

CONTENTS

Foreword / 1

Introduction / 2

Part I: Foundations / 3

Development in the Scientific Enterprise / 4

Part II: Evolution / 5

Maintaining the Faith / 6

Part III: Modernity / 7

Hood Foundation / 7

King Trust / 8

Jeffress Trust / 10

Lymphatic Education & Research Network / 11

Noonan Memorial Research Fund / 12

Patterson Trust / 13

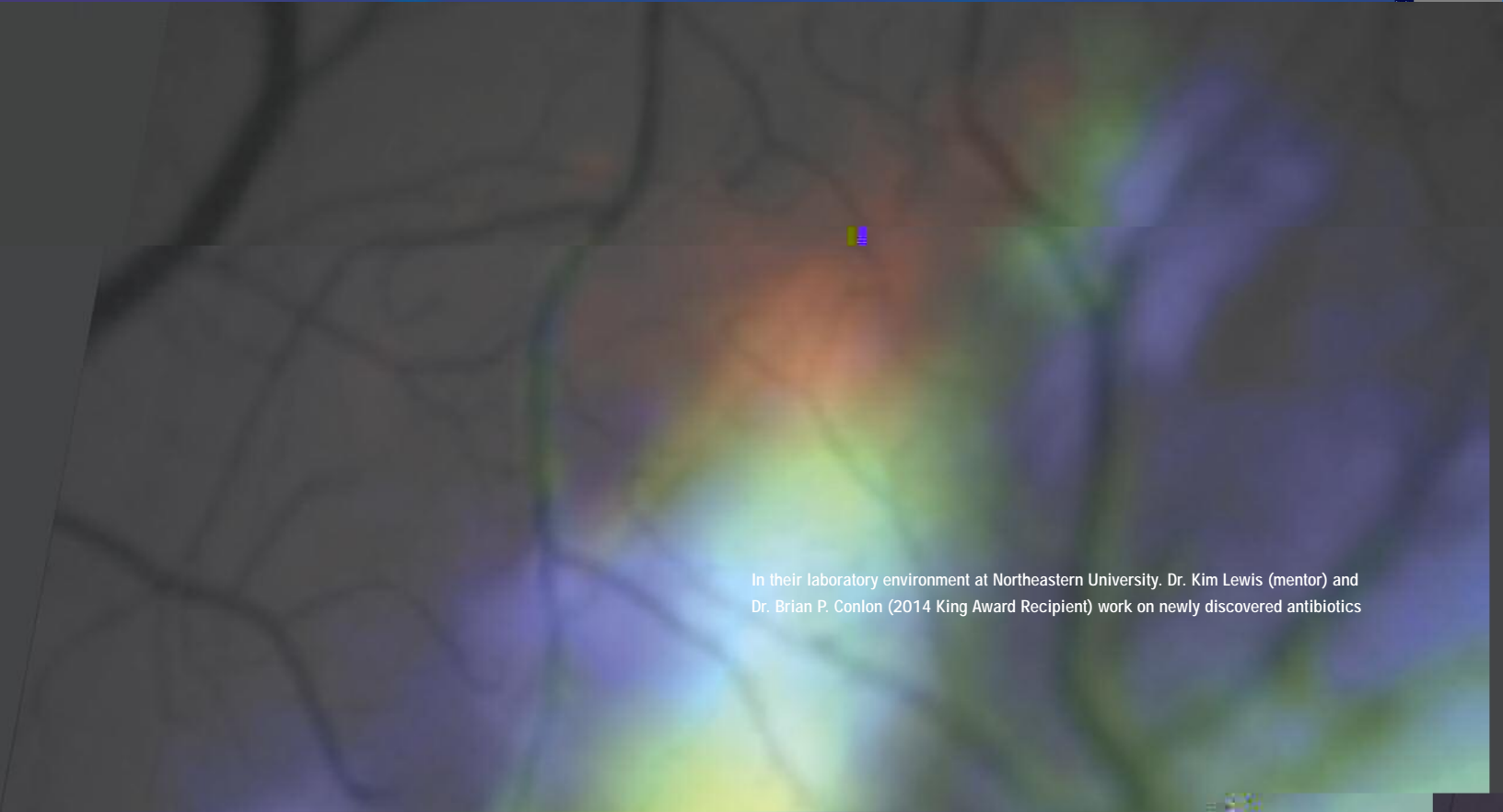
Geneen Trust / 13

Smith Family Foundation / 14

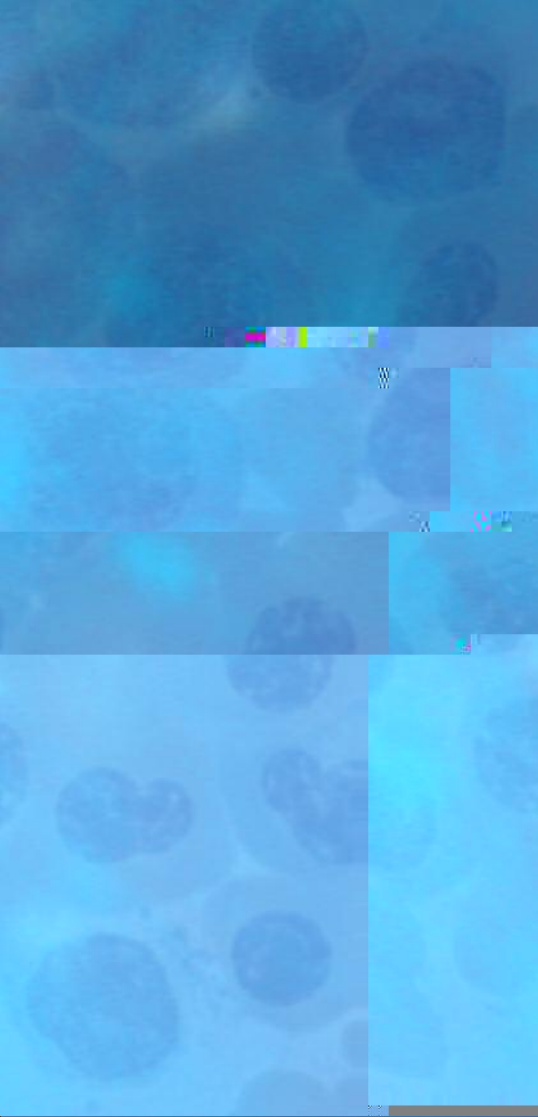
Thome Foundation / 15



Developing the Scientific Workforce



In their laboratory environment at Northeastern University, Dr. Kim Lewis (mentor) and Dr. Brian P. Conlon (2014 King Award Recipient) work on newly discovered antibiotics



Program Officer
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Award
Three-year awards
of \$600,000

Program Eligibility
Faculty at nonprofit
research institutions

Geographic Eligibility
