

CURRICULUM VITAE

Wendy Bollinger Bollag, Ph. D.

Professor of Physiology
Department of Physiology
Director of the Office of Postdoctoral Affairs
Medical College of Georgia at
Augusta University
(formerly Georgia Regents University, formerly Georgia Health Sciences University)
Augusta, GA 30912
(706) 721-0698
and
Research Physiologist
Charlie Norwood VA Medical Center
Augusta, GA 30904
(706) 733-0188 x2506

PERSONAL:

Home Address: 231 Watervale Road
Martinez, GA 30907
Home Telephone: (706) 869-8551
Citizenship: USA

EDUCATION:

High School: North Penn High School, Lansdale, PA; valedictorian, 1980
College: Pennsylvania State University, University Park, PA; BS in
Biochemistry, with honors and with highest distinction, 1984
Graduate: Yale University, New Haven, CT; Ph.D. in Cellular and Molecular
Physiology, 1990
Postdoctoral: Postdoctoral Research Associate, Hoffmann-La Roche, Inc., Nutley,
NJ, 1991-1992

PROFESSIONAL:

1985-1990	Lecturer, Yale University Physician Associate Program course in Physiology
1985-1990	Lecturer, Norwalk Hospital/Yale University School of Medicine Physician Assistant Surgical Residency Program review course in Physiology
1987-1990	Coordinator, Yale University Physician Associate Program course in Physiology
1987-1990	Coordinator, Norwalk Hospital/Yale University School of Medicine Physician Assistant Surgical Residency Program review course in Physiology
1992-1993	Assistant Professor of Biology, Seton Hall University
1993-1999	Assistant Professor of Medicine, Medical College of Georgia
1999-2004	Associate Professor of Medicine, School of Graduate Studies and Cell Biology and Anatomy with tenure (2000), Medical College of Georgia
2000-2008	Director, Molecular Medicine Graduate Program
2004-2009	Professor of Medicine, School of Graduate Studies and Cell Biology and Anatomy, Medical College of Georgia
2006-Present	Adjunct Professor of Orthopaedic Surgery, Medical College of Georgia at Augusta University (formerly Georgia Regents University, formerly Georgia Health Sciences University)
2009-Present	Professor of Physiology, School of Graduate Studies and Cell Biology and Anatomy, Medical College of Georgia at Augusta University (formerly Georgia Regents University, formerly Georgia Health Sciences University)
2009-Present	Adjunct Professor of Medicine, Medical College of Georgia at Augusta University (formerly Georgia Regents University, formerly Georgia Health Sciences University)
2011-Present	Adjunct Professor of Oral Biology, Augusta University (formerly Georgia Regents University, formerly Georgia Health Sciences University)
2014-Present	Director, Office of Postdoctoral Affairs, Augusta University (formerly Georgia Regents University, formerly Georgia Health Sciences University)
2018-Present	Research Director, Augusta University Adrenal Center

RESEARCH GRANTS AWARDED:

Co-Investigator, National Science Foundation Science and Technology Infrastructure Grant "Renovation of Biology Laboratory Space" awarded to Dr. Roberta Muldow, Seton Hall University—1993 (\$266,100)

- Biochemist, National Institutes of Health Grant "Hormonal and Ionic Control of Metabolism" awarded to Dr. Howard Rasmussen, Medical College of Georgia—1993-1994 (\$302,179)
- Principal Investigator, Medical College of Georgia Research Institute BRSB Award "The Mechanism Underlying Time-Dependent Potentiation of Aldosterone Secretion in Bovine Adrenal Glomerulosa Cells", Medical College of Georgia—1995 (\$10,000)
- Principal Investigator, American Heart Association Summer Student Award "The Mechanism Underlying Time-Dependent Potentiation of Aldosterone Secretion in Bovine Adrenal Glomerulosa Cells", Medical College of Georgia—1995 (\$2,750)
- Principal Investigator, American Heart Association /Georgia Affiliate Beginning Grant-in-Aid Award "The Mechanism Underlying Time-Dependent Potentiation of Aldosterone Secretion in Bovine Adrenal Glomerulosa Cells", Medical College of Georgia—1995 (\$33,000)
- Principal Investigator, American Heart Association Summer Student Award "The Mechanism Underlying Time-Dependent Potentiation of Aldosterone Secretion in Bovine Adrenal Glomerulosa Cells", Medical College of Georgia—1996 (\$2,750)
- Co-Investigator, National Institutes of Health Grant "Hormonal and Ionic Control of Metabolism" awarded to Dr. Howard Rasmussen, Medical College of Georgia—1996-1999 (\$850,724)
- Principal Investigator, American Heart Association /Georgia Affiliate Grant-in-Aid Award "Role of Phospholipase D in Angiotensin II-induced Sustained Aldosterone Secretion and Priming", Medical College of Georgia—1997-1999 (\$66,000)
- Principal Investigator, National Institutes of Health Grant "Phospholipase D and Keratinocyte Differentiation", Medical College of Georgia—1998-2003 (\$511,000) (with no-cost extension until 2005)
- Principal Investigator, American Heart Association /Southeast Affiliate Grant-in-Aid "Sustained AngII- vs. Transient Carbachol-induced Phospholipase D Activation and Priming", Medical College of Georgia—2000-2002 (\$120,000)
- Principal Investigator, Medical College of Georgia Combined Intramural Grants Program "Protein Kinase D and Keratinocyte Proliferation", Medical College of Georgia—2001-2002 (\$20,000)
- Co-Investigator, Medical College of Georgia/Georgia Institute of Technology Basic Research Enrichment Program "Optimization of Channel-Forming Peptides for Transdermal Drug Delivery", Medical College of Georgia—2001-2002 (\$15,000)
- Principal Investigator, Medical College of Georgia Combined Intramural Grants Program "Protein Kinase D and Keratinocyte Proliferation", Medical College of Georgia—2002-2003 (\$20,000)

- Principal Investigator, National American Heart Association Grant-in-Aid “Cholesterol Mobilization and Acute Aldosterone Biosynthesis in Adrenal Glomerulosa Cells”—2003-2004 (\$143,000)
- Principal Investigator, National Institutes of Health Grant “Regulatory Mechanisms of Aldosterone Secretion”, Medical College of Georgia—2003-2007 (with a no-cost extension to 2008) (\$1,144,000)
- Principal Investigator, National Institutes of Health Grant "Phospholipase D and Keratinocyte Differentiation", Medical College of Georgia--2005-2008 (Years 6-8) (with a no-cost extension to 2009) (\$755,040, plus a Research Supplement to Promote Diversity in Health-Related Research of \$45,284)
- Principal Investigator, National Institutes of Health Grant “Topical Treatment for Mild Psoriasis”, Medical College of Georgia—2007-2008 (\$136,035 – MCG portion)
- Principal Investigator, Georgia Research Alliance Industry Partnership Grant “Treatment for Disorders of Keratinocyte Proliferation”, Medical College of Georgia—2007-2008 (\$48,740)
- Principal Investigator, VA Merit Award “The Role of Protein Kinase D in Epidermal Tumorigenesis”, Charlie Norwood VA Medical Center—2007-2011 (~\$900,000)
- Principal Investigator, MCG Intramural Grant Program Pilot Study Research Program “Phosphatidylglycerol and Corneal Wound Healing”, Medical College of Georgia—2008-2009 (\$25,000)
- Principal Investigator, Southeastern Clinical and Translational Research Institute Pilot Project Program “Protein Kinase D as a Drug Target for Treatment of Hyperproliferative Skin Diseases”, Medical College of Georgia—2009 (\$40,000)
- Principal Investigator, National Institutes of Health Grant “Protein Kinase D and Epidermal Structure and Function”, Medical College of Georgia—2009-2011 (\$404,250)
- Principal Investigator, Georgia Research Alliance “Efficacy of Phosphatidylglycerol Liposomes for Treatment of Psoriasis” GRA/VentureLab Project Award Phase Ia, Medical College of Georgia—2009 (\$25,000)
- Principal Investigator, Medical College of Georgia Vision Discovery Institute “The Corneal Epithelium Phospholipase D2/Aquaporin 3 Signaling Module in Eye Diseases”, Medical College of Georgia – 2009 (\$25,000)
- Principal Investigator of Project #2 (William Rainey, Principal Investigator), Medical College of Georgia Cardiovascular Discovery Institute “Molecular Defects Leading to Primary Aldosteronism”, Medical College of Georgia – 2009 (\$10,000 for project, \$50,000 total)
- Principal Investigator, Medical College of Georgia Diabetes and Obesity Discovery Institute “Hyperaldosteronism in Obesity and the Metabolic Syndrome”, Medical College of Georgia – 2009 (\$50,000)

