

Farewell Greetings from the Director

Welcome to the sixth annual GDBBS Awards Banquet! As I reflect on my thirteen years of service as the Director of the Graduate Division of Biological and Biomedical Sciences I am most grateful for the respect and cooperation of thousands of students, faculty members, and University administrators. Equally important has been the financial support provided by the Laney Graduate School, research grants from the NIH, and numerous training grants and individual fellowships that our community has obtained. In fact, we top the nation in the number of F31 individual NRSA awards from the NIH, an incredible achievement attributable in large part to the courses in grant writing to which all students now have access.

Many other significant events have come to fruition during my tenure:

- ◆ the establishment of the annual Division Student Advisory Council Graduate Research Symposium;
- ◆ the addition of the Cancer Biology Graduate Program;
- ◆ the move of the Nutrition and Health Sciences program to the School of Public Health;
- ◆ the founding of the Student Career Symposium to showcase the successes of our graduates and inform our trainees; reorganizing Early Start to fund incoming students to do a summer research rotation;
- ◆ consolidation of the Graduate Program Coordinators into one office providing support for students and faculty;
- ◆ and a complete redesign and implementation of our GDBBS Database, used to track student progress and outcomes, as well as to prepare the required training tables for NIH T32 grant applications.

Finally, two other developments have enriched the graduate experience for our trainees; the increased emphasis on diversity and the expansion of professionalization and career awareness opportunities. Three years ago we established the STEM Research and Career Symposium, a national meeting that brings over a hundred underrepresented students and their advisors to campus for a two-day research symposium. We also sponsor several of these undergraduates for Summer Undergraduate Research at Emory (SURE) and support 32 underrepresented graduate and undergraduate students with fellowships and scholarships from our NIH-funded Initiative to Maximize Student Development (IMSD). As a consequence of these and other efforts our graduate programs now admit 20% of their incoming students from demographic groups that are underrepresented in the sciences. Once our students arrive at Emory they have many opportunities that go beyond standard research training. Finally, thirty to forty students and postdoctoral fellows each year undergo extensive exposure to careers and have an opportunity to do internships in their chosen career area sponsored by our NIH-funded Broadening Experiences in Scientific Training (BEST) program.

It has been exciting times to lead our GDBBS graduate programs, even if it feels like herding cats at times. I will miss it and hope that my successor enjoys the same support, encouragement and satisfaction that I have experienced.

Thank you,
Keith D. Wilkinson, Ph.D.
Professor and Vice Chair, Biochemistry

6th Annual GDBBS Awards Banquet

Recognizing the Achievements of our Students and Faculty



DRUID HILLS GOLF CLUB

740 CLIFTON ROAD

ATLANTA, GA 30307



EMORY

**LANEY
GRADUATE
SCHOOL**

**Graduate Division
of Biological and
Biomedical Sciences**

PROGRAM

RECEPTION & COCKTAIL HOUR

OPENING GREETINGS

Lisa Tedesco, Ph.D.

*Vice Provost for Academic Affairs – Graduate Studies
Dean of the James T. Laney School of Graduate Studies*

DINNER IS SERVED

CELEBRATING THE ACHIEVEMENTS OF DR. KEITH WILKINSON

*Professor and Vice Chair, Biochemistry
Director, Graduate Division of Biological and
Biomedical Sciences*

TRIBUTES

*Dr. Jeremy Boss, Professor and Chair
Department of Microbiology & Immunology*

*Dr. Edward T. Morgan, Professor
Department of Pharmacology
IMSD Co-Director*

*Dr. Anita Corbett, Professor
Department of Biochemistry
Co-Director, MD/PhD Program*

*Jasmine Miller-Kleinhenz, PhD Candidate
Cancer Biology Program
President, Division Student Advisory Council*

Interdisciplinary Programs Training for Success

Interdisciplinary Programs

Modern biological research is interdisciplinary. This type of research is central to the Graduate Division. The O. Wayne Rollins Research Center, Whitehead Biomedical Research Building, and the Rollins School of Public Health are all adjacent to one another and house faculty from multiple departments, including Biochemistry, Biology, Cell Biology, Human Genetics, Microbiology and Immunology, Pathology and Laboratory Medicine, Pharmacology, and Physiology. Division faculty are also drawn from the departments of Anthropology, Chemistry, Medicine, Neurology, Pediatrics, Psychiatry, Psychology, and Surgery.

The resources and faculty available to our graduate students provide them with the necessary training to excel. The Division has over 400 students in various stages of graduate training and last year they were primary or co-authors on more than 200 research papers or abstracts. The training our students receive prepares them for jobs in many different career areas, including faculty and postdoctoral positions at top research universities, prestigious institutions such as the U.S. Centers for Disease Control and Prevention and the National Institutes of Health, and positions in government and the pharmaceutical industry.