United States

Research Focus
High-impact, innovative
tra

The Medical Foundation division has long been a leader in the development of high-impact grant programs to fit the mission of our clients. Additional factors that determine a program's impact include the understanding of a disease's causes and treatment, its funding landscape, and the targeted scientific workforce. Each of these factors change over time. In order for programs to maintain a high level of impact, it is recommended that they periodically step back to evaluate their success. Making program adjustments will continue to maximize their contribution towards therapeutic development and potential cures.

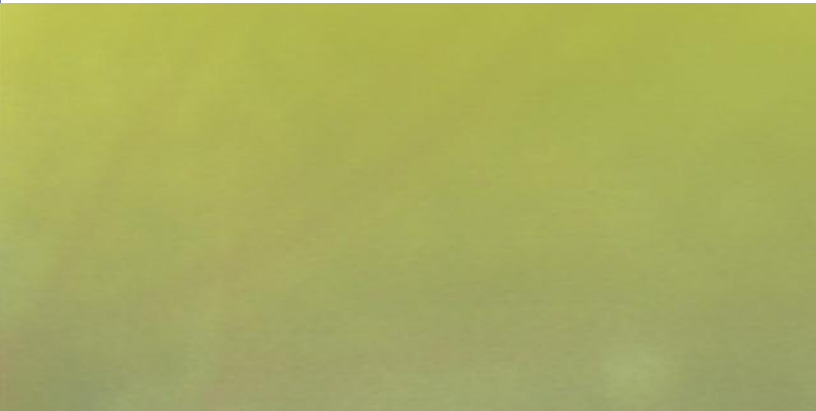
Through our Life Sciences Consulting services, we recently assessed and evaluated the Programs of the Russell Berrie Foundation and the Richard and Susan Smith Family Foundation.