- Principal Investigator, American Legion of Georgia, “Protein Kinase D in Prostate Cancer”, Charlie Norwood VA Medical Center—2010 (\$7,500)
- Principal Investigator, Georgia Research Alliance “Phosphatidylglycerol Pharmacodynamics in Reconstructed Human Skin” GRA/VentureLab Project Award Phase Ib, Medical College of Georgia—2010 (\$25,000)
- Lead Mentor, Department of Defense, “Translational Breast Cancer Research: A Mentor/Protege Collaborative Between Albany State University and Medical College of Georgia”, Medical College of Georgia – 2010-2013 (\$340,827 -- MCG portion)
- Co-Investigator (Carlos Isales, Principal Investigator), National Institutes of Health Grant “Age-induced Impairment of Nutrient Signaling Results in Bone Loss”, Medical College of Georgia, 2011-2016 (~\$8 million)
- Research Career Scientist Award, Charlie Norwood VA Medical Center—2011-2016 (salary support)
- Principal Investigator, VA Merit Award (CSR&D) “The Role of Protein Kinase D in Epidermal Tumorigenesis”, Charlie Norwood VA Medical Center—2011-2015 (~\$900,000)
- Principal Investigator, American Legion of Georgia, “Disrupted Wound Healing in Diabetes”, Charlie Norwood VA Medical Center—2011 (\$5,000)
- Principal Investigator, Georgia Health Sciences University Institute of Regenerative and Reparative Medicine Pilot Project Award “Preclinical Studies on Stem Cell Therapy to Accelerate Healing of Chronic Wounds”—2012 (\$25,000)
- Principal Investigator, VA Merit Award (BLR&D) “Regulation of Aldosterone Production in the Adrenal”, Charlie Norwood VA Medical Center—2012-2016 (~\$650,000)
- Co-Principal Investigator, Georgia Research Alliance “ApoCan: Sensitizing Drug-Resistant Cancer Cells to Anti-Cancer Agents to Increase Cancer Cell Death”, GRA/VentureLab Project Award Phase Ia, Georgia Health Sciences University—2012-2013 (\$25,000)
- Co-Principal Investigator (Kebin Liu, Principal Investigator), Georgia Regents University Cancer Center “Apoptosis Resistance and MDSC Persistence in CRC Patients”, Pilot Project Award—2013-2014 (\$50,000)
- Principal Investigator, Georgia Regents University James & Jean Culver Vision Discovery Institute “Diioleoylphosphatidylglycerol to Accelerate Corneal Wound Healing”, Pilot Project Award—2013-2014 (\$12,500)
- Principal Investigator, Georgia Regents University James & Jean Culver Vision Discovery Institute “Diioleoylphosphatidylglycerol to Accelerate Corneal Wound Healing”, Pilot Project Award—2014-2015 (\$12,500)

Principal Investigator, Georgia Regents University Bridge Funding Program “Mechanisms Regulating Aquaporin 3 Expression in Keratinocytes and the Epidermis”, Early Success Award—2015-2016 (\$25,000)

Principal Investigator, VA Merit Award (CSR&D) “Epidermal Aquaporin-3 in Psoriasis”, Charlie Norwood VA Medical Center—2016-2020 (~\$1,033,000)

Co-Principal Investigator, University of Georgia-Augusta University Seed Grant Program “Nitric Oxide-Releasing Biodegradable Hybrid Dressings for Wound Healing Application” — 2016-2017 (\$25,000)

Principal Investigator, Augusta University Pilot Study Research Program “The Aquaporin-3-Phospholipase D2 Signaling Module in Corneal Wound Healing” – 2016-2017 (\$25,000)

Principal Investigator, American Legion of Georgia, “Phosphatidylglycerol in Skin Wound Healing”, Charlie Norwood VA Medical Center—2017 (\$5,000)

Co-Investigator (Carlos Isales, Principal Investigator), National Institutes of Health Grant “Age-induced Impairment of Nutrient Signaling Results in Bone Loss”, Augusta University, 2017-2022 (~\$11.2 million)

Principal Investigator, Augusta University Pilot Study Research Program “Effects of Monomethylfumarate, a Nrf2 Activator, on Bone Formation and Bone Mass” – 2017-2018 (\$25,000)

Principal Investigator, VA ShEEP (Shared Equipment Evaluation Program) Award “ShEEP Request for Fluorescent Microscope”, Charlie Norwood VA Medical Center—2018-2018 (~\$189,421)

Co-Mentor (Carlos Isales, Principal Investigator and Mentor), NIH Diversity Supplement to Dr. Debra Irsik “Age Induced Impairment of Nutrient Signaling Results in Bone Loss (Diversity Supplement)” – 2018-2019 (~\$227,000)

Principal Investigator, Augusta University Pilot Study Research Program “The Aquaporin-3/Phospholipase D2/Phosphatidylglycerol Signaling Module in Dermatoporosis” – 2018-2019 (\$25,000)

Principal Investigator, VA Merit Award (BLR&D) “Phosphatidylglycerol to Promote Corneal Wound Healing and Inhibit Chronic Inflammation”, Charlie Norwood VA Medical Center—2019-2023 (~\$886,000)

Dr. Bollag and the Research Office of the Charlie Norwood VA Medical Center have been notified of the intent to fund once the just-in-time process is completes.

AWARDS AND HONORS:

