urgent scientific and societal need, be nimble in repurposing activities to continue our work, and support our network of awardees, advisors, and staff.

To paraphrase Denis Diderot: “Genius is present in every age, but the people carrying it within them remained benumbed unless extraordinary events occur to heat up and melt the mass so that it flows forth.” As extraordinary events heated up 2020, genius truly emerged.

In addition to previous award programs, our efforts in terrain mapping prioritized climate change and human health, science communication and data visualization, and further enhancement of the interactions of science and the arts. The past year has further demonstrated the critical importance of each of these themes in moving forward.

The pandemic reflects a dramatic and early instance of the consequences of global climate disruption. Expanded vector, host, and pathogen geographies bring into contact combinations of infectious agents that previously did not occur. Working with the National Academies of Medicine, we have partnered to address climate change at its root causes – reducing carbon footprint due to fossil fuels, identifying avenues in the healthcare sector to reduce environmental impact, fostering climate change communication, and BWF modeling use of green and sustainable resources such as an investment in solar photovoltaics.

To address COVID-19 research directly, we awarded collaborative grants within the existing awardee network

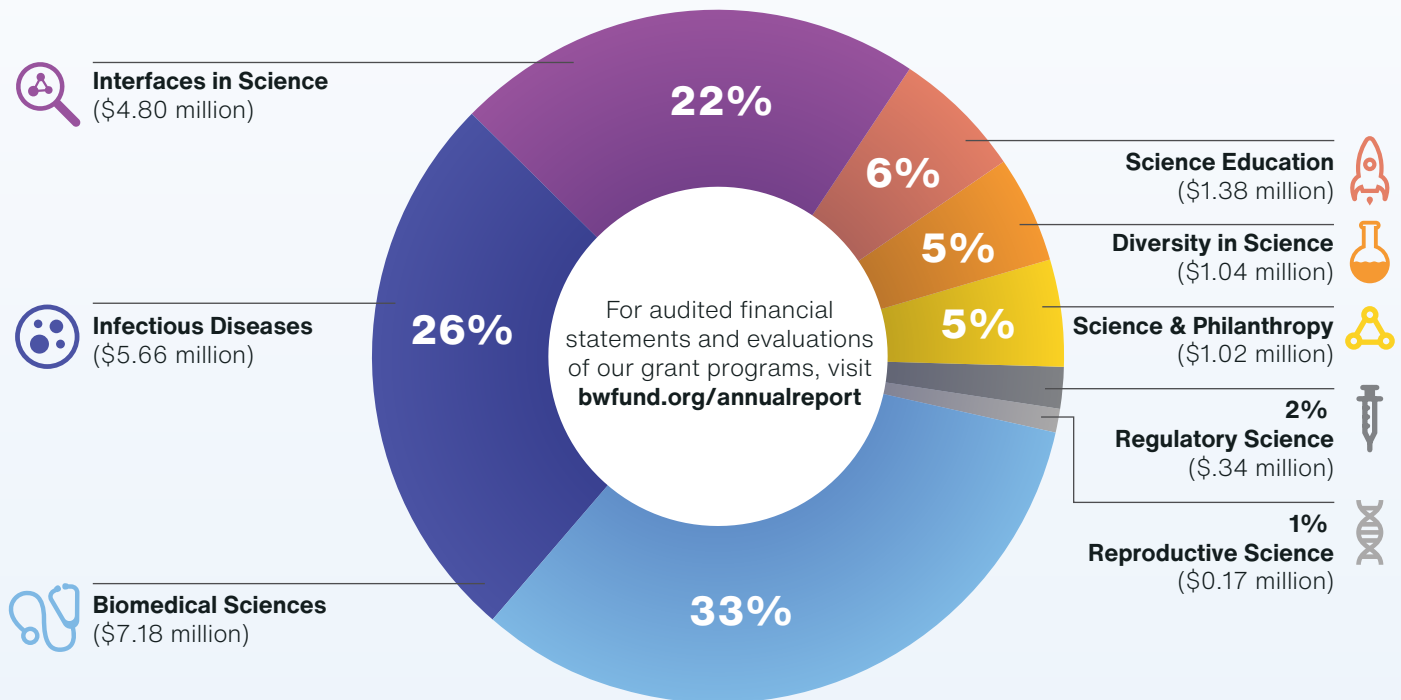
to generate innovative approaches to understanding the mechanisms of this disease and thinking about future pandemic prevention.

We recognized the hardships for early career investigators, and provided peer workshops, mentorship, and flexible use of grant awards to keep programs as productive as possible.

All BWF activities shifted to virtual platforms, and these have worked well with support from our meeting professional, Lori Hedrick, working with Barbara Evans, and our IT staff, Sam Caraballo, and Wendell Jones. These events have demonstrated that we can work effectively without extensive travel – and this further serves our goal of reducing our carbon footprint and detrimental environmental consequences.

Diversity, equity, and inclusion is a priority within programs such as the Postdoctoral Enrichment Program, Graduate Diversity Enrichment Program, and other investments such as bringing the RACE 2.0 exhibit to North Carolina and support for the establishment of the Dudley Flood Center for Educational Equity and Opportunity.

BWF awarded more than \$21 million in grants during fiscal year 2020



During 2020 we witnessed the profound display of ongoing racism and social injustice as evidence by the death of George Floyd, among others. As an organization, we emerge ignited and determined to work towards a safe and equitable society.

As Maya Angelou conveyed: Prejudice is a burden that confuses the past, threatens the future and renders the present inaccessible.

We now view every activity we are involved in through a DEI lens – the composition of our Board and advisory committees, and

the prioritization of requests for funding that include engaging diverse scholars, such as our new partnership with *The Conversation* to identify scholars of color to communicate their research with a broad audience.

These efforts to strengthen science and society have further motivated us to focus on big, bold goals around climate, racial justice, diversity, and inclusiveness of all types – beyond race, geography, gender, sexual orientation – serving to enrich the discussion, foster solutions, and engage the broad

scientific community and the public. I look forward to the creative programs that will emerge because of the experiences of 2020.

Thank you.

Louis J. Muglia, MD, PhD
President and CEO
Burroughs Wellcome Fund

2020 Highlights



@SCOTTEHENSLEY

"This study wouldn't have been possible without @BWFUND. The #bwfpath funds allowed us to venture off into a completely new direction. I remember nervously presenting some of these ideas in front of the #bwfpath advisory committee and it is nice to see this story come together!"

JAN 23, 2020



@MORRISTEACH1

"It's T.O.Y Time! Come on this fun science journey with @totalstemteach! Ms. Ellis is a @BWFUND CASMT awardee from @GastonSchools. In this episode you will learn about digestive system, complete with fun dance and DIY science experiment!"

APR 9, 2020

@MIQUELLACHAVEZ

"Congrats to former CASI Awardee Paul Blainey and everyone at @broadinstitute for this groundbreaking research!"

MAY 5, 2020



@BWFUND

"ACC to Deliver 'Virtual' Medical Bridge Camp to Young Males"

JUL 14, 2020



@BWFUND

"Greene County Middle teachers earn STEM Innovation Grant Award - NEUSE NEWS. Matthew Lococo, 7th Grade STEM ELA teacher at GCMS, and Thomas Loftin, GCMS STEM Lab teacher, receive PRISM Grants from the Burroughs Wellcome Fund."

APR 3, 2020



@AMAYS_BWFUND

"#bwfcasmt and #bwfpdep in action! #bwfdiversity programming being leveraged across @BWFUND's award programming."

NOV 17, 2020



@BWFUND

"From @JAMAPediatrics - Association of State-Level Opioid-Reduction Policies With Pediatric Opioid Poisoning"

JUL 18, 2020



Debra J. Holmes

Senior Program Associate

Debra Holmes, Senior Program Associate, retired from the Burroughs Wellcome Fund in 2020 after 20 years of service to the Fund. While at the Fund, Debra managed the Biomedical Research and Reproductive Science portfolio. Debra's contributions to the Fund's success are immeasurable and we are grateful for her dedication and many years of service.



@BWFUND

"Jen Alexander-Brett, MD, PhD (2015 CAMS) has spent time on the COVID-19 frontline as a pulm/cc physician. This story has a happy ending. 'Pregnant mother of two shares her story of nearly dying from COVID-19.'"

AUG 9, 2020



@BWFUND

"Social quarantine has severely impacted the training of new scientists, but the use of virtual platforms can supplement mentorship, making career development seamless."

DEC 4, 2020



FISCAL YEAR 2020

Competitive Grant Awardees

Career Award at the Scientific Interface

Ahmed S. Abdelfattah, PhD
Brown University

Zibo Chen, PhD
California Institute of Technology

Yogesh Goyal, PhD
University of Pennsylvania

Elizabeth R. Jerison, PhD
Stanford University

Stephanie E. Lindsey, PhD
Stanford University

Brittany S. Morgan, PhD
TBD

Cristina Rodriguez, PhD
University of California- Berkeley

Julea Vlassakis, PhD
University of California-Berkeley

Career Awards for Medical Scientists

Alexander George Bick, MD, PhD
Harvard Medical School

Julia Catherine Carnevale, MD
University of California-San Francisco

Emily Anne Ferenczi, MB, ChB, PhD
Harvard Medical School

Ryan Alexander Flynn, MD, PhD
Stanford University

Anna Nam, MD
Weill Medical College
of Cornell University

Josephine Ni, MD
University of Pennsylvania

Xilma Rosa Ortiz-Gonzalez, MD, PhD
University of Pennsylvania

William Renthal, MD, PhD
Harvard Medical School

Andrew Ben Stergachis, MD, PhD
Harvard Medical School

Career Guidance for Trainees

**Coaching for Career Development
via the ASPET Mentoring Network**

North Carolina State University

The STEM Advocacy Institute

**University of Colorado Denver,
Anschutz Medical Campus**

**University of Georgia Research
Foundation, Inc.**

University of North Carolina-Charlotte

University of Pittsburgh

Investigators in the Pathogenesis of Infectious Disease

Megan T. Baldrige, MD, PhD
Washington University School
of Medicine

Brian P. Conlon, PhD
University of North Carolina-
Chapel Hill

Gretchen Diehl, PhD
Memorial Sloan Kettering
Cancer Center

Asma I. Hatoum, PhD
University of Illinois, Urbana-Champaign

Iliyan D. Iliev, PhD
Weill Medical College
of Cornell University

Philip J. Kranzusch, PhD
Harvard Medical School

Anna Marie Selmecki, PhD
University of Minnesota
Medical School

Golnaz Vahedi, PhD
University of Pennsylvania

Ivan Zanoni, PhD
Harvard Medical School



Postdoctoral Enrichment Program

Tyler Alexander, PhD

St. Jude Children's Research Hospital

Shayna T. J. Bradford, PhD

Washington University

Adrian Sergio Enriquez, PhD

Tulane University

Ebony Flowers, PhD

University of Southern California

Monica Gutierrez, PhD

Northwestern University

Joshua Hooks, PhD

Johns Hopkins University

Nisan Michael Hubbard, PhD

University of North Carolina-
Chapel Hill

Clifford A Kapon, PhD

University of Hawaii-Hilo

Jessica Renee Queen, MD, PhD

Johns Hopkins University School
of Medicine

Valeria Marie Reyes Ruiz, PhD

Vanderbilt University

Andrew Santiago-Frangos, PhD

Montana State University

Chelsey Cierra Spriggs, PhD

University of Michigan-Ann Arbor

Jessica Rene Thomas, PhD

Vanderbilt University

Brittany Nicole Williams, DPhil, PhD

University of North Carolina
Chapel-Hill

Biomedical Sciences





BWF is committed to fostering the development of the next generation of biomedical scientists.