Since 2000, the Russell Berrie Foundation has supported postdoctoral fellows in diabetes research through The Naomi Berrie Fellowship Program at Columbia University. Our evaluation included a survey of past Award Recipients, interviews with deans and investigators, review of Award Recipient research and convening a site visit by a panel of experts in diabetes research. The evaluation helped illuminate the awardee selection process, highlighted Program accomplishments and described its impact in launching productive scientific careers. Importantly, the evaluation informed program design, and recommended ways to monitor and improve program impact.

In 1991, the Smith Family Trustees began the Smith Family Awards Program for Excellence in Biomedical Research to support junior faculty conducting research in the field of diabetes. The shift



Laser Scanning Confocal Microscopy image of a section of two



Charles A. King Trust Postdoctoral Fellowship Program

Understanding human disease and improving its treatment through postdoctoral research

The Charles A. King Trust, established in 1936, supports research that focuses on the causes of human disease in order to discover cures or improve therapeutic treatment. To meet this goal, the Charles A. King Trust Postdoctoral Fellowship Program contributes to high impact discovery research by providing vital support that prepares fellows for launching productive academic careers as independent investigators in biomedical research.

Over the past 56 years, this program has supported over 800 postdoctoral fellows, many of whom have gone on to make extraordinary contributions in a wide-range of scientific disciplines, including cancer, AIDS, heart disease, and diabetes.

In 2014, the Program received 170 applications which were read and critiqued by Scientific Review Committees comprised of forty experts across many disease fields. Funding, in the amount of \$1,827,000, provided two-year postdoctoral fellowships to 19 young investigators. The awards will support their career development, where their discoveries will contribute to accelerating medical innovations in research, training, and patient care. At the request of the Trustees, The Medical Foundation division will conduct an evaluation of the Program in 2015 in order to measure its past impact and plan for future contributions to medicine and patient care.

In addition to the outstanding commitment of the Charles A. King Trust, fellowship support has been generously provided by The Bushrod H. Campbell and Adah F. Hall Charity Fund, the Charles H. Hood Foundation, The Harold Whitworth Pierce Charitable Trust, the Sara Elizabeth O'Brien Trust, and the Simeon J. Fortin Charitable Foundation.

Postdoctoral fellows work closely with their

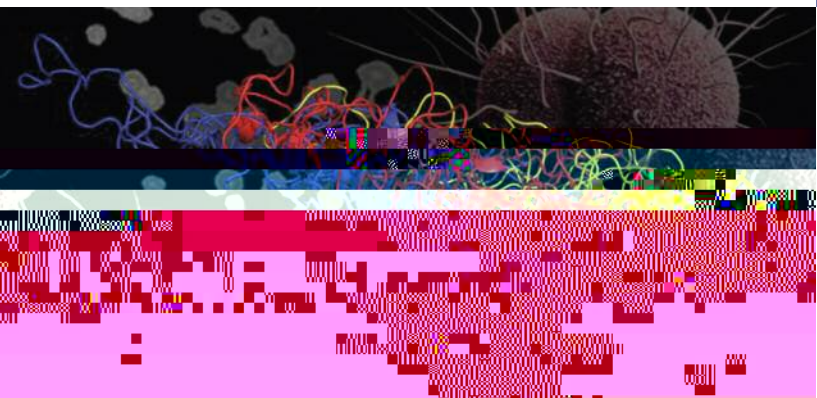
Micrograph of a frog ovary depicting oocytes at various stages of growth and supporting tissue and blood vessels. *Courtesy of Martin Wühr, Ph.D., 2014 King Award Recipient, Harvard Medical School*

Thanks to new techniques, **Dr. Martin Wühr** can now identify and describe the subcellular distribution for thousands of proteins. In contradiction with current models, he is studying how hundreds of proteins injected into the cell find their way into the nucleus. These measurements will allow us to improve our understanding of the properties of the nuclear envelope and shed new light on fundamental principles of cellular organization in health and disease.