Teaching Assistant, Pennsylvania State University Introductory Chemistry Laboratory, 1984
University Scholars Program of the Pennsylvania State University, 1980-1984
National Merit Scholarship, 1980-1984
National Science Foundation Predoctoral Fellowship, 1984-1987
Teaching Award, Yale University Physician Associate Program, 1989
Distinguished Teaching Award, Medical College of Georgia, School of Graduate Studies, 1999
Chair and Organizer, 37th Annual Southeast Regional Lipid Conference, 2002
Distinguished Faculty Award, Basic Science Teaching, Medical College of Georgia, School of
Medicine, 2004
Invited Participant, National Institute of Arthritis, Musculoskeletal and Skin Diseases
Roundtable Discussion, 2006
Outstanding Faculty Award, Medical College of Georgia, School of Graduate Studies, 2006
Outstanding Performance Award, Charlie Norwood VA Medical Center, 2008
Distinguished Service Award, Medical College of Georgia, School of Graduate Studies, 2009
Outstanding Performance Award, Charlie Norwood VA Medical Center, 2009
Distinguished Research Award, Medical College of Georgia, School of Graduate Studies, 2010
Outstanding Performance Award, Charlie Norwood VA Medical Center, 2010
VA Research Career Scientist Award, 2011-2016
Nomination and selection as a Fellow of the American Heart Association, 2011
Outstanding Performance Award, Charlie Norwood VA Medical Center, 2011
Distinguished Faculty Award, Basic Science Research, Georgia Health Sciences University,
Medical College of Georgia (School of Medicine), 2012
Selected to attend the Association of American Medical Colleges Mid-Career Women Faculty
Professional Development Seminar in Austin, TX, 2012
Outstanding Performance Award, Charlie Norwood VA Medical Center, 2012
Distinguished Teaching Award, Georgia Regents University, The Graduate School, 2013
Outstanding Performance Award, Charlie Norwood VA Medical Center, 2013
Nomination to and selection as a participant in the GRU Executive Leadership Excellence
Program, 2014-2015
Outstanding Performance Award, Charlie Norwood VA Medical Center, 2014
Outstanding Performance Award, Charlie Norwood VA Medical Center, 2015
Selected for Faculty of 1000, 2016
Outstanding Performance Award, Charlie Norwood VA Medical Center, 2016
MCG Exemplary Teaching Award, Medical College of Georgia at Augusta University, 2016

Outstanding Performance Award, Charlie Norwood VA Medical Center, 2017
 MCG Exemplary Teaching Award, Medical College of Georgia at Augusta University, 2017
 Invited Seminar Speaker at Jiangnan University (China) sponsored by the Hubei World Famous
 Visiting Scientist Program, 2018
 Institutional Service Award, Medical College of Georgia at Augusta University, 2018
 MCG Exemplary Teaching Award, Medical College of Georgia at Augusta University, 2018
 Outstanding Performance Award, Charlie Norwood VA Medical Center, 2018

EDUCATIONAL SERVICE:

1996-1998	Chair of Judging Subcommittee, MCG Graduate Student Research Day Committee
1998-Present	Member, Molecular Medicine Graduate Education Committee
1999	Section Coordinator, Renal and Gastrointestinal Physiology in SGS 8020
1999	Chair, MCG Graduate Student Research Day Committee
1999-2000	Graduate School Representative, Medical College of Georgia Committee on Professionalism
1999-2002	Ad hoc member, Medical School Admissions Committee
2000	Chair, MCG Graduate Research Day Committee
2000	Co-organizer, Rasmussen Biological Communications Symposium at MCG (with Continuing Medical Education credits available)
2000 (Spring)	Course Co-Director, Special Topics in Biological Signaling (MOL 8030)
2000 (Fall)	Course Co-Director, Molecular Medicine (MOL 8040)
2001-present	Chair of Postdoctoral Presentations Subcommittee, MCG Graduate Research Day Committee
2001 (Spring)	Course Director, Seminar in Cell Signaling (MOL 9010)
2003 (Spring)	Course Director, Molecular Medicine (MOL 8040)
2003 (Fall)	Course Co-Director, Grant Writing (SGS 8130)
2004 (Spring)	Course Co-Director, Seminar in Cell Signaling (MOL 9010)
2004 (Spring)	Chair, Organizing committee for the Tenth Anniversary IMMAG Retreat and Symposium
2004-2008	Ad hoc member, Medical School Admissions Committee
2004 (Fall)	Course Co-Director, Grant Writing (SGS 8130)
2005 (Spring)	Course Director, Molecular Medicine (MOL 8040)
2005 (Fall)	Course Co-Director, Grant Writing (SGS 8130)

- 2005 (Summer) Mentor, Dean's Summer Research Student Fellowship (Xiaofeng Zhong)
- 2006 (Fall) Course Co-Director, Grant Writing (SGS 8130)
- 2007 (Spring) Course Director, Molecular Medicine (MOL 8040)
- 2007 (Fall) Course Co-Director, Grant Writing (SGS 8130)
- 2008 (Summer) Mentor, Dean's Summer Research Student Fellowship (Kristen Voss)
- 2008 (Fall) Course Co-Director, Grant Writing (SGS 8130)
- 2009 (Summer) Mentor, Dean's Summer Research Student Fellowship (Kristen Voss)
- 2009 (Spring) Course Director, Seminar in Cell Signaling (MOL 9010)
- 2009 (Fall) Course Co-Director, Grant Writing (SGS 8130)
- 2009 (Fall) Course Co-Director, Advanced Study of Physiology (PSIO 8340)
- 2010 (Spring) Course Director, Current Trends in Physiology (PSIO 8350)
- 2010 (Summer) Mentor, Diabetes and Obesity Discovery Institute (DODI) Fellowship (Aaron Emmons and Angela Wang)
- 2010 (Fall) Course Co-Director, Grant Writing (SGS 8130)
- 2010-present Member, Department of Physiology Graduate Education Committee
- 2010-present Chair, Department of Physiology Postdoctoral Affairs Committee
- 2011 (Spring) Course Director, Current Trends in Physiology (PSIO 8350)
- 2011 (Summer) Mentor, Dean's Summer Research Student Fellowship (Peter Karempelis)
- 2011 (Fall) Course Director, Current Trends in Physiology (PSIO 8350)
- 2011 (Fall) Course Co-Director, Grant Writing (SGS 8130)
- 2011 (Fall) Facilitator, Postdoctoral Interactive Ethics sessions
- 2012 (Spring) Facilitator, Postdoctoral Interactive Ethics sessions
- 2012 (Spring) Course Director, Medical Endocrine and Reproductive Physiology (PSIO 8370)
- 2012 (Summer) Mentor, Diabetes and Obesity Discovery Institute (DODI) Fellowship (Mary Hardin)
- 2012 (Fall) Course Co-Director, Grant Writing (SGS 8130)
- 2012 (Fall) Course Director, Current Trends in Physiology (PSIO 8350)
- 2013 (Summer) Mentor, Dean's Summer Research Student Fellowship (Mary Hardin)
- 2013 (Summer) Mentor, AOA Carolyn L. Kuckein Student Research Fellowship (Karen Kagha)
- 2013 (Fall) Course Co-Director, Grant Writing (SGS 8130)
- 2014 (Summer) Mentor, AOA Carolyn L. Kuckein Student Research Fellowship (Abigail Cline)
- 2014 (Summer) Mentor, Dean's Summer Research Student Fellowship (Ada Agidi and Ravi Patel)