Career Award for Medical Scientists

BWF is committed to fostering the development of the next generation of biomedical scientists and is committed to supporting degree-granting institutions to achieve this goal. The career development of young scientists has been a major funding theme at BWF and various programs have provided major support to promising young scientists to help them make the transition from late postdoctoral training to early faculty service.

The Career Awards for Medical Scientists (CAMS) was introduced in 2007 to specifically address the declining participation of physicians

engaged in academic biomedical research. The CAMS award provides support to facilitate the transition from a mentored position to an independence for the early career physician scientist. The program is ideal for the physician scientist considering an academic career.

CAMS is a highly competitive program that provides \$700,000 in support over five years for physician scientists (MD, DO, DVM, DDS), who are committed to an academic career, to bridge postdoctoral/fellowship training and the early years of faculty service.

Proposals must be in the area of basic biomedical, disease-oriented, or translational research. BWF is also interested in artificial intelligence and machine learning. Proposals in health services research or involving large-scale clinical trials are not eligible. BWF anticipates making up to 10 awards including up to two awards to clinically trained psychiatrists who focus their research at the interface between psychiatry and neuroscience.

Career Development





Helping trainees understand, acquire, and demonstrate skills that make them ready for complex careers should be the goal of submitted proposals.

Career Guidance for Trainees

Moving from training to satisfying employment, whether within academe or in other realms, can require skills not always learned at the bench. Helping trainees understand, acquire, and demonstrate skills that make them ready for complex careers should be the goal of submitted proposals.

The Career Guidance for Trainees (CGT) program provides grants to support demonstration projects that will model affordable, transferable approaches to improving trainees' readiness for stable, fulfilling careers. For the 2021 round, we will be considering proposals for grants of \$15,000 - \$25,000. These smaller awards will allow us to make grants to more organizations. This decision

was made in the context of COVID-19's impact on support of career development activities at many institutions.

BWF will support pilot projects that demonstrate practical approaches to readying scientists for career transitions. Projects may be meant to enhance trainees' understanding of jobs beyond the Academy, or of career trajectories within academe, or of the flexibility of scientists' intellectual skill set.

CGT aims to advance ideas that have the potential to be deployed at larger scales. FASEB's Individual Development Plan, a tool that helps structure key conversations between

trainee and advisor, and Preparing Future Faculty, a program that provides trainees opportunities to observe and experience faculty responsibilities, are two examples of high impact programs that started small and expanded. By citing them as examples, we mean to encourage potential applicants to think big. In these proposals, send us ideas that could change how an organization like yours thinks about readying trainees for successful, fulfilling, happy careers that reflect the value of a scientific education.

Diversity in Science





Enrichment support for underrepresented postdocs has proven to be effective in their career progression.

Graduate Diversity Enrichment Program

The Burroughs Wellcome Fund is committed to supporting the next generation of biomedical scientists and researchers. A significant portion of its grant programming includes the career development of young scientists. The existing Postdoctoral Enrichment Program Award (PDEP) was established to address the continuing lag in the advancement of underrepresented scientists and to position awardees to be more competitive in their pursuit of securing academic and research positions. Enrichment support for underrepresented postdocs has proven to be effective in their career progression. More than 109 awards have been made to early career scientists since the establishment of the Postdoctoral Enrichment Program Award in 2013.

Despite several decades of federally supported programs, racial and ethnic minority Americans continue to be underrepresented among PhD recipients and in the science and engineering workforce. In biomedical sciences, graduate enrollment is 68% white, 12.9% Asian, 5.4%

black, 5.9% Hispanic, 7% unknown and less than .5% American Indian.

Students with strong SAT scores, high grades and success in high school honors math and science courses often leave the undergraduate college STEM pipeline, and the loss is disproportionate among underrepresented students. BWF seeks to support those underrepresented students who go on to become graduate doctoral students in STEM fields and thus increase the diversity of individuals completing degree requirements and entering postdoctoral programs.

To address access to enrichment opportunities and supporting resources, BWF is committed to funding the next generation of scientists and researchers and seeks to support PhD students in efforts to increase diversity in science. The primary goal of the Graduate Diversity Enrichment Program (GDEP) is to enhance the graduate student experience and provide early exposure to various professional environments and networks for which future research and/or professoriate opportunities might manifest.

Funds will support the following:

1. Activities for the graduate student to travel and participate in or present at conferences, workshops, courses and training.
2. Costs associated with the purchase of equipment, materials and supplies related to their research, presentation, short course enrollment, workshops and training.
3. Participation in peer network system of diversity and/ or underrepresented graduate students.

The Graduate Diversity Enrichment Program provides a total of \$5,000 over two years to provide underrepresented minority PhD students enrolled in NC Institutions of higher education with opportunities for greater science and research enrichment experiences.



Postdoctoral Enrichment Program

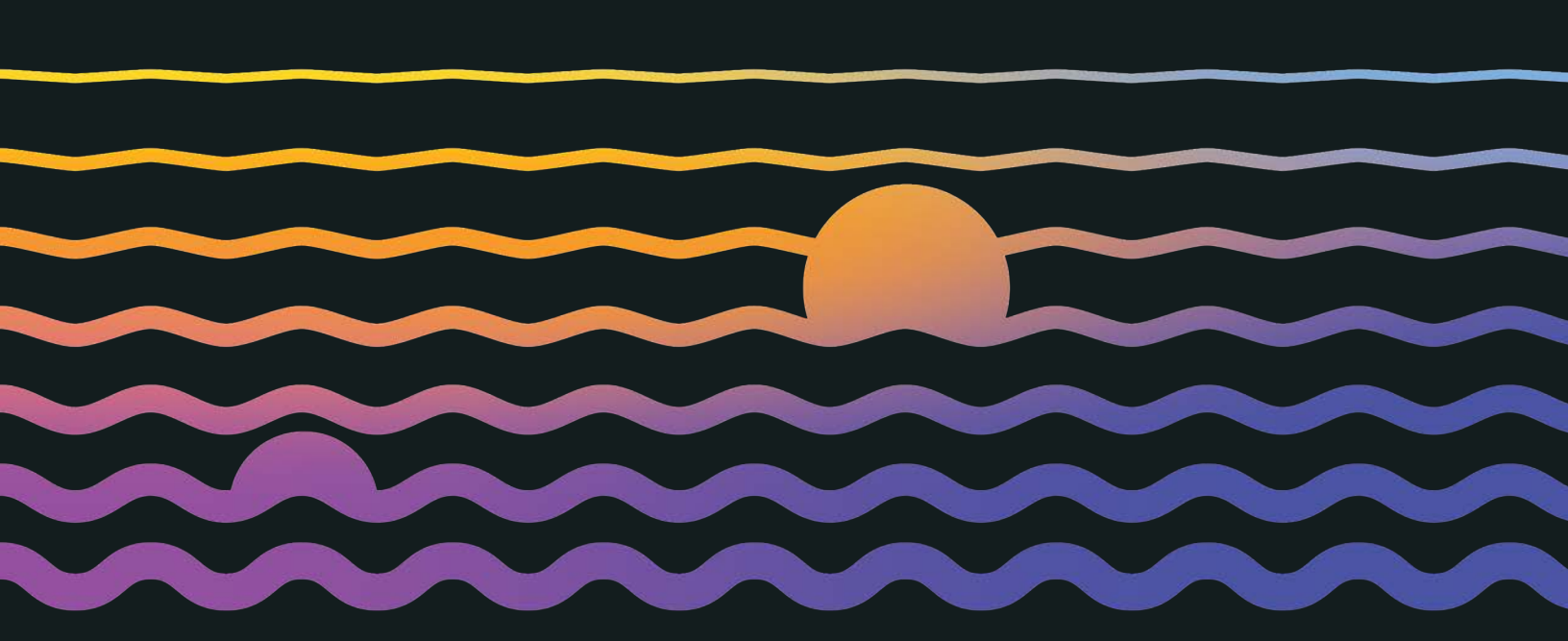
The Burroughs Wellcome Fund is committed to fostering the development of the next generation of biomedical scientists and is committed to supporting only degree-granting institutions to achieve this goal. The career development of young scientists has been a major funding theme at BWF. The continuing lag in advancement of underrepresented minority scientists is a significant problem for the scientific community. Despite several decades of federally supported programs, Americans from these minority populations continue to be underrepresented among PhD recipients and in the science and engineering workforce. Many well prepared underrepresented minority students—including people of Latino, Native-American, Pacific Island, and

African-American descent—are interested in pursuing scientific or engineering careers. Many students with strong SAT scores, high grades, and success in high school honors math and science courses leave the college science pipeline, but the loss is disproportionate among women and minorities. Thus, factors other than school preparation, science aptitude, and interest must be responsible for the low achievement and low persistence of these subgroups of undergraduate and graduate science and engineering students. Identifying and mitigating these negative factors, then retaining well-educated students with Science & Engineering interests would improve the United States' ability to compete in today's global scientific community. (SCIENCE, 31 March

2006, Preparing Minority Scientists and Engineers, Michael Summers and Freeman Hrabowski).

For this reason, the Burroughs Wellcome Fund created the Postdoctoral Enrichment Program in 2012. BWF is committed to funding the next generation of scientists and researchers, thus we have an interest in advancing the careers of underrepresented minority postdoctoral fellows.

The primary goal of the Postdoctoral Enrichment Program (PDEP) is to substantially enhance the postdoctoral training and experience of underrepresented minority junior scientists. Funds will be provided to support the following enrichment activities:



1. Activities for the postdoctoral fellow to enhance research productivity, e.g. workshops, courses, travel, collaborations, and training in new techniques
2. Activities for the postdoctoral mentor to increase the mentoring of PDEP fellows in university-based programs:
 - Career guidance of the underrepresented minority postdoctoral fellow
 - Research guidance that increases the productivity of the PDEP fellow
 - Attendance at one annual meeting of mentors hosted and/or sponsored by the Burroughs Wellcome Fund (BWF)
3. Participation in a peer network system of underrepresented minority postdoctoral scholars

The Postdoctoral Enrichment Program (PDEP) provides a total of \$60,000 over three years to support the career development activities for underrepresented minority postdoctoral fellows in a degree-granting institution in the United States or Canada whose training and professional development are guided by mentors committed to helping them advance to stellar careers in biomedical or medical research. Generally, up to 15 awards will be granted for enrichment activities annually. This grant is meant to supplement the training of postdocs whose research activities are already supported. It is not a research grant.

The program provides a total of \$60,000 over three years as follows:

Year one: \$20,000 will be granted to support enrichment activities of the postdoctoral fellow (\$10,000 for research supplies or equipment uniquely required to enhance the postdoctoral fellow's research and \$10,000 for education and training, including for mentors in the research lab where the postdoctoral fellow is assigned.) The PDEP award cannot be used to support salary expenses or indirect costs.

Year two: \$20,000
(same allocation as year one)

Year three: \$20,000 will be granted to help the postdoctoral fellow advance research efforts towards the professoriate. The funds must be used to develop independent, innovative areas of research.

Infectious Diseases





Provides opportunities for assistant professors to bring multidisciplinary approaches to the study of human infectious diseases.

Investigators in the Pathogenesis of Infectious Disease

The Investigators in the Pathogenesis of Infectious Disease program provides opportunities for assistant professors to bring multidisciplinary approaches to the study of human infectious diseases. The goal of the program is to provide opportunities for accomplished investigators still early in their careers to study what happens at the points where the systems of humans and potentially infectious agents connect. The program supports research that sheds light on the fundamentals that affect the outcomes of these

encounters: how colonization, infection, commensalism and other relationships play out at levels ranging from molecular interactions to systemic ones.