Dr. Kathryn Papp is a 2014 King Award Recipient in Clinical and Health Services Research. Her work is focused on Alzheimer's disease, specifically the study of semantic memory (such as the ability to remember the names of famous faces). Her goal is to determine if declines in language memory are a marker of impending Alzheimer's in otherwise healthy older adults. The most common cognitive complaint of older patients is word-finding difficulty and, therefore, Dr. Papp is studying the

Jeffress Trust AVEccccnViiiiJhfj0[hhviJhfjooRhR0[i'viJhfniRhR0ZeaJhfmrhR0[h

Below: In this image Opa proteins found in *Neisseria gonorrhoeae* and *Neisseria meningitidis* trigger the engulfment of the bacteria by human host cells. *Courtesy of Linda Columbus, Ph.D., 2014 Jeffress Award Recipient, University of Virginia*





A Program of

Lymphatic Education & Research Network

Lymphatic Education Network Postdoctoral Fellowship Program

Supports a worldwide

Zebrafish facial lymphatic vessels visualized in red, blood vessels in blue.
Courtesy of Katarzyna Koltowska, PhD, University of Warsaw, Poland

Program Officer
Jean



Patterson Trust Awards Program in Clinical Research

The Robert E. Leet and Clara Guthrie Patterson Trust was created in 1980 to support research “relating to human diseases, their causes and relief.” The Patterson Trust Awards Program in Clinical Research provides support to early-stage physician scientists and clinical researchers in Connecticut and New Jersey.

**Patterson
Program Officer**
Gay Lockwood
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Award
One-year awards in
the amount of \$75,000

Program Eligibility
Invited faculty at
nonprofit institutions
holding NIH K23 or
K08 Awards

Geographic Eligibility
Connecticut and
New Jersey

Research Focus
Clinical research
across a wide range of
research disciplines,
including patient-
oriented research
and translational
laboratory research

Smith Family Awards Program for Excellence in Biomedical Research

A PROGRAM OF THE RICHARD AND SUSAN SMITH FAMILY FOUNDATION

Supporting biomedical innovation and discovery by early-stage investigators

For the past 23 years, the Smith Family Foundation has been supporting groundbreaking medical research through the Smith Family Awards Program for Excellence in Biomedical Research. Its mission is to launch the careers of junior faculty studying health-related basic science with the ultimate goal of achieving medical breakthroughs. Since its founding in 1992, the Program has funded 143 investigators for a total investment of \$26.9 million.

The Smith Family Foundation hosted its annual poster session in May 2014 for its current and past Awardees. Thirty-two scientists showcased their projects and had the opportunity to meet with other scientists from many different fields.

Dr. Neil Ganem, Assistant Professor of Pharmacology and Medicine at B.U. School of Medicine and a 2014 Award Recipient, has focused his research on the basic biology of cancer cells. Unlike normal human cells that always have 23 pairs of chromosomes and stop dividing or die when they have abnormal chromosome numbers, cancer cells tolerate an abnormal number of chromosomes. An abnormal number of chromosomes in cancer cells is associated with tumor progression, resistance to chemotherapy, and cancer

Edward N. and Della L. Thome Memorial Foundation Awards Program in Age-Related Macular Degeneration Research

Fighting the leading cause of blindness in older adults

Established in 2002, the Edward N. and Della L. Thome
Memorial

**Charles A. King Trust
Postdoctoral Fellowship Program**

(Basic Science Research)

Jeannie Lee, M.D., Ph.D. (Chair)

Ingolf Bach, Ph.D.

Steve Buratowski, Ph.D.

David M. Center, M.D.