2014 (Fall)	Course Co-Director, Grant Writing (SGS 8130)
2015 (Summer)	Mentor, Dean's Summer Research Student Fellowship (Lauren Marshall and Mathew Joseph)
2015 (Fall)	Course Co-Director, Grant Writing (SGS 8130)
2015 (Fall)- present	Co-Preceptor for Problem-Based Learning small group, Essentials of Clinical Medicine 1
2015 (Fall)- present	Co-Preceptor for Problem-Based Learning small group, Essentials of Clinical Medicine 2
2016 (Summer)	Mentor, Medical Scholars Program (Victoria Custer)
2016 (Fall)	Course Co-Director, Grant Writing (SGS 8130)
2017 (Summer)	Mentor, Medical Scholars Program (Catherine Zhang)
2017 (Summer)	Mentor, AOA Carolyn L. Kuckein Student Research Fellowship (Elyssa Cohen)
2017 (Fall)	Course Co-Director, Grant Writing (SGS 8130)
2018 (Summer)	Mentor, Medical Scholars Program (Wendi Bao and Hirel Patel)
2018 (Fall)	Course Co-Director, Grant Writing (SGS 8130)
1993-Present	Thesis committee member for Soraya Betancourt-Calle, Ryan Shanks, Ted Johnson, Susan Nozell, Chadwick Hales, Amy Willis, Brent Steadman, Jingwen Chang, Billie Moore-Scott, Anna Manlapat, Karenne Fru, Michael Clark, Won-Jong Oh, Jennifer Cannon, Thom Gaddy, Ning Xu, Rachel Novak, Ethan Kellum, Kannan Krishnamurthy, Shalini Padmanabhan, Katie West (withdrew from the program prior to defending), Uma Chandrasekar (transferred to Loyola University), Tiffany Floyd, Danielle Daniely, Mark Merkle, Burles (Rusty) Johnson, Tiffany Nyugen, Jeniel Parmer, Edson Nogueira, Yewei Xing, Moataz Elkasrawy, Yu Qin, Kou Qin, Kirti Bhatt, Hyehun Choi, Nikhil Prakash, Hicham Labazi, Anthony Florschutz, Davies Agyekum, Jutamas Suwanpradid, Namita Hattangady, Juilee Rege, Samuel Herberg, Qian He, Katie Spitler, Ashley Wilson (withdrew from the program prior to defending), Cameron McCarthy, Ji Na Kong, Nicole Howie, Prasanna Abeyrathna, Amy Paschall, Lawrence Hicks, Eun Kyung Ko, Eun Mi Lee, Mason Webb, Jessica Pierce, Lia Taylor, Raziye Piranlioglu, Ahmed Elmansi (transferred to Medical University of South Carolina), Casey Derella, Patricia Martinez-Quinones and Anuj Sharma

- 1993-Present Advisor and thesis committee member for Xiangjian Zheng (Postdoctoral fellow at Vanderbilt University 2003-2006; postdoctoral fellow at University of Pennsylvania 2006-2011; Research Associate at University of Pennsylvania, 2011-2014; Group Head of the Laboratory of Cardiovascular Signaling at Centenary Institute in Newtown, Australia 2014-present), M. Ernie Dodd (Postdoctoral fellow at University of Wisconsin, Madison 2005-2009; currently caring for children), Brian Shapiro (Postdoctoral fellow at Virginia Commonwealth University 2009-2011; Assistant Adjunct Professor at Randolph Macon College 2012; Instructor at South University 2012-2014; Technical Writer at American Type Culture Collection 2014-present), Lakiea Bailey (Postdoctoral fellow at Georgia Health Sciences University 2012-2014; member of the Research Advisory Committee for the Foundation of Sickle Cell Disease Research and Executive Director of the Sickle Cell Community Consortium 2014-present), Senthil Arun (Student in Dentistry Program at the University of Pennsylvania 2009-2011; Dental resident at the University of Louisville, Kentucky 2011-2013; Orthodontist in private practice 2013-present), Haixia Qin (Internal Medicine resident at Grady Hospital, Atlanta, GA 2011-2014; Assistant Professor 2014-2015; Associate Professor 2015-present, Loma Linda University Faculty Medical Group, Loma Linda, CA), Lawrence Olala (Postdoctoral fellow at Georgia Regents University 2013-2016; student in the Physician Assistant Program at Yale University 2016-present), Mutsa Seremwe (Postdoctoral fellow at Augusta University 2014-2017; Clinical Research Associate at Augusta University 2017-present), Ying-Ying Tsai (currently caring for children) and Inas Helwa (Post-doctoral fellow at Augusta University 2014-2017; Lecturer at Augusta University, 2017-2018)
- 1993-Present Thesis reader for Mary Hutson, Feng Qin, Carol Nichols, Haiyan Liu, Hank Schmidt, Michael Dohn, Ebrahim Shafizadeh, Dennis Maddox, Scott Noggle, Robert Lober, Yang Sui Brooks, Faith Mmanywa, Amber Cyran Howard and Renee Bozard
- 2012 Subject Matter Expert, Master's Project of Meg Gullotto, Graduate Program in Medical Illustration
- 2012-2013 Host and Mentor for Visiting Scholar Dr. Zhi-qiang Pan, Shanghai University of Traditional Chinese Medicine (Shanghai, China)
- 2013 Subject Matter Expert, Master's Project of Lisa Sato, Graduate Program in Medical Illustration

- 2013-2014 Host and Mentor for Visiting Scholar Dr. Jin Liu, Jiangnan University
(Wuhan, China)
- 2016-2017 Host and Mentor for Visiting Scholar Dr. Rong Yang, Jiangnan University
(Wuhan, China)
- 2017-2018 Host and Mentor for Visiting Scholar Dr. Rawipan Uaratanawong,
Navamindradhiraj University (Bangkok, Thailand)

STAR STUDENTS

Dr. Bollag has mentored multiple Summer Training and Research undergraduate students over many years.

TRAINEES' HONORS AND AWARDS

MEDICAL STUDENTS

Dean's Summer Research Fellowships to first-year medical students Xiaofeng Zhong (2005), Kristen Voss (2008), Peter Karempelis (2011), Mary Hardin (2013), Ada Agidi (2014), Ravi Patel (2014), Lauren Marshall (2015) and Mathew Joseph (2015) and to second-year medical student Kristen Voss (2009)

American Heart Association Health Sciences Fellowship to first-year medical student Annie Park (2012)

Diabetes and Obesity Discovery Institute (DODI) Medical Scholars Aaron Emmons and Angela Wang (2010) and Mary Hardin (2012)

Medical Scholars Program research fellowships to first-year medical students Victoria Custer (2016), Catherine Zhang (2017) and Hirel Patel and Wendi Bao (2018)

AOA Carolyn L. Kuckein Student Research Fellowship Award to Karen Kagha (2013)

AOA Carolyn L. Kuckein Student Research Fellowship Award to Abigail Cline (2014)

AOA Carolyn L. Kuckein Student Research Fellowship Award to Elyssa Cohen (2017)

Poster Travel Award to the Southeastern Regional Lipid Conference in Cashiers, NC to Wendi Bao (2018)

Oral Presentation and Travel Award to the Southeastern Regional Lipid Conference in Cashiers, NC to Hirel Patel (2018)

Oral Presentation and Travel Award to the Southern Section of the American Federation for Medical Research in New Orleans, LA to Mark Schwade (2018)

GRADUATE STUDENTS

Xiangjian Zheng

The Rasmussen Award for Outstanding Molecular Medicine Graduate Student (2001)
School of Graduate Studies Excellence in Research Award, Medical College of Georgia
Graduate Research Day (2002)
Medical College of Georgia Faculty and Spouse Award for Outstanding Graduate Student
(2003)
Appointed Head of the Cardiovascular Signaling Group at the Centenary Institute in Sydney,
Australia (2014)

Brian Shapiro

National Institutes of Health Travel Award, Southeastern Regional Lipid Conference (2006)
School of Graduate Studies Excellence in Research Award, Medical College of Georgia
Graduate Research Day (2006)

Senthil Arun

Travel Award, Southeastern Pharmacology Society (2007)
Nomination for and inclusion in Who's Who among Students in American Universities and
Colleges (2008)
Graduation with distinction (2010)
American Dental Education Association/Johnson and Johnson Preventive Dentistry
Scholarship (2010)

Lawrence Olala

New Investigator Travel Award, Jackson Cardiovascular-Renal Meeting (2008)
Federation of American Societies for Experimental Biology (FASEB) Minority Access to
Research Careers (MARC) Travel Award, American Physiological Society (APS)
Professional Skills Course (2012)

Lakiea Bailey

Travel Award, Southeastern Regional Lipid Conference in Cashiers, NC (2008)
Fisher Scientific Overall Excellence in Research Award, Medical College of Georgia
Graduate Research Day (2009)
Travel Award, Southeastern Regional Lipid Conference in Cashiers, NC (2011)
Induction into the Alpha Upsilon Phi Honor Society (2012)