PATH is a competitive award program that provides \$500,000 over a period of five years to support accomplished investigators at the assistant professor level to study pathogenesis, with a focus on the interplay between infectious agents and their hosts, shedding light on how both are affected by

their encounters. The awards are intended to give recipients the freedom and flexibility to pursue new avenues of inquiry, stimulating higher-risk research projects that hold potential for significantly advancing understanding of how infectious diseases work and how health is maintained.

Interfaces in Science





This grant is intended to foster the early career development of researchers who are dedicated to pursuing a career in academic research.

Career Awards at the Scientific Interface

Recognizing the vital role cross-trained scientists will play in furthering biomedical science, the Burroughs Wellcome Fund developed the Career Awards at the Scientific Interface (CASI). This grant is intended to foster the early career development of researchers who are dedicated to pursuing a career in academic research. The ideal applicants are researchers who have transitioned from graduate work in the physical/mathematical/computational sciences or engineering into postdoctoral work in the biological sciences.

The awards provide \$500,000 over five years to bridge advanced postdoctoral training and the first three years of faculty service. These awards are open to U.S. and Canadian citizens, permanent residents, or temporary residents.

Scientific advances such as genomics, quantitative structural biology, imaging techniques, and modeling of complex systems have created opportunities for exciting research careers at the interface between the physical/computational sciences and the biological sciences.

Tackling key problems in biology will require scientists trained in areas such as chemistry, physics, applied mathematics, computer science, and engineering. Proposals that include deep or machine learning applications of artificial intelligence are particularly encouraged.

Special consideration will be given to proposals that investigate the connection between climate change and human health.

Regulatory Science





BWF aims to provide research support to stimulate innovation in this area.

Innovation in Regulatory Science Award

The Burroughs Wellcome Fund (BWF) recognizes Regulatory Science as an important yet underfunded area of research. With this initiative, BWF aims to provide research support to stimulate innovation in this area.

The process of translating biomedical discoveries into new therapies has become increasingly complex considering evolving science and technology and requires that the science of regulation keep up with the advances in biomedical science and technology. For example, existing animal models of human disease are often poor predictors of efficacy of new therapeutic approaches in humans. As new technologies produce new types of preclinical models, innovation is needed in the evaluation of these models to justify

movement into clinical studies. Although numerous reports have documented the importance of this area of research to the future of the biomedical enterprise, it remains inadequately supported.

Regulatory science has been defined as the “development and use of new tools, standards, and approaches to more efficiently develop products and to more effectively evaluate product safety, efficacy, and quality.” Regulatory science has become a centerpiece of the Food and Drug Administration’s (FDA) strategy for fostering innovation, and the academic and foundation communities have been called to take an active role in building this emerging field. BWF encourages investigators to address regulatory science in areas of the FDA’s

strategic priorities including product manufacturing & quality, and food safety & applied nutrition.

BWF’s Innovation in Regulatory Science Awards provides \$500,000 over five years to academic researchers developing new methodologies or innovative approaches in regulatory science that will ultimately inform the regulatory decisions made by the FDA and others. This would necessarily draw upon the talents of individuals trained in mathematics, computer science, applied physics, medicine, engineering, toxicology, epidemiology, biostatistics, systems pharmacology, and food safety and nutrition as examples.

Reproductive Science





Growing evidence suggests relationships between the duration of pregnancy, fetal growth, and adverse pregnancy outcomes.

Next Gen Pregnancy Initiative

Building upon the original goals of the BWF Preterm Birth Initiative, a recently convened Pregnancy Think Tank has helped shape the next generation of BWF preterm birth awards. Growing evidence suggests relationships between the duration of pregnancy, fetal growth, and adverse pregnancy outcomes such as preterm birth, preeclampsia, intrauterine growth restriction, stillbirth, and maternal medical complications including maternal mortality. Other areas of interest are climate change and environmental impact on pregnancy, complications associated with ART, and epigenome-wide association studies. We seek to expand the scope of this award mechanism to capture these and other pregnancy outcomes as we

believe they will be mutually informative and accelerate discovery. Each award will provide up to \$500,000 over a four-year period (\$125,000 per year).

The initiative is designed to stimulate both creative individual scientists and multi-investigator teams to approach healthy and adverse pregnancy outcomes using creative basic and translation science methods. The formation of new connections between reproductive scientists and investigators who are involved in other areas is particularly encouraged. Postdoctoral fellows nearing their transition to independent investigator status through senior established investigators are encouraged to apply.

Molecular and computational approaches such as genetics/genomics, immunology, microbiology, evolutionary biology, mathematics, engineering, and other basic sciences hold enormous potential for new insights independently or in conjunction with more traditional areas of parturition research such as maternal-fetal medicine, obstetrics, and pediatrics. We encourage applications seeking actionable therapeutic interventions, novel diagnostics, and device development for real time data capture, and particularly those investigating mechanisms of racial disparities in pregnancy outcomes.

Science Education





The award offers schools and school districts the opportunity to fully develop and empower teachers as leaders in the field.

Career Award for Science and Mathematics Teachers

The Burroughs Wellcome Fund's Career Award for Science and Mathematics Teachers recognizes outstanding STEM teachers in the North Carolina public primary and secondary schools.

The award provides \$175,000 over five years and is available to North Carolina teachers who have an outstanding performance record in educating children and who demonstrate solid knowledge of STEM content.

This award presents opportunities for professional development and collaboration with other master science and/or mathematics teachers who will help to ensure their success as teachers and their

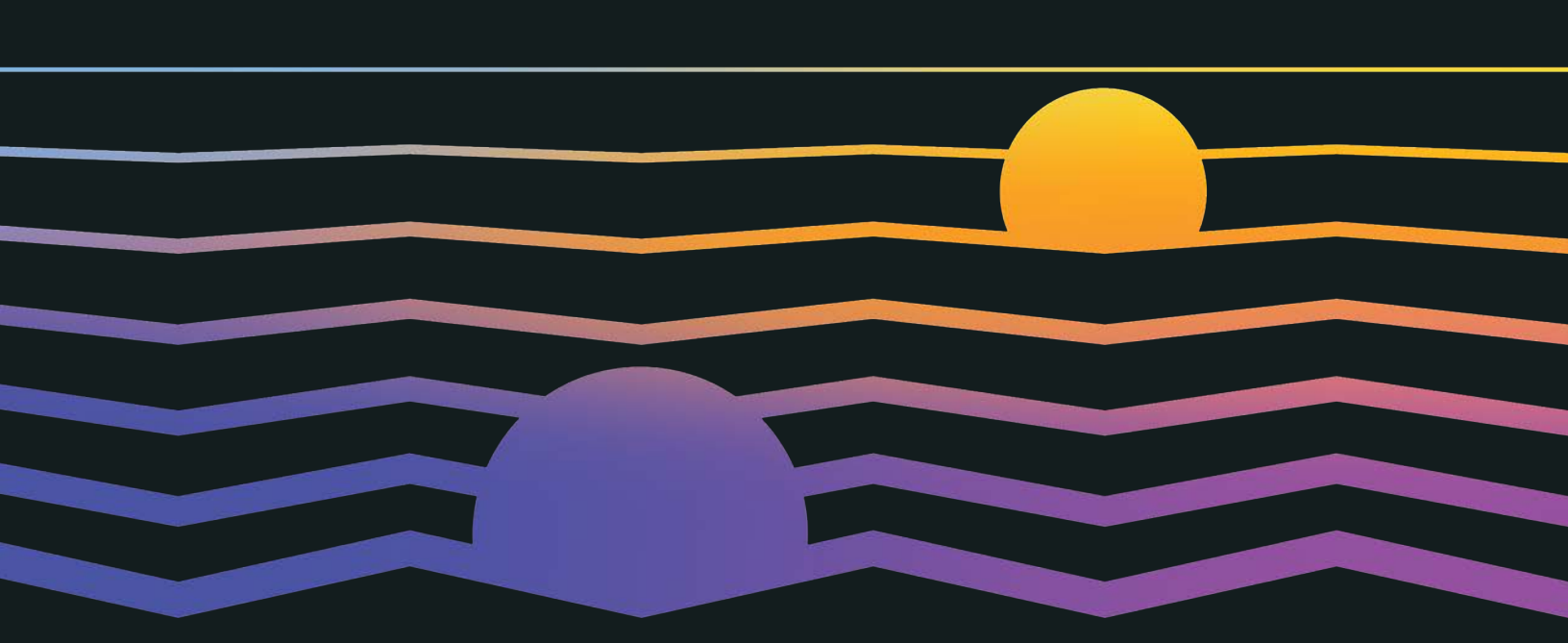
satisfaction with the field of teaching. The award offers schools and school districts the opportunity to fully develop and empower teachers as leaders in the field.

Special consideration will be given to teachers working in hard-to-staff, economically deprived classrooms in North Carolina. Special consideration will also be given to efforts that integrate environmental science and climate change into STEM-related curriculum.

BWF and the State Board of Education recognize that improving STEM education in North Carolina will require systemic revision of K-12 instruction. Teachers who are content-area experts and have

pedagogical skills are critical to ensuring students' success in understanding STEM subjects. These teachers can make a difference by serving as change agents, not only for their students, but also for other educators across the state.

The largest hurdle in accomplishing these goals has been a severe shortage of STEM teachers (even beyond North Carolina's ongoing teacher shortage). In 2015, only 13 percent of the University of North Carolina system's 4,675 newly prepared teachers were certified in computer science/technology, science, and mathematics.



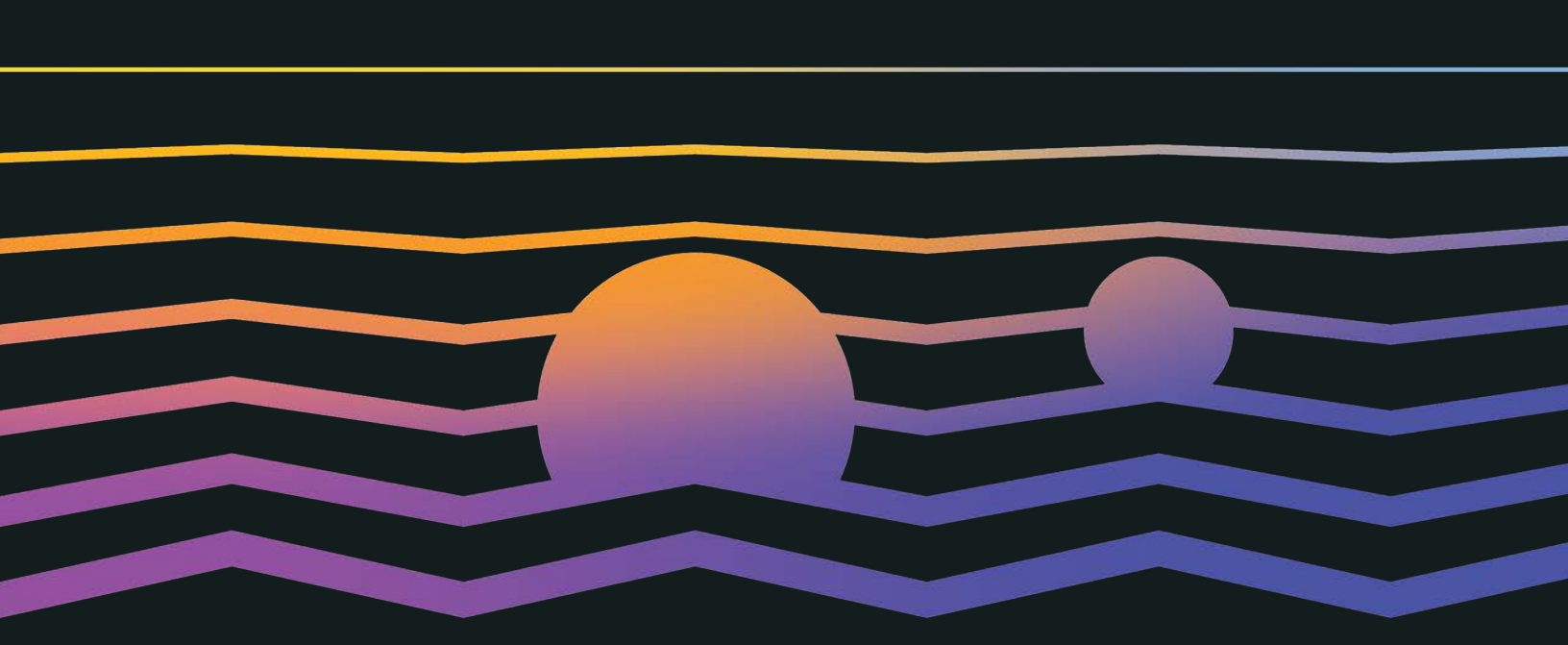
Promoting Innovation in Science and Mathematics