World Class Relationships

Students can choose to work with over 300 faculty members who may be affiliated with:

- ◆ *American Cancer Society*
- ◆ *Centers for Disease Control and Prevention*
- ◆ *Emory College*
- ◆ *Robert W. Woodruff Health Sciences Center*
- ◆ *Rollins School of Public Health*
- ◆ *The Carter Center*
- ◆ *Winship Cancer Institute*
- ◆ *Yerkes National Primate Research Center*

GDBBS' Unique Training Structure

More Than a University

The Graduate Division of Biological and Biomedical Sciences at Emory University provides our students with the opportunity to work with world-renowned researchers who are located on, or near, the Emory campus. Current programs are:

Biochemistry, Cell and Developmental Biology

Cancer Biology

Genetics and Molecular Biology

Immunology and Molecular Pathogenesis

Microbiology and Molecular Genetics

Molecular and Systems Pharmacology

Neuroscience

Population Biology, Ecology and Evolution



PROGRAM, CONT.

Emily Kuiper, PhD Candidate

*Biochemistry & Cell Developmental Biology Program
BCDB Scholar of the Year*

Dr. Gillian Hue, Director

*Undergraduate Research Programs
Program Associate, Neuroethics, Center for Ethics*

Concluding Remarks

Dean Lisa Tedesco

RECOGNITION OF FELLOWSHIPS & SCHOLARSHIPS RECIPIENTS

ENDOWMENT RESEARCH AWARDS

*William and Catherine Rice Research Award
Graduate Program in Biology Academic and Professional
Achievement Award*

GDBBS AWARDS

*Distinguished Alumnus Award
Student Scholars of the Year
Graduate Career Award
Student Teaching Award
Career Teaching Award
Student Leadership Award
Outreach/Community Service Award
Student Mentor Award
Faculty Mentor Award*

Closing Remarks

Dr. Keith D. Wilkinson, Ph.D.

DR. KEITH WILKINSONS GDBBS ACCOMPLISHMENTS

The Director of the Graduate Division of Biological and Bio-



medical Sciences (GDBBS), earned his BS from Albion College and his PhD from the University of Michigan. Following a post-doctoral fellowship with Nobel Laureate Dr. Irwin Rose at Fox-Chase Cancer Center, he came to Emory in 1981 as an Assistant Professor in the Biochemistry Department. He is currently Professor and Vice Chair of Biochemistry. Dr. Wilkinson is an internationally recognized expert in the field of protein ubiquitination and degradation, and a revered and respected teacher. Tonight however, we celebrate his contributions to

graduate education and to the GDBBS in particular.

Dr. Wilkinson is the third Director of GDBBS, serving as interim Director from 2003-2006 and as Director from 2006 until present. He has had a major a major role in every phase of the development of GDBBS, as it has grown from a handful of graduate students to one of the Nation's major, high quality graduate biomedical research and training programs with >400 hundred students, or one third of the graduate student population at Emory. Dr. Wilkinson was instrumental in the inception of GDBBS in the late 1980s, when he was part of a small group of Emory faculty with the vision and energy to initiate the movement towards revolutionizing graduate education in the biomedical sciences at Emory. Dr. Wilkinson played a crucial role in founding one of the first GDBBS programs, Biochemistry and Molecular Biology (BMB) and was its Director from 1989 until 1995. He later championed the merger of BMB with Cell and Developmental Biology to form the Biochemistry, Cell and Developmental Biology program.

Additional Awards & Fellowships, Cont

Initiative to Maximize Student Development (IMSD)

Fellows

Morgan Barham, IMP

Briana Brown, CB

Jessica Coates, MMG

Si'Ana Coggins, BCDB

Bijean Ford, IMP

Byron Gardner, NS

Eduardo Gigante, NS

Dora Guzman, NS

Raven Hardy, NS

Binta Jalloh, GMB

Jamie King, CB

Lisa Mills, IMP

Trenell Mosley, GMB

Luis Munoz, IMP

Roxana Rodríguez, MMG

Edgar Sherman, MMG

UNCF/MERCK Science Initiative

Jason Conage-Pough (CB)

William and Catherine Rice Research Award

Scott Wilkinson (CB)

"The scientific man does not aim at an immediate result. He does not expect that his advanced ideas will be readily taken up. His work is like that of the planter - for the future. His duty is to lay the foundation for those who are to come, and point the way. " Nikola Tesla



A special thank you to Wells Fargo for its ongoing sponsorship of the Laney Graduate School's new student orientation and the annual GDBBS Awards Banquet.