Mutsa Seremwe

Selection as an Endocrine Trainee (including a travel award), Annual Meeting of the
Endocrine Society (2009)
Nomination for and inclusion in Who's Who among Students in American Universities and

Colleges (2013)

Haixia Qin

Travel Award, Southeastern Regional Lipid Conference in Cashiers, NC (2009)

Nomination for and inclusion in Who's Who among Students in American Universities and Colleges (2009)

Selection for an oral presentation at the 71st Annual meeting of the Society for Investigative Dermatology in Atlanta, GA (2010)

Inas Helwa

Excellence in Research in Oral Biology, Georgia Health Sciences University Graduate Research Day (2012)

Excellence in Research in Oral Biology, Georgia Regents University Graduate Research Day (2013)

Fisher Scientific Overall Excellence in Research Award, Georgia Regents University Graduate Research Day (2014)

Inducted into the Georgia Regents University Phi Kappa Phi Society of academic excellence (2014)

POSTDOCTORAL FELLOWS

Richard Griner

Appointed Chair, Department of Biology, Augusta State University (2009)

Ding Xie

Excellence in Postdoctoral Research Award, Poster Presentation, Medical College of Georgia Graduate Research Day (2010)

Travel Award, Southeastern Regional Lipid Conference in Cashiers, NC (2010)

Vivek Choudhary

Selected for the Chair's Postdoctoral Fellowship to attend the American Physiological Society's Professional Skills course (2013)

Travel Award, Southeastern Regional Lipid Conference in Cashiers, NC (2013)

Runner-up, Postdoctoral Poster Award, Charlie Norwood VA Medical Center VA Research Week (2014)

Runner-up, Postdoctoral Poster Award, Charlie Norwood VA Medical Center VA Research Week (2015)

Travel Award, Southeastern Regional Lipid Conference in Cashiers, NC (2018)

VOLUNTEERSRabei Alaisami

People's Choice Poster Award, VA Research Week (2013)

VISITING SCHOLARSRawipan Uaratanawong

Travel Award to the annual Southern Translational Education and Research Conference in Augusta, GA (2017)

Poster Travel Award to the annual Southeastern Regional Lipid Conference in Cashiers, NC (2017)

INSTITUTIONAL SERVICE:

2001-2004	Elected School of Medicine representative, Graduate Council (faculty governance body for the School of Graduate Studies)
2006-2007	Elected Senator-at-Large, Faculty Senate Executive Committee (faculty governance body for the School of Medicine)
2006-2009	Elected School of Medicine representative, Graduate Council (faculty governance body for the School of Graduate Studies)
2006-2009	Appointed School of Graduate Studies representative, Academic Council (faculty governance body for the Medical College of Georgia)
2006-2007	Member, Pathology Search Committee
2007-2008	Member, Physiology Search Committee
2007-2009	Appointed School of Graduate Studies representative to the Executive Committee of the University Faculty Senate (formerly the Academic Council)
2007-2009	Elected Secretary of the School of Medicine Faculty Senate
2007-2009	Chair, School of Medicine Faculty Recognition Committee
2007-2010	Elected to the Board of Directors of the Medical College of Georgia Research Institute
2009-2012	Elected School of Medicine representative, Graduate Council (also chosen Chair-Elect for 2009-2010 and Chair for 2010-2011)
2009-2011	Elected Secretary of the School of Medicine Faculty Senate
2009-2011	Chair, School of Medicine Faculty Recognition Committee
2009-present	Member, Post-Tenure Review Committee
2010-2015	Member, Dean's Summer Research Fellowship Committee

2010	Member, Chief of the Section of Dermatology Search Committee
2010	Chair, Investigation Subcommittee of the Ethics Committee for Research Misconduct
2011	Member, Associate Vice President for Technology Transfer and Economic Development Search Committee
2011-2013	Elected Vice President of the MCG (School of Medicine) Faculty Senate
2011-2012	Member, Associate Vice President for Research Administration Search Committee
2012	Member, Georgia Health Sciences University/Augusta State University Consolidation Faculty Governance Committee
2012	Co-Chair, Chair of the Department of Cell Biology and Anatomy Search Committee
2012	Member, Cancer Advisory Committee
2012	Member, Associate Dean for Research (College of Dental Medicine) Search Committee
2012-present	Elected, Department of Physiology Chair's Advisory Committee
2012-present	Senior Faculty Mentor for the Department of Physiology Mentoring Program (Protégé: Assistant Professor Dr. Weiqin Chen, promoted to Associate Professor 7/1/2018)
2013	Member, Medical College of Georgia Strategic Planning Committee
2013-2014	Member, Cancer Center Promotion and Tenure Committee
2013-2014	Member, Chair of the Department of Pharmacology and Toxicology Search Committee
2014	Chair, Department of Oral Biology Promotion and Tenure Committee
2014	Participant, Academic Mission Strategic Planning Committee
2013-2015	Chair, Medical College of Georgia Dean's Summer Research Committee
2013-2015	Elected, President Elect of the Medical College of Georgia Faculty Senate
2013-2015	Medical College of Georgia Senator, Georgia Regents University Senate
2014	Member, Pharmacology and Toxicology Promotion and Tenure Committee
2014-2017	Appointed to the Board of Directors of the Georgia Regents Research Institute
2014-present	Member of the Translational Research Program Steering Committee of the Department of Medicine
2014	Member, Biochemistry and Molecular Biology Promotion and Tenure Committee

2014-2015	Senior Faculty Co-Mentor, Department of Cellular Biology and Anatomy Mentoring Program (Protégé: Associate Professor Dr. William Hill, promoted to Professor 7/1/2015)
2014-present	Director, Augusta University Office of Postdoctoral Affairs
2015	Member, Georgia Regents University Campus Master Planning Committee
2015-2017	Elected, President of the MCG Faculty Senate
2015-2016	Senior Faculty Mentor, Department of Medicine Mentoring Program (Protégée: Assistant Professor Dr. Joyce Gonzales, promoted to Associate Professor 7/1/2018)
2015-present	Senior Faculty Co-Mentor, Department of Cellular Biology and Anatomy Mentoring Program (Protégé: Associate Professor Dr. Ellen LeMosy)
2016-2017	Senior Faculty Mentor, Department of Medicine Mentoring Program (Protégée: Assistant Professor Dr. Leila Clay, obtained a position at Johns Hopkins University)
2016-present	Vice Chair, Augusta University Research IT Committee
2018-present	Member, MCG Promotion & Tenure Committee

VETERANS HEALTH ADMINISTRATION (VA) SERVICE:

2007-present	Member, Proposal Review Subcommittee of the Charlie Norwood VA Research and Development Committee
2008-present	Member, Ad hoc Committee on Promotion
2009-present	Member, VA Institutional Animal Care and Use Committee
2010-2012	Member, VA Research and Development Committee
2011-2014	Elected Member Director, Augusta Biomedical Research Corporation (non-profit organization associated with the Charlie Norwood VAMC)
2011-2017	Member, Organizing Committee for VA Research Week
2012	Subject Matter Expert for the Development of the VA Learning University Course “Formal Writing Using Plain Language, Module 8: Grant Writing”
2012-present	Ex Officio Member, VA Research and Development Committee
2012	Ad hoc member, VA Merit ONC-A
2013	Ad hoc member, VA Merit ONC-B
2013	Ad hoc member, VA Merit ONC-A
2013-present	Permanent member, VA Eligibility Panel
2014-present	Treasurer, Augusta Biomedical Research Corporation