BWF supports teaching professionals in their efforts to provide quality hands-on, inquiry-based activities for their students. This award provides up to \$3,000 for one year to cover the cost of equipment, materials, and supplies. An additional \$1,500 may be requested for professional development related to the implementation of new equipment or use of materials in the classroom. Awards are made to teaching professionals

that hold a professional educator's license to teach in a North Carolina K-12 public school.

BWF recognizes the important role that K-12 teachers play in the lives of students by stimulating a passion for science and mathematics innovations. In this time of tight budgets, BWF wants to support teaching professionals in their efforts to provide quality hands-on, inquiry-based activities

for their students. BWF launched this program to support North Carolina K-12 teachers in their efforts to promote excitement for science and mathematics in the classroom by providing grants for materials, equipment, and supplies related to the implementation of high-quality curriculum and activities in the classroom.



Student Science Enrichment Program

The Student STEM Enrichment Program (SSEP) supports diverse programs with a common goal: to enable K-12 students to participate in creative, active learning STEM activities and pursue inquiry-based exploration in BWF's home state of North Carolina. These awards provide up to \$60,000 per year for three years. Since the program's inception in 1996, BWF has awarded 250 grants totaling \$37.7 million to 110 organizations that reach more than 43,000 North Carolina students.

SSEP awards support career-oriented and practical programs intended to provide creative STEM enrichment activities for students in K-12 education who have exceptional skills and interest in science, technology, engineering, and mathematics, as well as those perceived to have high potential.

After school and out of school time programs demonstrate value in helping to close opportunity gaps for underserved and underrepresented students. These programs must enable students to explore inquiry-based approaches to STEM activities, which BWF believes to be an effective way to increase students' understanding and appreciation of the scientific and inquiry-based method. To increase academic achievement, programs must provide a well-defined structure that aligns with the school-day curriculum, well-trained staff, and student follow up.

Program Goals

In line with the mission of the Burroughs Wellcome Fund, projects that are funded under SSEP must seek to attain three goals:

- Improving students' competence in science and mathematics
- Nurturing student enthusiasm for science and mathematics
- Engaging students in pursuing careers in research or other science-related areas

The activities designed to lead to these goals must align with the North Carolina Standard Course of Study for science and mathematics pertinent to the grade levels of the student participants (see NC Essential Standards). Activities should involve active learning and be inquiry-based.

Additional resources to consider are Next Generation Science Standards and National Council of Teachers of Mathematics.

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.



Report on Finance

The Burroughs Wellcome Fund's investments totaled \$775.4 million at August 31, 2020, 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 \$165.6 million. The sector's target allocation was 25 percent, and actual holdings stood at 21.4 percent.
- U.S. small capitalization equity assets had a market value of \$111.2 million. The sector's target allocation was 18 percent, and actual holdings stood at 14.3 percent.
- International equity assets had a market value of \$205.6 million. The sector's target allocation was 32 percent, and actual holdings stood at 26.5 percent.

- Fixed income assets had a market value of \$130.4 million. The sector's target allocation was 22 percent, and actual holdings stood at 16.8 percent.
- Cash equivalent assets had a market value of \$11.5 million. The sector's target allocation was 3 percent, and actual holdings stood at 1.5 percent.
- Alternative assets had a market value of \$151.1 million. The sector did not have a target allocation, and actual holdings stood at 19.5 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 \$24.2 million, or 3.2 percent, from the end of the previous fiscal year. This increase in assets was due mainly to good returns for world equities during the fiscal year. BWF's total investment return before investment management fees for the fiscal year was +9.5 percent. The U.S. large capitalization equity sector returned +15.6 percent, the U.S. small capitalization equity sector had a +4.6 percent gain, the international equity sector returned +16.3 percent for the fiscal year, and fixed income produced a +4.7 percent result.

As of August 31, 2019, BWF employed 16 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, Loomis Sayles, Bridge City Asset Management and Essex Investment Management managed U.S. small capitalization equities. Camden Asset Management; C.S. McKee; Rimrock Capital Management; Barings; and Amundi Pioneer were the fixed income managers. Capital Guardian Trust Company; Hardman Johnston Global Advisors; Acadian Asset Management; and Hansberger Growth Investors managed international equities. BWF also held investments in four venture capital funds: Intersouth Partners VI, Spray Venture Funds I and II and Mission Ventures II. Winston Partners managed a fund of equity oriented hedge funds. Blackrock Alternative Advisors managed a fund of absolute return strategies. Hamilton Lane Advisors managed three funds of private equity strategies and three private debt strategies. Dyal Capital managed a private equity fund. Neuberger Berman managed an insurance linked strategy. 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, 2020 AND 2019 (all dollar amounts presented in thousands)

	2020	2019
ASSETS		
Cash and cash equivalents	\$ 2,924	\$ 5,479
Investments	778,877	746,832
Accrued interest and dividends receivable	1,206	1,383
Other assets	116	142
Property and equipment, net	7,178	7,163
Total assets	\$ 790,301	\$ 760,999
LIABILITIES AND NET ASSETS		
Transactions payable, net	\$ 4,168	\$ 2,639
Accounts payable and other liabilities	927	1,227
Excise tax payable	262	551
Deferred federal excise taxes	2,120	2,259
Unpaid awards	103,118	114,802
Total liabilities	110,595	121,478
Unrestricted net assets	679,706	639,521
Total liabilities and net assets	\$ 790,301	\$ 760,999

Statements of Activities

AUGUST 31, 2020 AND 2019 (all dollar amounts presented in thousands)

	2020	2019
REVENUES		
Interest and dividends, less investment expenses of \$3,277 and \$3,079 in 2020 and 2019, respectively	\$ 6,286	\$ 8,417
Net realized gain on sale of investments	18,560	15,725
Total revenues and realized gains	\$ 24,846	\$ 24,142
EXPENSES		
Program services	\$ 21,115	\$ 45,111
Management and general	6,596	6,061
Total expenses before net unrealized appreciation (depreciation) and deferred federal excise tax	27,711	51,172
Net unrealized appreciation (depreciation) of investments, net of provision for deferred federal excise tax benefit of \$139 and \$421 in 2020 and 2019, respectively	43,050	(21,607)
Change in net assets	40,185	(48,637)
Net assets at beginning of year	639,521	688,158
Net assets at end of year	\$ 679,706	\$ 639,521

Grants Index

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

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

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

For full audited financials visit **bwfund.org/annualreport**



Program Summary

AUGUST 31, 2020

	Awarded Net of Cancelled	Amount Paid	Percentage of Total Paid
BIOMEDICAL SCIENCES			
Career Awards in the Medical Sciences	\$ 6,311,277	\$ 7,603,750	
Physician-Scientist Institutional Award	–	3,750,000	
Research Travel Grant	149,002	140,402	
Ad Hoc	723,500	797,500	
Total	\$ 7,183,779	\$ 12,291,652	37%
DIVERSITY IN SCIENCE			
Graduate Diversity Enrichment Program	\$ –	\$ 27,500	
Postdoctoral Enrichment Program for Underrepresented Minorities	871,447	791,447	
Ad Hoc	170,000	170,000	
Total	\$ 1,041,447	\$ 988,947	3%
INFECTIOUS DISEASES			
Career Guidance	\$ 267,294	\$ 310,805	
Investigators in Pathogenesis of Infectious Disease	4,700,000	5,282,306	
Ad Hoc	699,632	981,632	
Total	\$ 5,666,925	\$ 6,574,742	20%
INTERFACES IN SCIENCE			
Career Award at the Scientific Interface	\$ 4,297,857	\$ 3,672,095	
Ad Hoc	508,500	76,000	
Total	\$ 4,806,357	\$ 3,748,095	11%
POPULATION SCIENCES			
Curriculum Development in Quantitative Thinking	\$ –	\$ 225,000	
Institutional Program Unifying Population and Laboratory-Based Sciences	–	812,378	
Total	\$ –	\$ 1,037,378	3%

Program Summary

AUGUST 31, 2020

	Awarded Net of Cancelled	Amount Paid	Percentage of Total Paid
REGULATORY SCIENCE			
Innovation in Regulatory Science Awards	\$ 200,000	\$ 2,146,558	
Ad Hoc	146,500	146,500	
Total	\$ 346,500	\$ 2,293,058	7%
REPRODUCTIVE SCIENCES			
Preterm Birth Initiative	\$ 172,448	\$ 1,800,000	
Total	\$ 172,448	\$ 1,800,000	5%
SCIENCE AND PHILANTHROPY			
Ad Hoc	\$ 1,024,795	\$ 618,600	
Total	\$ 1,024,795	\$ 618,600	2%
SCIENCE EDUCATION			
Career Award for Science and Mathematics Teachers	\$ 96,692	\$ 455,000	
PRISM Award	206,424	202,605	
Student STEM Enrichment Program	120,354	1,977,253	
Ad Hoc	963,394	1,061,394	
Total	\$ 1,386,864	\$ 3,696,252	11%
GRAND TOTAL	\$ 21,629,114	\$33,048,724	100%

Biomedical Sciences

Career Awards for Medical Scientists

Alexander George Bick, MD, PhD

Harvard Medical School
Targeting clonal hematopoiesis
using human genetics

Julia Catherine Carnevale, MD

University of California-San Francisco
Targeting SOCS1 and RASA2 to
engineer more potent adoptive T
cell therapies for cancer treatment

Emily Anne Ferenczi, MB, ChB, PhD

Harvard Medical School
Direct projections from globus pallidus
externa (GPe) to cortex: a novel role in
basal ganglia-cortical circuit function

Ryan Alexander Flynn, MD, PhD

Stanford University
Defining the regulation of RNA
by glycosylation

Anna Nam, MD

Weill Medical College of Cornell University
Defining the impact of somatic mutations
on human hematopoiesis via single-cell
multi-omics

Josephine Ni, MD

University of Pennsylvania
Determinants of bacterial biofilm formation
at the intestinal mucosal interface and
their roles in pathogen exclusion

Xilma Rosa Ortiz-Gonzalez, MD, PhD

University of Pennsylvania
Looking at Neurodegenerative Disorders
Through a Pediatric Lens

William Renthall, MD, PhD

Harvard Medical School
Leveraging single-cell genomics for the
development of novel pain treatments

Andrew Ben Stergachis, MD, PhD

Harvard Medical School
Single-molecule chromatin architectures
of disease-associated non-coding
genetic variants

Career Guidance

Career Guidance for Trainees

**Advancing PhD Careers Through
Industry Immersion**

Coaching for Career Development
via the ASPET Mentoring Network

Accelerate to Industry (A2i) Consortium

North Carolina State University

Bench 2 Outreach

The STEM Advocacy Institute

A Framework for PhD Career Transitions

University of Colorado Denver,
Anschutz Medical Campus

**Exploring Pathways to Industry Careers
(EPIC) Demonstration Project**

University of Georgia Research
Foundation, Inc.