NSF Fellows



Elizabeth Barfield (NS)
Travis Dynes (PBEE)
Erica Harris (PBEE)
Madelyn Crawford Houser (IMP)
Zachary Lynch (PBEE)

Additional Awards & Fellowships



Action Cycling Atlanta
Zachary Ende (IMP)

Fulbright Scholar Program
Hye Rim Kim (CB)
Valentina Gonzalez-Pecchi (CB)

Graduate Program in Biology
Academic and Professional
Achievement Award
Lukas Hoffmann (NS)



Howard Hughes Medical
Institute
*James Burkett (NS)**
*Heather Comstra (BCDB)***
Jessica Eliason (GMB)
*Osric Forrest (IMP)***
*Zachary Johnson (NS)**
*Kathryn MacPherson (NS)***
*Colleen McGary (IMP)***
**ORDER Fellowship*
***SIRE Fellowship*

As GDBBS Director he has overseen many important initiatives and enhancements including the Annual Awards Banquet to honor the achievements of our students; the addition of the Cancer Biology Program drawing on the strength of the NCI-designated Winship Cancer Institute: placing the responsibility for programming and hosting the Career Seminar speakers in the hands of a student GDBBS Career Committee; the GDBBS Career Opportunities in Biological and Biomedical Sciences; the GDBBS Research Symposium to provide students with opportunities to hone research presentation skills and to enhance their portfolios; the GDBBS Division Student Advisory Committee; Scientific Writers at Emory, a student group that publishes a quarterly magazine featuring science topics and the semiannual GDBBS newsletter that reaches out to students, faculty and alumni; and an Early Start program for incoming students.

Dr. Wilkinson has led major efforts to support and develop diversity initiatives for faculty, graduate students and undergraduates. As a result of these efforts, underrepresented applicants and matriculants to GDBBS have tripled over the last 15 years. Together with Dr. Pat Marsteller and LGS, Dr. Wilkinson founded the Emory-LGS STEM Research and Career Symposium to showcase graduate and postdoctoral opportunities at Emory to underrepresented students and their mentors. This was a crucial step in obtaining NIH funding for the Emory Initiative to Maximize Student Development (IMSD), of which is co-PI. He has also supported the SURE summer undergraduate research program, contributing funding and a platform for expanding this program to bring underrepresented scholars to Emory. Through IMSD he also conceived and led the establishment of the Atlanta Society of Mentors (ASOM), to help foster best mentoring practices at Emory and other participating schools. Dr. Wilkinson established meaningful relationships with the Atlanta University Center and many other historically minority-serving institutions including partnering with Xavier University of Louisiana, which has received a \$19.6 million grant as part of the national Building Infrastructure Leading to Diversity (BUILD) Initiative of NIH.

Dr. Wilkinson's legacy is not limited to these tangible achievements. He has been a tireless advocate for students and faculty alike. Truly he is a role model for students, faculty and administrators, who has set a very high standard for others to follow.

Students of the Year

BCDB

Emily Kuiper

Advisor: Graeme Conn, Ph.D.

CB

Jason Conage-Pough

Advisor: Larry Boise, Ph.D.

GMB

Shannon Torres

Roger Deal, Ph.D.

IMP

Anna Kersh

Advisor: Brian Evavold, Ph.D.

MMG

Charlene Wang

Advisors: Guido Silvestri, M.D & Satish Pillai, Ph.D.

MSP

Nicole Brown

Advisor: John Hepler, Ph.D.

NS

Lauren DePoy

Advisor: Shannon Gourley, Ph.D.

PBEE

Chloe Robins

Advisor: Karen Conneely

NIH NRSA Fellows



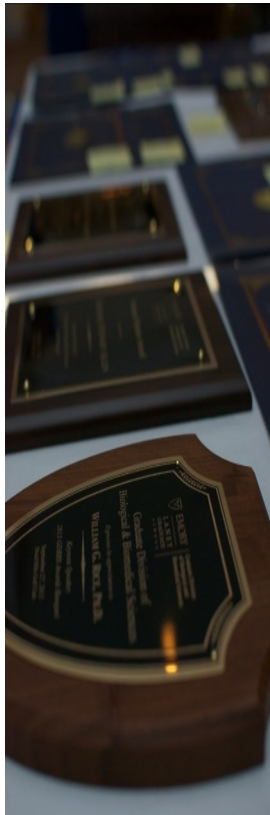
Gina Alesi, CB
Daniel Barron, BCDB
Benjamin Barwick, GMB
Joshua Bell, GMB
Rick Bienkowski, GMB
James Burkett, NS
Lauren Byrd-Leotis, MMG
James Cordova, MSP
Alicia Cutler, BCDB
Sarah Daniel, NS
Paul Donlin-Asp, BCDB
Amy Dunn, NS
Paul Evans, NS
Joshua Francis, BCDB
Jodi Godfrey, NS
Lukas Hoffmann, NS
George Kannarkat, IMP
Kara Kittelberger, NS
Jessica Konen, CB
Sonia Laurie, IMP
Kelly Lohr, NS
Sean McMaster, IMP
Kevin Morris, BCDB
Filomene Morrison, NS
Laura Newman, BCDB
Alexandra O'Sullivan, GMB
Omotola Omotade, BCDB
Jennifer Rha, BCDB
Chloe Robins, PBEE
Emily Rye, BCDB
Alessandra Salgueiro, CB
Karl Schmidt, NS
Kelly Shaw, GMB
Iris Spiegel, NS
Kristen Stout, MSP
Andrew Swanson, NS
Kristen Thomas, NS
Erica Torres, GMB
Charlene Wang, MMG
Scott Wilkinson, CB
Elizabeth Zoeller, CB