2015	VA Representative, Research Misconduct Inquiry Committee
2016-2017	Member, Research Misconduct Investigation Committee VA Review Committee
2017-2018	Member, Faculty Search Committee for the University of Georgia's Clinical and Experimental Therapeutics Program (with laboratories at the VA)

SCIENTIFIC SERVICE AND PROFESSIONAL SOCIETIES:

Ad hoc member, National Institutes of Health Special Emphasis study section (December 1999)

Ad hoc reviewer, VA Merit Award (August 2000)

Member, American Heart Association Southeast Affiliate study section 5A (2000-2004)

Reviewer for abstracts submitted to the Society of Investigative Dermatology annual meeting, May 2000 in Chicago, IL

Ad hoc member, National Institutes of Health Program Project review (August 2001)

Guest editor, special Symposium proceedings issue of *Molecular and Cellular Endocrinology*, 2001

Ad hoc reviewer for The Wellcome Trust (November 2002)

Chair and Organizer, 37th Annual Southeast Regional Lipid Conference (November 2002)

Ad hoc member, National Institutes of Health Program Project review (March 2003)

Ad hoc reviewer for The Wellcome Trust (May 2003)

Ad hoc member, National Institutes of Health Skin Diseases Research Core Center (SDRC) review (October 2003)

Ad hoc reviewer, Israel Science Foundation (April 2004)

Member, National American Heart Association Molecular Signaling 2 study section (2005-2008)

Ad hoc reviewer, Israel Science Foundation (April 2005)

Member, Editorial Board, *Journal of Lipid Research* (2005-2020; renewed every 3 years)

Ad hoc member, National Institutes of Health ZRG1 MOSS Special Emphasis Panel/Scientific Review Group (August 2005)

Ad hoc member, National Institutes of Health Skin Diseases Research Core Center (SDRC) review (December 2005)

Ad hoc member, National Institutes of Health ZRG1 MOSS Special Emphasis Panel/Scientific Review Group (February 2006)

Invited Participant, National Institute of Arthritis, Musculoskeletal and Skin Diseases Roundtable Discussion (March 2006)

Co-President, Epidermal Structure and Function II Minisymposium at the 67th Annual Meeting of the Society for Investigative Dermatology (May 2006 in Philadelphia, PA)

Ad hoc member, National Institutes of Health ZRG1 MOSS Special Emphasis Panel/Scientific Review Group (June 2006)

Reviewer for abstracts submitted to the Society of Investigative Dermatology annual meeting, May 2007 in Los Angeles, CA

Ad hoc reviewer, National Institutes of Health Special Emphasis Panel (March 2007)

Ad hoc reviewer, Austrian Science Foundation (April 2007)

Co-President, Epidermal Structure and Function I Minisymposium at the 68th Annual Meeting of the Society for Investigative Dermatology (May 2007 in Los Angeles, CA)

Permanent Member, National Institutes of Health Arthritis, Connective Tissues and Skin (ACTS) Study Section (2007- 2011)

Reviewer for abstracts submitted to the International Investigative Dermatology meeting (May 2008 in Kyoto, Japan)

Ad hoc member, National Institutes of Health/National Cancer Institute P01 Special Emphasis Panel Cluster Review (February 2008)

Ad hoc member, Dermatology/Rheumatology Small Business Special Emphasis Panel (July 2008)

Ad hoc member, VA ENDO-A Study Section (December 2008)

Ad hoc reviewer, Austrian Science Foundation (August 2009)

Ad hoc reviewer, The National Medical Research Council, Singapore (August 2009)

Ad hoc reviewer, University of Michigan Pilot Grant Competition (March 2010)

Ad hoc member, National Institutes of Health/National Cancer Institute P01 Special Emphasis Panel Cluster Review (September 2010)

Ad hoc reviewer for The Wellcome Trust (January 2011)

Ad hoc member, National Institutes of Health Skin Diseases Research Core Center (SDRC) Review Panel (March 2011)

Associate Editor, *Journal of Investigative Dermatology* (2011-2012)

Poster Judge, 2011 Georgia Life Sciences Summit in Atlanta, GA (September 2011)

Poster Judge, 2011 Southern Translational Educational and Research Conference sponsored by the University of Georgia College of Pharmacy (September 2011)

Associate Editor, *Journal of Investigative Dermatology* (reappointed 2012-2017)

Ad hoc member, VA ONC-A Study Section (June 2012)

Ad hoc member, Peer-Reviewed Medical Research Committee Discovery Award Study Section, Osteoporosis and Related Bone Disease (July 2012)

Member, Editorial Board, *Journal of Endocrinology* (2014-2017)

Member, Editorial Board, *Journal of Molecular Endocrinology* (2014-2017)

Poster Judge, 2012 Southern Translational Educational and Research Conference sponsored by the University of Georgia College of Pharmacy (September 2012)

Ad hoc member, VA ONC-A Study Section (December 2012)

Ad hoc member, VA Eligibility Panel (January 2013)

Permanent member, VA Eligibility Panel (2013-present)

Ad hoc member, VA ONC-B Study Section (June 2013)

Poster Judge, 2013 Southern Translational Educational and Research Conference sponsored by the University of Georgia College of Pharmacy (September 2013)

Ad hoc member, VA ONC-A Study Section (December 2013)

Ad hoc member, National Institutes of Health/National Institute of Arthritis, Musculoskeletal and Skin Diseases Skin Disease Research Cores P30 Review Panel (March 2014)

Poster Judge, 2014 Southern Translational Educational and Research Conference sponsored by the University of Georgia College of Pharmacy (September 2014)

Ad hoc member, National Institutes of Health Center for Scientific Review Pilot Study (to evaluate the relative quality of grant applications) Review Panel (October 2014)

Ad hoc member, National Institutes of Health Fellowship Review Panel (November 2014)

Reviewer for abstracts submitted to the Endocrine Society annual meeting, March 2015 in Chicago, IL

Ad hoc mail reviewer, National Institutes of Health U54 Review Panel (March 2015)

Ad hoc reviewer for the Research Foundation--Flanders (June 2015)

Ad hoc reviewer for Worldwide Cancer Research (August 2015)

Ad hoc reviewer for the Morehouse School of Medicine/Tuskegee University/University of Alabama (UAB) Comprehensive Cancer Center Partnership Pilot Project Program (August 2015)

Ad hoc member, National Institutes of Health Fellowship Review Panel (October 2015)

Ad hoc member, National Institutes of Health/National Institute of Arthritis, Musculoskeletal and Skin Diseases Skin Disease Research Cores P30 Review Panel (November 2015)

Reviewer for abstracts submitted to the Endocrine Society annual meeting, March 2016 in Boston, MA

Member, Postdoctoral Retreat Organizing Committee for the 2016 annual meeting of the Society for Investigative Dermatology

Ad hoc member, National Institutes of Health Arthritis, Connective Tissue and Skin AMS Special Grants Review Committee (February 2016)

Ad hoc member, National Institutes of Health Integrative Clinical Endocrinology and Reproduction Review Panel (February 2016)

Ad hoc member, National Institutes of Health Arthritis, Connective Tissue and Skin Review Panel (October 2016)

Editorial Consultant, *Journal of Investigative Dermatology* (2017-2022)

Member, Editorial Advisory Board, *Molecular Pharmacology* (2017-2020)

Ad hoc member, National Institutes of Health Arthritis, Musculoskeletal and Skin Diseases AMS Special Grants Review Committee (February 2017)

Reviewer for abstracts submitted to the Endocrine Society annual meeting, March 2017 in Orlando, FL