STEM Communication Fellows Program

University of North Carolina-Charlotte

**Lowering Barriers to Career Exploration
by Biomedical PhD Students**

University of Pittsburgh

Diversity in Science

Postdoctoral Enrichment Program

Tyler Alexander, PhD

St. Jude Children's Research Hospital
Brain volume loss after intrathecal
methotrexate and oral dexamethasone
in a juvenile mouse model of childhood
ALL chemotherapy
Mentor: Kevin Krull, PhD

Shayna T. J. Bradford, PhD

Washington University
Targeting failed proximal tubule repair
to spur kidney regeneration
Mentor: Benjamin Humphreys, MD, PhD

Adrian Sergio Enriquez, PhD

Tulane University
Mapping of Lassa Virus Polyclonal
Antibody Response in Humans and
Rodents using Rapid Electron Microscopy
Mentor: Erica O. Saphire, PhD

Ebony Flowers, PhD

University of Southern California
PPAR-regulated Fatty Acid Oxidation
and ROS detoxification in Breast Cancer
CTCs during Lung Metastasis
Mentor: Min Yu, MD, PhD

Monica Gutierrez, PhD

Northwestern University
Defining an epigenomic signature of
myeloid skewing in hematopoietic stem
cells as a risk factor for disease in aging
Mentor: Deborah Winter, PhD

Joshua Hooks, PhD

Johns Hopkins University
Determining the presence and
functions of monocyte subpopulations
in biomaterial influenced wound
environments using single cell RNA-seq
Mentor: Jennifer Elisseeff, PhD

Nisan Michael Hubbard, PhD

University of North Carolina-Chapel Hill
Lymphatic Development Response
During Implantation
Mentor: Kathleen Caron, PhD

Clifford A Kapono, PhD

University of Hawaii - Hilo
Multi-omic Characterization of Coral
Mucus During Sediment Disturbances
Mentor: John Burns, PhD

Jessica Renee Queen, MD, PhD

Johns Hopkins University School
of Medicine
Fusobacterium Nucleatum Pathogenicity
and Carcinogenesis in Colorectal Cancer
Mentor: Cynthia Sears, MD

Valeria Marie Reyes Ruiz, PhD

Vanderbilt University
Defining the battle for manganese between
Staphylococcus aureus and the host
Mentor: Eric Skaar, PhD

Andrew Santiago-Frangos, PhD

Montana State University
Regulatory mechanisms of CRISPR
evolution and expression
Mentor: Blake Wiedenheft, PhD

Chelsey Cierra Spriggs, PhD

University of Michigan-Ann Arbor
The role of cellular motors in
polyomavirus nuclear entry
Mentor: Billy Tsai, PhD

Jessica Rene Thomas, PhD

Vanderbilt University
Somatosensory function in mice with
CaMKII mutations linked to autism
Mentor: Roger Colbran, PhD

Brittany Nicole Williams, DPhil, PhD

University of North Carolina Chapel-Hill
Base Editing Approaches to Treat
Retinitis Pigmentosa
Mentor: Benjamin Philpot, PhD

Infectious Diseases

Investigators in the Pathogenesis of Infectious Disease

Megan T. Baldrige, MD, PhD

Washington University School of Medicine

Brian P. Conlon, PhD

University of North Carolina-Chapel Hill

Gretchen Diehl, PhD Gretchen Diehl, PhD

Memorial Sloan Kettering Cancer Center

Asma I. Hatoum, PhD

University of Illinois, Urbana-Champaign

Iliyan D. Iliev, PhD

Weill Medical College of Cornell University

Philip J. Kranzusch, PhD

Harvard Medical School

Anna Marie Selmecki, PhD

University of Minnesota Medical School

Golnaz Vahedi, PhD

University of Pennsylvania

Ivan Zaroni, PhD

Harvard Medical School

Interfaces in Science

Career Awards at the Scientific Interface

Ahmed S. Abdelfattah, PhD

Brown University

Probing and manipulating the neural circuitry of opiate addiction using novel optogenetic tools

Zibo Chen, PhD

California Institute of Technology

Molecular programming using de novo designed proteins

Yogesh Goyal, PhD

University of Pennsylvania

Biochemical trajectories guiding rare cell plasticity and therapy resistance in single cancer cells

Elizabeth R. Jerison, PhD

Stanford University

Migration and population dynamics in the zebrafish adaptive immune system

Stephanie E. Lindsey, PhD

Stanford University

Quantitation of early great vessel growth and remodeling

Brittany S. Morgan, PhD

TBD

Cracking the molecular recognition code: capturing dynamic substructures with small molecules

Cristina Rodriguez, PhD

University of California - Berkeley

Decoding spinal cord neural circuits through advanced optical imaging methods

Julea Vlassakis, PhD

University of California-Berkeley

Precision oncology via single-cell proteomics

Ad Hoc

Biomedical Sciences

Career Development of Postdoctoral Scientists

American Society for Cell Biology

Support for the ASCB Annual Meeting, December 7-11, 2019, Washington, DC

Gordon Research Conferences

Support for a Gordon Research Seminar on Fibroblast Growth Factors in Development and Disease: Biology, Technology and Translation in FGF Research

International Society for Antiviral Research

Support for the 2020 Gertrude Elion Memorial Lecture Award / 33rd International Conference on Antiviral Research, March 30 – April 3, 2020, Seattle, Washington

Johns Hopkins University School of Medicine

Support for Summer Academic Research Experience (SARE) in the Careers in Science and Medicine Initiative

Keystone Symposia

Support for Keystone Symposia Diversity Initiatives 2020

Marine Biological Laboratory (MBL)

Support for the 2020 Embryology course: Concepts and Techniques in Modern Developmental Biology

President and Fellows of Harvard College

Support for the Great Wall Symposium 2019, Paris, France, September 25-27, 2019

Society for Neuroscience

Support for Trainee Professional Development Awards, October 19-23, 2019 Chicago, IL

Society for Research on Biological Rhythms

Support for the Society for Research on Biological Rhythms (SRBR) Meeting and International Chronobiology School, May 30 – June 3, 2020

University of North Carolina-Chapel Hill Lineberger Comprehensive Cancer Center

Support for UNC Lineberger Comprehensive Cancer Center 44th Annual Symposium: The Yin-Yang of Immunity in Cancer, March 18-19, 2020

Medical Sciences

American Foundation for Suicide Prevention

Support for AFSP's 2020 mission to save lives and bring hope to those affected by suicide in lieu of honorarium for CAMS advisory committee member Sarah H. Lisanby, MD

American Physician Scientists Association (APSA)

Support for 2019-2020 APSA Initiatives: 16th AAP/ASCI/APSA Joint Meeting/Mentorship and Diversity Program Expansions/Resident, Fellow, and Junior Faculty Resource Development

Association for Clinical and Translational Science

Support for the Translational Science meeting, Washington, DC, April 14-17, 2020

Gordon Research Conferences

Support for a Gordon Research Conference on Mutagenesis: Fundamental Mechanisms of Genomic Change and Adaptation, June 14-19, 2020, Sunday River, Newry, Maine

The LAM Foundation

Support for the 2020 International LAM Research Conference and LAMposium, September 22 – October 8, 2020

University of Toronto

Support for the 2019 Clinician Investigator Trainee Association of Canada (CITAC-ACCFC)/Canadian Society for Clinical Investigation (CSCI) Annual General Meeting, November 8-10, 2019, Banff, British Columbia, Canada

Weill Medical College of Cornell University

Support for the Pediatric Scientist Development Program (PSDP): Building the next generation of pediatrician scientists, 2021-2022

Diversity in Science

Kaiser Permanente Bernard J. Tyson School of Medicine

Promoting Engagement in science for underrepresented Ethnic and Racial minorities (P.E.E.R)

North Carolina Central University

Leadership Institute for Future Teachers (LIFT)

North Carolina Museum of Natural Sciences

RACE 2.0 Exhibit Purchase and Transfer – Phase 2

Profound Gentlemen

Increase Support For Male Educators of Color in NC

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

The Innovation Project

Support for the Pathway to Practice North Carolina-The Innovation Project Collaboration/Burroughs Wellcome Fund (BWF) Pathway Scholars Program: Effectively Serving Diverse Science and Mathematics Residency Teachers in High Needs NC School Districts

Infectious Diseases

American Society for Microbiology

Support for American Society for Microbiology (ASM) Professional Development Programs

American Society for Virology

Support for the 39th Annual Meeting of the American Society to be hosted by the Colorado State University from June 13-17, 2020 in Fort Collins, CO

American Society of Tropical Medicine and Hygiene

Support for the 68th Annual Meeting of the American Society of Tropical Medicine and Hygiene (ASTMH) to be held November 20-24, 2019 in National Harbor, Maryland

Boston Children's Hospital/Harvard Medical School

Support for BWF PATH awardee, David Weiss, to give a seminar at Boston Children's Hospital/Harvard Medical School on November 20, 2019

Brown University

Support for the 2020 Candida and Candidiasis Conference to be held in Montreal, Quebec, Canada

Canadian Association of Postdoctoral Scholars

Support for the 4th national postdoctoral survey to be conducted in 2019

Canadian Association of Postdoctoral Scholars

Support for the 2019 Canadian Association of Postdoctoral Scholars Annual General Meeting

Center for Open Science

Support for the Center for Open Science in Charlottesville, VA in lieu of 2020 honorarium to Dr. Maryrose Franko for BWF CGT Advisory Committee service.

Fred Hutchinson Cancer Research Center

Support for Julie Overbaugh (Former PATH AC Chair) to host Leigh Knodler (PATH awardee), Washington State University, for a seminar on March 16, 2020 to present her work to the Fred Hutch and UW microbiology community.