Emory Graduate Diversity Fellows



Jason Conage-Pough (CB)
Kristie Garza (NS)
Desiree DeLeon (NS)
Zachary Lynch (PBEE)
Alessandra Salgueiro (CB)
Eduardo Sanabria (MSP)
Cristina Trevino (GMB)

Laney Graduate School Fellows



Mwangala Akamandisa (CB)
Sarah Anderson (MMG)
Kelsie Brooks (MMG)
Sara Fielder (GMB)
Lauren Fleischer (MSP)
Robert Haines (GMB)
PamelaSara Head (GMB)
Carlie Hoffman (NS)
Madelyn Houser (IMP)
Jessica Jadaun (GMB)
Binta Jalloh (GMB)
Michelle Johnson (NS)
Kelly Lynn (BCDB)
Kelsey Maher (BCDB)
Elizabeth Minten (BCDB)
Kara Phipps (MMG)
John Rounds (GMB)
Kathryn Schaber (PBEE)
Sarah Takushi (IMP)
Jessie Wozniak (MMG)

Graduate Career Award

Constance S. Harrell Shreckengost, NS,MD/PhD
Advisor: Gretchen Neigh, PhD

Student Teaching Award

Kameryn McCarty Butler, GMB
Advisor: Andrew Escayg, Ph.D.

Career Teaching Award

Scott Wilkinson, CB
Advisor: Anita Corbett, Ph.D.

Student Leadership Award

Crystal Grant, GMB
Advisors: Karen Conneely, Ph.D. & Peng Jin, PhD

Outreach/Community Service Award

Annie McPherson, GMB
Advisor: Anita Corbett, Ph.D.

Student Mentor Award

Annie McPherson, GMB
Advisor: Anita Corbett, Ph.D.

Faculty Mentor Award

Malu Tansey, Ph.D.
IMP & NS Programs

Distinguished Alumnus Award

Elisabeth B. Binder, Ph.D. has studied Medicine at the University of Vienna, Austria and Neuroscience at Emory University in Atlanta, GA, USA. Following a postdoctoral training at the Max-Planck Institute of Psychiatry in Munich, Germany, she returned to Emory University as an Assistant Professor in the Departments of Psychiatry and Behavioral Sciences and Human Genetics. In 2007, she was appointed as research group leader at the Max-Planck Institute of Psychiatry within the Minerva Program of the Max-Planck Society.



Since August 2013, Elisabeth Binder is the director of the Department of Translational Research in Psychiatry at the Max-Planck Institute of Psychiatry. She

also holds an appointment as an Associate Professor in the Dept. of Psychiatry and Behavioral Sciences at Emory University School of Medicine. Her main research interests are the identification of molecular moderators of the response to environmental factors, with a focus on early trauma and gene x environment interactions. She studies how such factors influence trajectories to psychiatric disease or well-being to ultimately use this information for novel prevention and treatment strategies. She has shown that this gene x environment interaction is mediated by allele-specific epigenetic changes and involves genotype-dependent differences in long range chromatin interactions. This is the first study to report a molecular mechanism for a gene x environment interaction in psychiatry and provides an unique example of how evolution produces long-term genetic variations that determine the short-term environmental adaptation of an individual via epigenetic processes. This work was mentioned as a research highlight in *Nature Genetics Reviews* and *Nature Neuroscience Reviews* and a News and Views article in *Nature Neuroscience*. The paper first describing the gene x environment interaction of FKBP5 polymorphisms and early trauma to predict post-traumatic stress disorder was highlighted in the Oct. 2012 Special of *Nature* on Stress and Resilience – The Roots of Resilience.

Fellowships and Research Awards

American Heart Association Award



Nicole Brown (MSP)
Julianne Freeman (NS)
Emily Hunter (BCDB)
Qize Jiang (NS)

ARCS Foundation Fellows



Brenda Calderon (BCDB)
Lauren DePoy (NS)
Paul Donlin-Asp (BCDB)
Marissa Grossman (PBEE)*
Elizabeth Littauer (MMG)
***Global Impact Award**

Emory University Woodruff Fellows



Erica Akhter (NS)
Rachel Cliburn (NS)
Emily Summerbell (CB)
Rachel Turn (BCDB)