Invited Panel Member, Postdoctoral Retreat for the 2017 annual meeting of the Society for Investigative Dermatology in Portland, OR (April 2017)

Ad hoc member, National Institutes of Health Arthritis, Musculoskeletal and Skin Diseases (ACTS) Study Section (June 2017)

Senior Editor, *Journal of Endocrinology* and *Journal of Molecular Endocrinology* (2018-2022)

Ad hoc member, American Heart Association, Career Development Award Basic Cell Committee (March 2018)

Ad hoc member, American Heart Association, Fellowship Award Basic Cell Membranes and Subcellular Organelles Committee (August 2018)

Ad hoc member, National Institutes of Health/National Institute of Arthritis, Musculoskeletal and Skin Diseases Skin Disease Research Cores P30 Review Panel (November 2018)

Ad hoc member, National Institutes of Health Arthritis, Musculoskeletal and Skin Diseases (ACTS) Study Section (February 2019)

Ad hoc member, National Institutes of Health Fellowship Review Panel (March 2019)

Ad hoc reviewer for *Molecular and Cellular Endocrinology*, *Journal of Investigative Dermatology*, *International Journal of Cancer*, *American Journal of Physiology*, *Biochimica et Biophysica Acta*, *Journal of Lipid Research*, *Endocrinology*, *Journal of Biochemical and Molecular Toxicology*, *Neurochemical Research*, *Life Sciences*, *Journal of Biological Sciences*, *Journal of Cellular Physiology*, *BMC Pharmacology*, *Experimental Dermatology*, *Journal of Molecular Endocrinology*, *Biochemical Pharmacology*, *FEBS Journal*, *FASEB Journal*, *British Journal of Dermatology*, *Clinical and Experimental Dermatology*, *Journal of Pharmacy and Pharmacology*, *Archives of Dermatological Research*, *Journal of Cancer Research and Clinical Oncology*, *Journal of Clinical Investigation*, *Experimental and Molecular Pathology*, *General Physiology and Biophysics*, *Toxicology and Applied Pharmacology*, *Molecular Biology of the Cell*, *Molecular Pharmacology*, *Hypertension*, *Molecular and Cellular Biochemistry*, *Journal of Molecular Medicine*, *Endocrine*, *Cellular and Molecular Biology Letters*, *FEBS Letters*, *Journal of Pharmacology and Experimental Therapeutics*, *Journal of Endocrinology*, *Clinical and*

Experimental Immunology, Biological Research for Nursing, Free Radical Biology and Medicine, Molecular Cancer Research, Oncogene, Inflammation and Allergy-Drug Targets, Cell Biology: Research & Therapy, PLoS One, Journal of Steroid Biochemistry and Molecular Biology, Cellular Physiology and Biochemistry, Medical Hypotheses, Journal of Immunology, Molecular and Cellular Biology, Frontiers in Endocrinology, International Journal of Endocrinology, Open Biology, JAMA Dermatology, NeuroMolecular Medicine, Scientific Reports; Prostaglandins, Leukotrienes and Essential Free Fatty Acids; BBA-Molecular Basis of Disease, Journal of Visualized Experiments (JoVE), International Journal of Molecular Sciences, Journal of Diabetes Research, BMC Musculoskeletal Disorders, BMC Neurology, Stem Cells, Nature Communications, Aging Cell, BMC Complementary and Alternative Medicine, Experimental Biology and Medicine and Nature

Member of Sigma Xi (Science Honor Society)

Member of the Society for Investigative Dermatology

Member of the American Society for Cell Biology

Member of the Endocrine Society

Member of the American Heart Association

Member of the American Society for Biochemistry and Molecular Biology

Member of the American Society for Bone and Mineral Research

Member of the American Society for Pharmacology and Experimental Therapeutics

COMMUNITY ACTIVITIES:

1995	Judge for the Georgia Science and Engineering Fair
1998	Sigma Xi (CSRA Chapter) Best Undergraduate and Graduate paper award committee chair
1999	Sigma Xi (CSRA Chapter) Acting Secretary
1999-2007	Unitarian Universalist Church of Augusta Religious Education instructor
2000	Sigma Xi (CSRA Chapter) Secretary
2001 (Fall)	Sigma Xi (CSRA Chapter) President-elect
2001-2003	Sigma Xi (CSRA Chapter) President
2001-2003	Member, Board of the Unitarian Universalist Church of Augusta
2003-2004	Chair, Personnel Committee, Unitarian Universalist Church of Augusta
2004	Speaker, National Chemistry Week at Fort Discovery
2005	Judge, Sego Middle School Science Fair

- 2006 School of Graduate Studies Representative, Panel on Health Professions Admissions and Strategies at the Southern Region Spring Conference of the National Association of Medical Minority Educators
- 2007 Canvass Captain, Unitarian Universalist Church of Augusta
- 2007-present Board Member of the Pennsylvania State University Club of Aiken/Augusta
- 2012 Cross Creek High School Career Lunch (spoke to Cross Creek High School Honors students about careers in science)
- 2013 Participated in High School U (spoke to Lakeside High School students about the skin)
- 2014 Participated in High School U—Middle School Edition (spoke to Jackson Middle School students about the skin)
- 2014 Guest speaker, Lakeside High School (spoke to Ms. Charlotte Smith's class in Genetics about cancer and the development of novel cancer treatments)
- 2017 Guest speaker, AR Johnson Middle School (spoke to the entire middle school of ~300 students of this Richmond County Health Science and Engineering Magnet Middle School about the skin and skin cancer)

PRESENTATIONS AND INVITED SEMINARS:

Department of Biology, Seton Hall University "Getting the Message Across" (October 1992)

Department of Cell Biology and Anatomy, Medical College of Georgia "Regulation of Epidermal Keratinocyte Proliferation" (April 1994)

Sigma Xi (Central Savannah River Area chapter) "The ABCs of Vitamin D" (March 1998)

Department of Medicine, University Hospital, Geneva, Switzerland "Phospholipase D, Aldosterone Secretion and the Mechanism of Priming" (May 1998)

Department of Cell Biology and Anatomy, Medical College of Georgia "Vitamin D, Phospholipase D and Keratinocyte Differentiation" (October 1998)

Department of Physics, Georgia Southern University, Statesboro, GA "Phospholipase D and Keratinocyte Differentiation" (October 1998)

Department of Pharmacology, MCP Hahnemann University, Philadelphia, PA "Phospholipase D and Cellular Responses" (November 1998)

Department of Dermatology, Jefferson Medical School, Philadelphia, PA "Phospholipase D and Keratinocyte Differentiation" (November 1998)

Department of Pharmacology and Toxicology, Medical College of Georgia "Priming of and Aldosterone Secretion from Adrenal Glomerulosa Cells" (December 1998)