Gordon Research Conferences

Support for Gordon Research Seminar and Conference on Cellular and Molecular Fungal Biology to be held June 20-26, 2020 in Holderness, NH

Gordon Research Conferences

Support for the Biology of Host-Parasite Interactions Gordon Research Conference and Gordon Research Seminar to be held June 14-19, 2020 at Salve Regina University in Newport, RI

Gordon Research Conferences

Support for Gordon Research Conference on Bacterial Cell Surfaces to be held June 28 – July 3rd, 2020 in West Dover, Vermont

Gordon Research Conferences

Support for 2020 Biology of Acute Respiratory Infections Gordon Research Conference to be held at the Hotel Galvez, Galveston Texas February 16-21, 2020

Gordon Research Conferences

Support for a Gordon Research Conference on Streptococcal Biology to be held at the Jordan Hotel in Sunday River, Maine, USA, from August 16-21, 2020

Gordon Research Conferences

Support for 2020 Gordon Research Conference on Microbial Toxins and Pathogenicity to be held July 12-17, 2020 at Waterville Valley Resort, New Hampshire, USA

Harvard Medical School

Support for Covid-19: Dissecting antibody responses in COVID-19 convalescent individuals in Massachusetts and Washington State

Iowa State University

Support for young investigators to attend Anthelmintics IV: 'From Discovery to Resistance' Feb 3-7, 2020 in Santa Monica, CA

Johns Hopkins Bloomberg School of Public Health – Baltimore, MD

Support for Covid-19: Dynamics of localized and systemic immune responses to SARS-CoV-2 and implications for estimating population-level wide susceptibility

La Jolla Institute of Allergy and Immunology

Support for a seminar visit by Dr. Karla Satchell, PATH awardee, at the La Jolla Institute for Immunology in January 2020 hosted by PATH awardee, Dr. Erica Saphire

Loyola University Chicago

Support for keynote speaker for the 2020 International Conference on Gram Positive Pathogens to be held October 11-14th, 2020 in Omaha, NE

Midwinter Conference of Immunologists

Support for the 59th Annual Midwinter Conference of Immunologists to be held January 25-28, 2020 at the Asilomar Conference Grounds in Pacific Grove, CA

National Academy of Sciences

Support for a Meeting of Experts on Emerging Issues in Climate Change and Human Health

National Academy of Sciences

Support for Emerging Issues in Climate Change and Human Health Opportunity Grants

National Academy of Sciences

Support for "Human Health in a Changing Climate: A Strategic Initiative of the National Academy of Medicine"

National Academy of Sciences

Support for The Science of Effective Mentorship in STEM program

New York University School of Medicine

Support for Department of Microbiology seminar speaker, Dr. Michael Shiloh, MD, PhD

Northwestern University Feinberg School of Medicine

Support for the Lakeside Conference on Bacterial Toxins and Effectors to be held October 4-7, 2020 in Lake Geneva, Wisconsin

Regents of the University of Minnesota

Support for 11th international conference on Cryptococcus and Cryptococcosis

Saint Louis Science Center Foundation

Support for the Saint Louis Science Center in Saint Louis, MO in lieu of 2020 honorarium to Dr. Thi Nguyen for CGT AC service.

Stanford University

Support for grand rounds seminar for Dr. Sing-Sing Way (2012 PATH awardee) in Dept of Pathology on January 28, 2020.

Stanford University

Support for grand rounds seminar by Dr. Julie Overbaugh, a PATH AC member, in the Department of Pathology on February 25, 2020

Stanford University

Support for Microbiology & Immunology Wednesday Seminar Series by Gregory Barton on January 15, 2020 hosted by Denise Monack at Stanford University

Stanford University

Support for Microbiology & Immunology Wednesday Seminar Series by Andrew Goodman on November 6, 2019 hosted by Justin Sonnenburg at Stanford University

Stanford University

Support for Microbiology & Immunology Wednesday Seminar Series: David Wang, October 23, 2019 hosted by Matthew Bogoyo at Stanford University

Tufts University School of Medicine

Support for seminar speaker, PATH awardee, Sebastian Winter to visit Tufts University School of Medicine

University of California-Berkeley

Support for seminar speaker, PATH advisory committee member, Dr. Eric Skaar, to visit UC Berkeley

University of California-San Francisco

Support for the Bay Area Microbial Pathogenesis Symposium (BAMPS) to be held on March 31, 2020 at UCSF

University of Colorado

Support for seminar by Dr. Leigh Knodler in August 2020 at University of Colorado School of Medicine

University of Oxford

Support of the Genomic Epidemiology of Malaria (GEM) Conference to be held June 7-10, 2021 in Hinxton, UK

University of Pennsylvania

Support for "Identifying antivirals active against SARS-CoV-2 and other human coronaviruses"

University of Pennsylvania

Support for Yasmine Belkaid from NIH (Ellison Foundation New Scholar in Infectious Disease award) to attend the Joint Annual Meeting on Mucosal Immunology at University of Pennsylvania

University of Pennsylvania School of Veterinary Medicine

Support for the 24th annual Woods Hole Immunoparasitology (WHIP) Meeting to be held on April 19-22, 2020 in Cape Cod, MA

University of Tennessee-Knoxville

Support for a workshop on Quantitative Education in Life Science Graduate Programs

University of Texas Southwestern Medical Center-Dallas

Support for the 2020 Parasitic Helminths: New Perspectives in Biology and Infection conference to be held August 30 – September 4, 2020 in Hydra, Greece

University of Texas Southwestern Medical Center-Dallas

Support for PATH awardee, Dr. Isaac Chiu, to present a seminar at UT Southwestern, Dallas hosted by PATH awardee Dr. Michael Shiloh.

University of Texas Southwestern Medical Center-Dallas

Support for seminar grant for PATH awardee (2017), Jason Crawford, PhD at the Microbiology seminar series at UT Southwestern Medical Center in Dallas TX on November 19th 2019.

University of Texas Southwestern Medical Center-Dallas

Support of seminar visit by Dr. Terence Dermody at University of Texas Southwestern Medical Center-Dallas on March 10, 2020

University of Texas Southwestern Medical Center-Dallas

Support for a seminar by Kent Hill (PATH 2008) at UT Southwestern Medical Center, Department of Pharmacology on March 12, 2020 hosted by James J. Collins (PATH 2018)

Vanderbilt University Medical Center

Support for the 2020 Biennial Congress of the Anaerobe Society of the Americas (ASA), ANAEROBE to be held July 23-26, 2020 in Seattle, WA

Walter and Eliza Hall Institute of Medical Research

Support of Molecular Approaches to Malaria Conference 2020 to be held in Lorne, Victoria, Australia on 23-27th February 2020

Washington State University

Support for PATH awardee, Jorn Coers, D.Phil., PhD. to present a seminar at Washington State University

Interfaces in Science

Biophysical Society

Support for the 64th Annual Meeting to support the “Future of Biophysics Symposium,” the postdoctoral breakfast, and postdoc travel awards, February 15 – 19, 2020, San Diego, California

California Institute of Technology

Support for a travel grant to attend and present at the annual meeting of the Society for Advancement of Chicanos/Hispanics and Native Americans in Science

Computational and Systems Neuroscience (Cosyne)

Support for the 2020 Computational and Systems Neuroscience (COSYNE) Meeting, February 27-March 1, 2020, Denver, Colorado

Emory University

Support for a travel grant to attend and present at the annual meeting of the Society for Advancement of Chicanos/Hispanics and Native Americans in Science

Gordon Research Conferences

Support for the 2020 Gordon Research Conference “Single Molecule Approaches to Biology,” July 5-10, 2020, Castelldefels, Spain (delayed until 2022)

Gordon Research Conferences

Support for the 2020 GRC Bioinspired Materials meeting, Les Diablerets, Switzerland, June 7-12, 2020 (delayed until 2022)

Gordon Research Conferences

Support for the Gordon Research Seminar on Proteolytic Enzymes and Their Inhibitors

Gordon Research Conferences

Support for the Gordon Research Seminar, Biointerfaces 2020, June 2020

Marine Biological Laboratory (MBL)

Support for the Marine Biological Laboratory Physiology Course

National Organization for the Professional Development of Black Chemists and Chemical Engineers

Support for the NOBCCChE 2020 Virtual Conference, September 24-25, 2020

Society for Biomaterials

Support for the Cato T. Laurencin, MD, PhD, Travel Fellowship to attend the annual meeting of the Society for Biomaterials and/or the World Biomaterials Congress

University of California-Berkeley

Support for a travel grant to attend and present at the annual meeting of the Society for Advancement of Chicanos/Hispanics and Native Americans in Science

University of California-San Diego Foundation

Support for the winter Q-Bio conference, February 18-21, 2020

University of Colorado-Boulder

Support for a travel grant to attend and present at the annual meeting of the Society for Advancement of Chicanos/Hispanics and Native Americans in Science

University of Michigan-Ann Arbor

Support for a subgroup, the Biological Timing: Molecular Clocks and Timers, from Systems to Synthetic Biology, of the annual American Society of Cell Biology Meeting, December 2019

Regulatory Science

American Association for Cancer Research (AACR)

Support for the Translational Cancer Research for Basic Scientists Workshop, November 17-22, 2019, Boston, Massachusetts

American Institute of Chemical Engineers

Support for events of the Regenerative Engineering Society hosted in 2019-2020

American Society for Cellular and Computational Toxicology

Support for the 19th International Workshop on (Quantitative) Structure-Activity Relationships in Environmental and Health Sciences, QSAR2020: From QSAR to New Approach Methodologies, June 8-11, 2020, Durham, North Carolina

American Society for Pharmacology and Experimental Therapeutics

Support for the ASPET Annual Meeting at Experimental Biology, initially scheduled for April 4-7, 2020, but will now be restructured into a virtual meeting or series of webinars

American Society of Gene & Cell Therapy

Support for the Outstanding New Investigator Symposium at the ASGCT 23rd Annual Meeting

Georgia Tech Research Corporation

Support for QBioS Hands-On Modeling Workshop: Epidemics and Outbreaks, 2021

Harvard Medical School

Support for the workshop: Pediatric drug development and product labeling

International Society for Cellular Therapy

Support for the ISCT 2020 Paris Virtual Conference – Global Regulatory Session, May 28-29, 2020

International Society for Stem Cell Research

Support for the ISSCR 2020 Virtual Annual Meeting, June 23-27, 2020

MidSouth Computational Biology and Bioinformatics Society (MCBIOS)

Support for the fourth annual MAQC Society conference to be held in Cary, North Carolina, in April 2020

National Academy of Sciences

Support for the Forum on Drug Discovery, Development, and Translation

Society of Toxicology

Support for the 59th Annual Society of Toxicology Meeting and ToxExpo, initially scheduled for March 15-19, 2020, Anaheim, California and now moved to virtual format

Reproductive Science

Baylor College of Medicine

Support for the 2019 NICHD Contraceptive Development Meeting, Houston, Texas, November 3-6, 2019

Duke University

CANCELLED – Support for the Evolutionary Medicine Summer Institute (EMSI) workshop at NC State University, May 17-22, 2020

Gordon Research Conferences

Support for the Gordon Research Seminar on Meiosis-Molecular Mechanism and Regulation of Sexual Reproduction, Colby-Sawyer College, New London, New Hampshire, June 6-7, 2020

Gordon Research Conferences

Support for the 2020 Gordon Research Conference on Mammalian Reproduction, August 9-14, 2020, South Hadley, Massachusetts

Marine Biological Laboratory (MBL)

Support for the Frontiers in Reproduction (FIR) 23rd Annual Symposium, rescheduled to June 2021, Woods Hole, MA

Marine Biological Laboratory (MBL)

Support for the Mike McClure Endowed Scholarship Fund 2020

Society for Reproductive Investigation

Support for the Society for Reproductive Investigation's 67th Annual Meeting, Translating Reproductive Science to the Bedside

Society for the Study of Reproduction

Support for the Society for the Study of Reproduction's 2020 Diversity Initiative

Society for the Study of Reproduction

Support for SSR 53rd Annual Meeting – Reproductive Biology: Solutions for Adult Disease, July 9-12, 2020

University of Missouri-Columbia School of Medicine

Support for the 2019-2020 RSDP Seed Grant Phase II Scholars

University of Missouri-Columbia School of Medicine

Support for RSDP scholar research related expenses 2019-2020

University of Missouri-Columbia School of Medicine

Support for the RSDP Scholars Dinner and Executive Committee Meeting, March 2020, Vancouver, BC, Canada

University of Texas Health Science Center-Houston

Support for the Reproductive Scientists for Women's Health Preconception to the Cradle 2019 meeting

University of Texas Health Science Center-Houston

Support for Reproductive Scientists for Women's Health meeting entitled: from Preconception to the Cradle, November 11-12, 2019

Science and Philanthropy

Communications/Science Writing

Council for the Advancement of Science Writing

Support for the Initiative for Science Journalism

EducationNC

Support for EducationNC's Focus on STEM

Food and Environment Reporting Network (FERN)

Support for the Gastropod Coverage of Biomedical Research

Imagine Science Films

Support for the project "Imagine Science x Burroughs Wellcome Fund"

North Carolina Community Foundation/ North Carolina Network of Grantmakers

Support for the Communications Training Initiative

North Carolina Community Foundation/ North Carolina Network of Grantmakers

Support for NCNG communications programming for 2019-20

North Carolina State University

Support for the North Carolina Science and Technology Policy Fellowship

Open Notebook

Support for the TON/BWF Early-Career Fellowship Program

Science Cheerleaders, Inc.

Support for the Science Cheerleaders at the USA SciFest

Science Talk

Support for Science Talk 2020, March 26-27, 2020, Portland, OR

ScienceCounts

Support for the study on Revisiting Public Attitudes in Science

Sigma Xi, The Scientific Research Society

Support for Sigma Xi: Science Communication, Education, and Public Engagement Track

University of Rhode Island Foundation

Support for the Advancing Inclusive Science Communication initiative

General Philanthropy

Alport Syndrome Foundation Inc

Support for research to facilitate the treatment of Alport Syndrome

American Association for the Advancement of Science

Support for the 2020 AAAS Mass Media Science & Engineering Fellowship

Center for Excellence in Health Care Journalism

Support for the training of journalists in medical science and health care

Children's Hospital of Pittsburgh Foundation

Support for the Aviva Katz Program in Pediatric Ethics – research, education, and training related to ethics, directed by BWF Board Member Terence S. Dermody, MD

Community Foundation of New Jersey

Support for the Rita Allen Foundation Civic Science Fellows Program

Community Initiatives

Support for the ComSciCon Flagship Workshop

Foundation Center

Support for 2019-20

Health Research Alliance, Inc. (HRA)

General support for Health Research Alliance activities

Iowa City Community School District Foundation

Support for the South East Jurnior High School's CASL program, science lab supplies, and teacher professional development, directed by BWF Board Member, Michael Welsh, MD

Iowa City Community School District Foundation

Support for hands-on learning experiences and teacher professional development, directed by BWF Board Member, Michael Welsh, MD

National Geographic Society

Support for the National Geographic Society Storytelling Fellowship Proposal for Álvaro Laiz

New Venture Fund

Support for the Science Philanthropy Alliance

North Carolina Community Foundation/

North Carolina Network of Grantmakers General support for 2020-2021

North Carolina School of Science and Mathematics Foundation

Support for the North Carolina STEM Hall of Fame Gala

Open Notebook

Support for Science Storytellers

PEAK Grantmaking

Support for 2020-2021

University of California-Los Angeles Foundation

Support for the Partners for Pediatric Progress through the Global Health Program at the David Geffen School of Medicine, directed by BWF Board Member Kelsey Martin, MD, PhD

Science Education

Science Education

Afterschool Alliance

STEM West – AmeriCorps VISTA Support

Catawba County Schools

STEM West Networking & Marketing

Charitable Ventures

Membership Dues for STEM Funders Network

Cumberland County Board of Education

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

Edgecombe County Schools

The Casandra Cherry Maker Space

Grantmakers for Education

Grantmakers for Education Membership Dues

Massachusetts Institute of Technology

The Blackwell-Johnson-Banneker Statistics Education Project

McDowell County Schools

Support for the Singapore Math Project: Building a Strong Math Foundation Through Constructing, Drawing, and Solving, a proposal by Eastfield Global Magnet School, McDowell County Schools

Moore County Schools

Support for Educational Policy Fellowship Program

National Association of Academies of Science

Support for the 2020 American Junior Academy of Science

National Indian Education Association

Developing Distance Learning tools for Native Students

North Carolina Association for Biomedical Research

Bridging the Gap 2020 STEM Education Conference

North Carolina Business Committee for Education

Support for the DRIVE Summit – Developing a Representative and Inclusive Vision for Education by moving towards a new landscape in recruiting, developing, supporting and retaining educators of color.

North Carolina Science Olympiad

2020 National Science Olympiad Tournament

North Carolina Society of Hispanic Professionals

Support of Promotion of Participation/ Enrollment of Hispanic Students on STEM Programs in North Carolina

North Carolina State University Foundation

Kenan Fellowship for 1 K-12 teacher with a Diversity Focus

Public School Forum of North Carolina

Dudley Flood Center for Educational Equity and Opportunity (FCEEO)

Shodor Education Foundation Inc.

STEM Student Network

University of North Carolina Center for Public Television

Showcasing North Carolina Educators: Teachers of the Year Spots on UNC-TV

University of North Carolina-Chapel Hill

Creating Virtual NC DNA Day Modules

Village of Wisdom

Protecting Students of Color Belonging and Matriculation in STEM courses

Wilkes County Schools

Singapore Math Project
North Wilkesboro Elementary School
Wilkes County School District

Science, Math, and Technology Science Champion**Friday Institute for Educational Innovation**

Updating the North Carolina STEM Education Strategic Plan Scope of Work

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

Support for Driving Progress Toward College and Career Readiness in North Carolina

Morehead Planetarium and Science Center

NC STEM EVENTS CALENDAR – Proposal from Morehead Planetarium and Science Center for July 1, 2020 – October 31, 2020.

North Carolina Alliance for School Leadership Development

Support for Emerging Trends Network for NC Superintendents

North Carolina Alliance for School Leadership Development

Digital Leadership Institute for NC Superintendents

North Carolina Alliance for School Leadership Development

Support for Next Generation Superintendent Development Program Cohort VII

North Carolina Alliance for School Leadership Development

Support for Aspiring Superintendent Program Cohort IV

North Carolina Chamber Foundation

NC Chamber Conference on Education and Workforce

North Carolina School of Science and Mathematics Foundation

Support for NC Student Academy of Science Delegation to the AAAS/ AJAS Annual Meeting (Science Competition Center)

North Carolina Science Fair Foundation

2019-2020 NC Science and Engineering Fair

North Carolina Science Leadership Association

NCSLA Science Leadership Fellows Program, Cohort 2020-2022

Smithsonian Science Education Center

Smithsonian Science for the Classroom: Improving Student Achievement Across State Borders and State Standards

University of North Carolina-Charlotte

14th Annual K-12 STEM Conference, UNC Charlotte

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 (Co-Chair)

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

Geoffrey Aguirre, MD, PhD

Associate Professor of Neurology
University of Pennsylvania Perelman School of Medicine
Department of Neurology
Hospital of the University of Pennsylvania

Leslie J. Berg, PhD

Professor and Chair
Immunology and Microbiology Department
University of Colorado School of Medicine

Chester W. Brown, MD, PhD

St. Jude Chair of Excellence in Genetics
Professor of Division Chief of Genetics
Department of Pediatrics
University of Tennessee Health Science Center

Paul Buckmaster, DVM, PhD

Professor
Dept. of Comparative Medicine
Stanford University

Kathleen H. Burns, MD, PhD

Chair, Department of Pathology
Dana-Farber Cancer Institute
Professor of Pathology
Harvard Medical School

Kathleen Caron, PhD (Co-Chair)

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

Jeanine D'Armiento, MD, PhD

Professor of Medicine in Anesthesiology
Director of the Center for Molecular Pulmonary Disease in Anesthesiology and Physiology and Cellular Biophysics
Director, Center for LAM and Rare Lung Disease
Chair, University Senate
Columbia University

Seth Field, MD, PhD

Harrington Discovery Institute
Case Western Reserve University

Sarah H. Lisanby, MD

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

Heather C. Mefford, MD, PhD

Center for Pediatric Neurological Disease Research
Department of Cellular and Molecular Biology
St. Jude Children's Research Hospital

W. Kimryn Rathmell, MD, PhD

Cornelius Abernathy Craig Professor of Medicine and Biochemistry
Director, Division of Hematology and Oncology
Vanderbilt University Medical Center

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

Physician-Scientist Institutional Award

Matthew Redinbo, PhD

Professor and Chair, Department of Chemistry
The 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 of Biochemistry
Chair, Department of Biochemistry
Vanderbilt University School of Medicine

Diversity in Science

Postdoctoral Enrichment Program

Joey V. Barnett, PhD

Professor
Vanderbilt University

Kami Kim, MD (Chair)

Professor
University of South Florida

George M. Langford, PhD

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

Gina R. Poe, PhD

Professor
University of California-Los Angeles

Michael Summers, PhD

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

Blanton S. Tolbert, PhD

Professor
Case Western Reserve University

Infectious Diseases

Investigators in the Pathogenesis of Infectious Disease

Craig E. Cameron, PhD

Professor and Chair of Microbiology
and Immunology
University of North Carolina-Chapel Hill

Blossom Damania, PhD (Co-Chair)

Professor of Microbiology & Immunology
and Vice Dean for Research
University of North Carolina-Chapel Hill

Maurizio Del Poeta, MD

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

Michael S. Diamond, MD, PhD

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

Katherine A. Fitzgerald, PhD

Professor, Department of Medicine
University of Massachusetts Medical School

Denise Kirschner, PhD

Professor, Department of Microbiology
and Immunology
University of Michigan School of Medicine

Carolina Lopez, PhD

Professor and BJC Investigator in
Molecular Microbiology
Washington University School of Medicine

Eric G. Pamer, MD

Director, Duchossois Family Institute
University of Chicago

**Barbara Papadopoulos, BPharm, PhD,
FCAHS**

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

Eric Skaar, PhD, MPH (Co-Chair)

Director, Vanderbilt Institute for Infection,
Immunology, and Inflammation (VI4)
Ernest W. Goodpasture Professor
Vice Chair for Basic Research
Chief, Division of Molecular Pathogenesis
Vanderbilt University Medical Center

Vanessa Sperandio, PhD

Professor of Microbiology
and Biochemistry
University of Texas Southwestern
Medical Center

Interfaces in Science

Career Awards at the Scientific Interface

David Acheson, MD

President and CEO
The Acheson Group, LLC

Sandy Allerheiligen, PhD

Senior Vice President of Health
Economics & Education
Certara

Martha Brumfield, PhD

Senior Advisor, Past President and CEO,
Critical Path Institute
Associate Professor, College of Pharmacy
University of Arizona

Robert Califf, MD

Head of Clinical Strategy and Policy
Verily Life Sciences and Google Health

Andrea Leonard-Segal, MD

Associate Clinical Professor of Medicine
George Washington University School
of Medicine

Wendy R. Sanhai, PhD, MBA

Federal Strategy and Operations
Deloitte Consulting, LLP
Associate Professor (adj) School
of Medicine
Duke University
Senior Executive Education Fellow
University of Maryland Robert H. Smith,
School of Business

Christy L. Shaffer, PhD

General Partner, Hatteras Venture Partners
Managing Director, Hatteras Discovery

Alastair J.J. Wood, MD (Chair)

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

Regulatory Science

Innovation in Regulatory Science

Anne Churchland, PhD

Professor, Department of Neurobiology
University of California-Los Angeles

Todd Coleman, PhD

Professor of Bioengineering
University of California-San Diego

Jennifer Elisseeff, PhD

Professor and Director, Translational
Tissue Engineering Center
Wilmer Eye Institute
Depts of Biomedical Engineering,
Orthopedic Surgery, Chemical and
Biological Engineering, and Materials
Science and Engineering
Johns Hopkins University

Loren Frank, PhD

Investigator, Howard Hughes
Medical Institute
Professor, Sandler Neurosciences Center
University of California-San Francisco

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

Melissa Lambeth Kemp, PhD

Professor
Wallace H. Coulter Department
of Biomedical Engineering
Georgia Institute of Technology
and Emory University

Andrea Liu, PhD

Hepburn Professor of Physics
Department of Physics and Astronomy
University of Pennsylvania

Alison Marsden, PhD

Associate Professor
Departments of Bioengineering
and Pediatrics
Institute for Computational and
Mathematical Engineering
Stanford University

Matthew R. Redinbo, PhD

Kenan Distinguished Professor
Departments of Chemistry, Biochemistry,
Microbiology and Genomics
University of North Carolina-Chapel Hill

Shyni Varghese, PhD

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

Reproductive Science

Next Gen Pregnancy Initiative

Irina Burd, MD, PhD

Director, Integrated Research Center for Fetal Medicine
Director, Maternal Fetal Medicine Fellowship Program
Professor of Gyn/OB and Neurology
Department of Gynecology and Obstetrics
Johns Hopkins University

Susan Fisher, PhD

Professor
Depts. of Obstetrics, Gynecology and Reproductive Sciences
University of California-San Francisco

Amy P. Murtha, MD

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

Carole Ober, PhD

Blum-Riese Professor, Chair,
Department of Human Genetics
Department of Obstetrics and Gynecology
Committee on Genetics and Systems Biology
University of Chicago

Mana Parast, MD, PhD

Professor Department of Pathology
University of California-San Diego

Hyagriv N. Simhan, MD, MS

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

Jerome F. Strauss, III, MD, PhD (Chair)

Professor of Obstetrics and Gynecology, Human and Molecular Genetics, Biochemistry and Molecular Biology, and Physiology and Biophysics
Virginia Commonwealth University

Science Education

Career Awards for Science and Mathematics Teachers

David Marsland

Science Content Specialist
Discovery Education

Angela Quick, EdD

RTI International

Honorable Bobbie Richardson, EdS

North Carolina General Assembly
Former Director of Exception Children, Vance County Schools (retired)

Student STEM Enrichment Program

John E. Burris, PhD

Past President
Burroughs Wellcome Fund

Yolanda Comedy, PhD

American Association for the Advancement of Science

Connie Locklear

Division of Indian Education
Public Schools of Robeson County

Eric D. Packenham

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

Celestine Pea, PhD

STEM Education Consultant

Steve Saucier

President
Carolina Aviation Museum

William Franklin Scott Sr.

Retired, High School and Middle School Principal

Marco Zarate

Co-founder
North Carolina Society of Hispanic Professionals

Board of Directors and Staff

Board of Directors

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Paula T. Hammond, PhD
Robert J. Lefkowitz, MD, PhD
Wendell Lim, PhD
Kelsey Martin, MD, PhD (Chair)
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Philip R. Tracy

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Associate Communications
and Special Projects Officer

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Assistant
Glenda H. Gilbert
Senior Manager, Facilities
and Administration
Betsy Stewart
Administrative Assistant

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Ken Browndorf
Senior Asset and
Accounting Manager
Jennifer Caraballo
Senior Accountant

Information Technology

Sammy Caraballo
Systems and Web Engineer
Wendell Jones
Technology Coordinator

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Barbara Evans
Administrative Meeting
Assistant
Lori Hedrick
Meeting Professional

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Daniel Baroff
Program Assistant
Alfred Mays
Senior Program Officer
Victoria McGovern, PhD
Senior Program Officer
Samantha Moore
Program Assistant
Kelly Rose, PhD
Program Officer
Melanie Scott
Senior Program Associate
and Database Specialist
Rolly L. Simpson Jr.
Senior Program Officer
Tiffanie Taylor
Senior Program Associate
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Program Associate
and Data Specialist

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Diversity in Science; Science Education

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Interfaces in Science; Regulatory Science; Translational Research

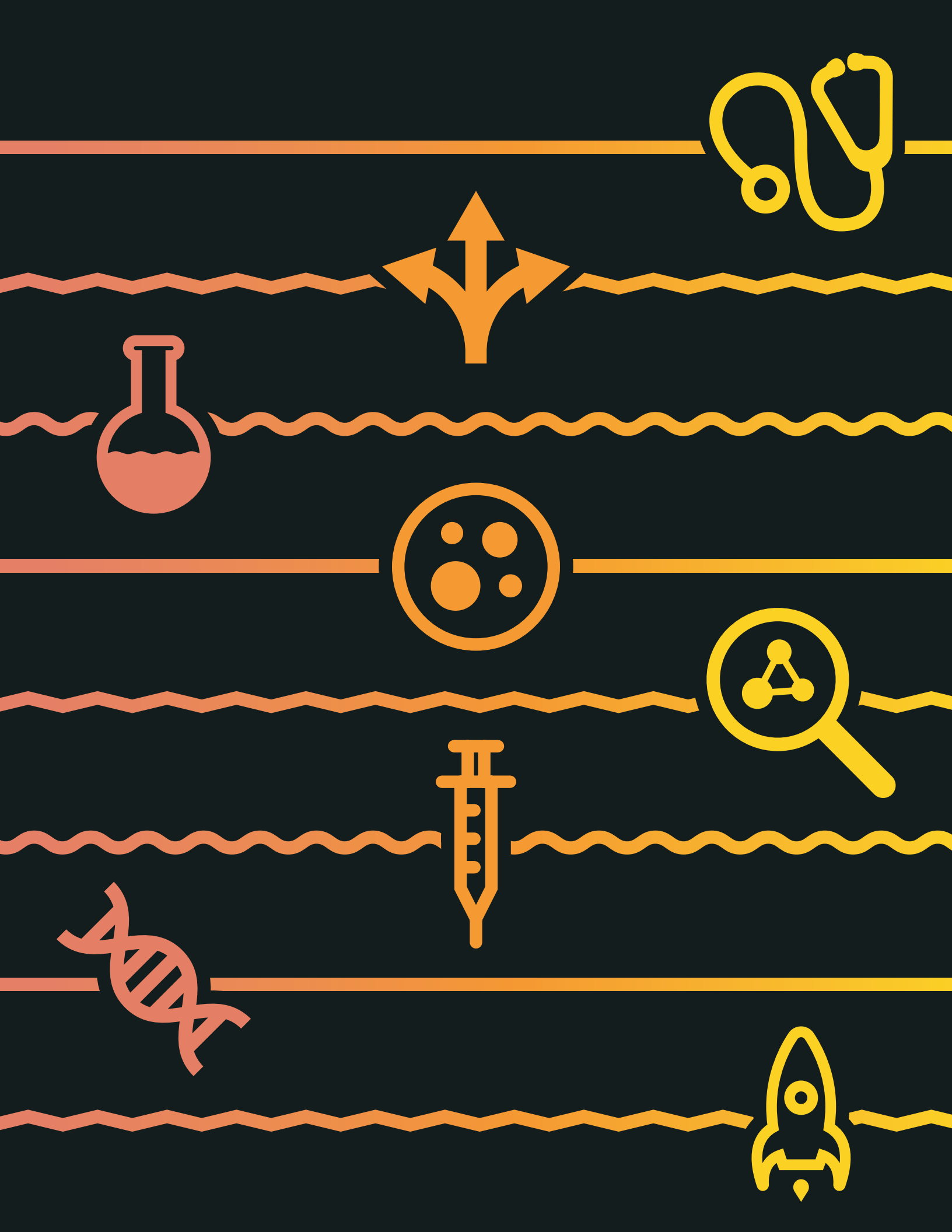
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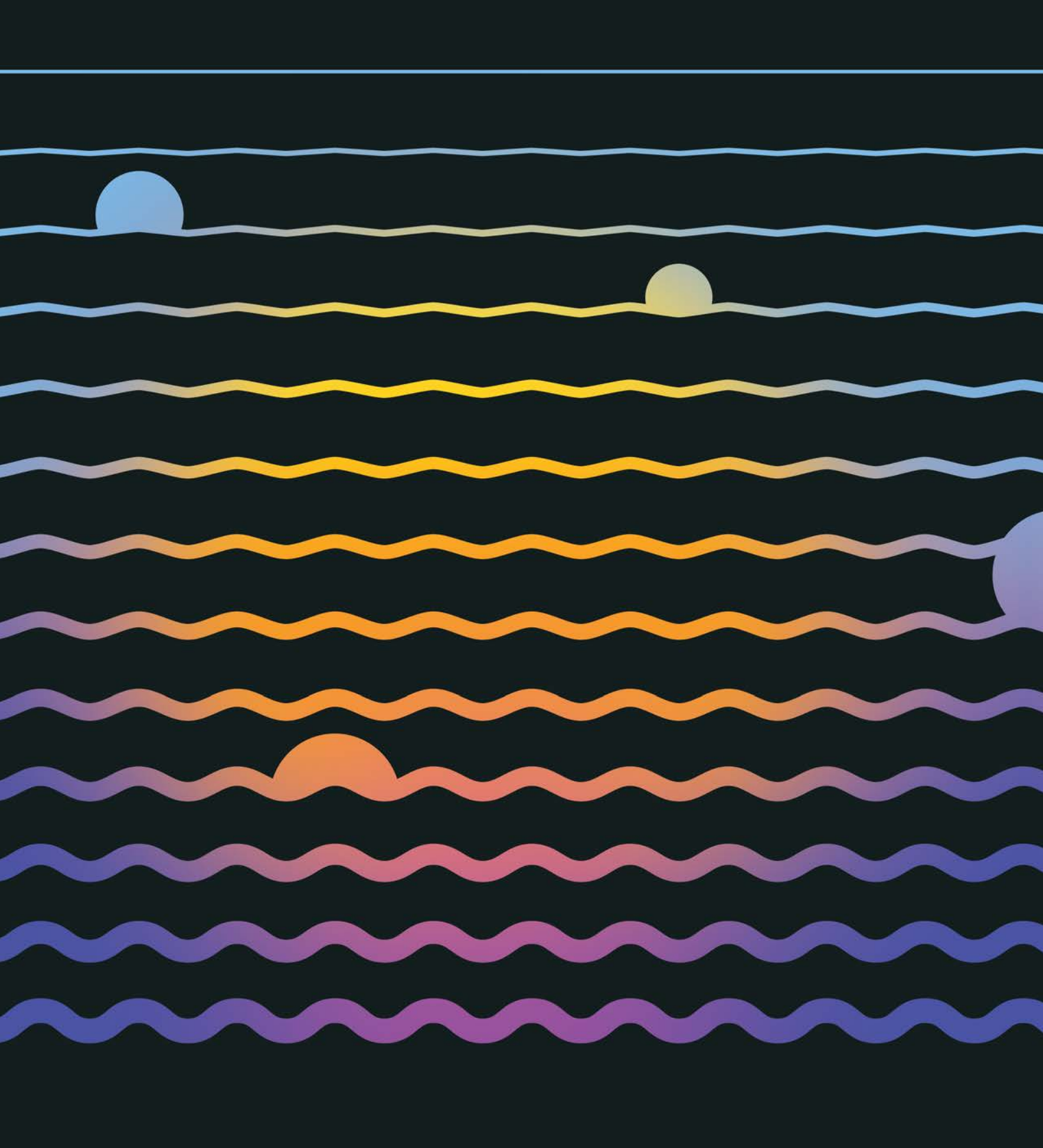
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Program Information

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





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