- University System of Georgia Research Symposium "8-Cl-Adenosine Induces Reversible Growth Arrest of Primary Mouse Epidermal Keratinocytes" (March 1999 in Augusta, GA)
- Department of Physiology and Endocrinology, Medical College of Georgia "Potassium, Phospholipase D and Protein Kinase C: Signaling and Aldosterone Secretion" (August 1999)
- Southeast Regional Lipid Conference "1,25-Dihydroxyvitamin D₃ Increases Phospholipase D-1 Expression and Enhances the Response to Phospholipase D-stimulating Agents in Primary Epidermal Keratinocytes" (November 1999 in Cashiers, NC)
- Department of Medicine (Dermatology), Medical College of Georgia "8-Cl-Adenosine as an Inhibitor of Keratinocyte Proliferation" (November 1999)
- Department of Oral Biology, Medical College of Georgia "Lipids in Signaling: More than just a Barrier" (January 2000)
- Rasmussen Biological Communications Symposium "Priming and Phospholipase D" (June 2000 in Augusta, GA)
- Rasmussen Biological Communications Symposium "Vitamin D and Phospholipase D in Keratinocyte Differentiation" (June 2000 in Augusta, GA)
- FASEB Summer Conference on Phospholipase D "Phospholipase D-2 and aquaporin-3 are co-localized in caveolin-containing detergent-resistant membranes" (July 2001 in Tuscon, AZ)
- Department of Chemical Engineering, Georgia Institute of Technology "Vitamin D and Phospholipase D in Keratinocyte Differentiation" (November 2001)
- Department of Medicine (Dermatology), Medical College of Georgia "Protein Kinase D as a Regulator of Keratinocyte Function" (February 2002)
- Department of Pharmacology, Medical College of Georgia "Angiotensin II and Priming of Aldosterone Secretion: Memory in the Endocrine Cardiovascular System" (January 2003)
- Department of Physiology, Medical College of Georgia "A Glycerol Channel, an Enzyme and Keratinocyte Differentiation: Why Neutrogena Puts Glycerine in its Skin Care Products and Other Mysteries" (November 2003)
- Department of Dermatology, Emory University "Phospholipase D and Aquaporin: A New Signaling Module Affecting Skin Function?" (February 2004)
- Department of Oral Biology, Medical College of Georgia "Phospholipase D and Aquaporin: A New Signaling Module Affecting Skin Function?" (February 2004)
- Department of Dermatology, Medical University of South Carolina "Cell Signaling and Skin Function" (December 2004)
- Biology Honors Seminar Class, University of Georgia "Skin Biology" (February 2005)
- Biological Sciences Student Association, University of Georgia "Signaling Mechanisms that Regulate Skin Formation" (September 2005)

- Department of Anatomy and Cell Biology, Indiana University School of Medicine “A Tale of Two Signals: Roles for Phospholipase D and Protein Kinase D in Epidermal Keratinocyte Proliferation and Differentiation” (September 2005)
- Department of Pharmacology, Medical College of Georgia "A Tale of Two Signals: Regulating Keratinocyte Proliferation and Differentiation" (June 2006)
- Department of Physiology, Medical College of Georgia “Priming of Aldosterone Secretion: Phospholipase D and Cellular Memory” (September 2006)
- Department of Dermatology, University of Wisconsin, Madison “Protein Kinase D and Tumorigenesis in the Skin” (November 2006)
- Department of Dermatology, University of Alabama, Birmingham “A Glycerol Channel, an Enzyme and Keratinocyte Differentiation: Why Neutrogena Puts Glycerine in its Skin Care Products and Other Mysteries” (January 2007)
- Society for Investigative Dermatology 68th Annual Meeting, Los Angeles, CA “Caveolin-1 Scaffolding Domain Peptide Inhibits Phosphatidylglycerol Synthesis and Keratinocyte Differentiation in Response to an Elevated Extracellular Calcium Concentration” (May 2007)
- Department of Biology, Georgia State University “A Novel Lipid Signaling Module for Keratinocyte Differentiation” (September 2007)
- Calcium Club, Georgia State University “Priming of Aldosterone Secretion: Cellular Memory in Adrenal Glomerulosa Cells” (September 2007)
- Department of Dermatology, University of California, San Francisco Veterans’ Administration Medical Center “A Novel Lipid Signaling Module for Keratinocyte Differentiation” (November 2007)
- Augusta Veterans’ Affairs Medical Center “A Potential Role for Protein Kinase D in Epidermal Tumorigenesis” (November 2007)
- International and Postdoctoral Services Office, Medical College of Georgia “Presentation Skills” (February 2008)
- Department of Medicine, Section of Gastroenterology, Medical College of Georgia “Protein Kinase D in Tumorigenesis” (March 2008)
- Medical College of Georgia-Translational Research Interest Group, Medical College of Georgia “Protein Kinase D: A Signaling Enzyme Involved in Human Skin Diseases” (March 2008)
- Department of Oral Biology, Medical College of Georgia “Protein Kinase D in Epidermal Tumorigenesis” (March 2008)
- Cancer Center Research in Progress, Medical College of Georgia “A Tale of Two Signals: Regulating Keratinocyte Proliferation and Differentiation" (April 2008)
- Department of Medicine Research in Progress, Medical College of Georgia “Regulating Keratinocyte Proliferation and Differentiation: A Tale of Two Signals" (September 2008)

- Medical Scientist Training Program Seminar Series, Medical University of South Carolina
“Priming of Aldosterone Secretion: Phospholipase D and A Type of Cellular Memory”
(October 2008)
- Department of Pathology, Pennsylvania State College of Medicine “Regulating Keratinocyte
Proliferation and Differentiation: A Tale of Two Signals" (December 2008)
- Department of Oral Biology, Medical College of Georgia “A Novel Lipid Signaling Module for
Keratinocyte Differentiation” (February 2009)
- Cancer Center Research in Progress, Medical College of Georgia “An Update on the Role of
Protein Kinase D in Epidermal Tumorigenesis" (March 2009)
- Department of Physiology, Medical College of Georgia “A Novel Signaling Module Regulating
Keratinocyte Differentiation” (March 2009)
- Department of Pathology, Medical College of Georgia “A Novel Signaling Module Regulating
Keratinocyte Differentiation” (April 2009)
- International Aldosterone Conference, Washington, DC “Protein Kinase C and Src Kinase
Mediate Angiotensin II-Induced Protein Kinase D Activation and Aldosterone Secretion in
Bovine Adrenal Glomerulosa Cells” (June 2009)
- Vision Discovery Institute Group Meeting, Medical College of Georgia “Corneal Epithelial
Cells: Eye ‘Keratinocytes’?” (July 2009)
- Department of Medicine Research in Progress, Medical College of Georgia “Ultraviolet B-
induced Protein Kinase D Activation Protects Epidermal Keratinocytes from Apoptosis”
(September 2009)
- Department of Medicine Research in Progress, Medical College of Georgia
“Phosphatidylglycerol: A Potential Treatment for Skin Diseases and Wound Healing”
(September 2010)
- Dermatology Resident Seminar Series, Medical College of Georgia “The Skin” (September
2010)
- Dermatology Resident Seminar Series, Medical College of Georgia “Protection of Keratinocytes
from Ultraviolet-Induced Apoptosis by Protein Kinase D-- Good News or Bad News?”
(October 2010)
- Department of Natural Sciences, Albany State University “Protection of Keratinocytes from
Ultraviolet-Induced Apoptosis by Protein Kinase D and Epidermal Tumorigenesis”
(November 2010)
- Albany State University Biotechnology Day, Albany State University “Phosphatidylglycerol: A
Potential Treatment for Psoriasis” (November 2010)
- Cancer Center Research in Progress, Medical College of Georgia “Protection of Keratinocytes
from Ultraviolet-Induced Apoptosis by Protein Kinase D and Epidermal Tumorigenesis”

(December 2010)

Keynote Speaker for VA Research Week, Charlie Norwood VA Medical Center “Skin Cancer and Other Skin Diseases: A Tale of Two Signals” (May 2011)

Program in Clinical and Experimental Therapeutics, University of Georgia College of Pharmacy PHRM7210 Research Conduct and Grant Writing Course “Study Sections: What are the Reviewers Looking for?” (September 2011)

Clinical and Experimental Therapeutics-Veterans Administration Journal Club “An Interactive Training Session on Research Ethics” (December 2011)

Department of Pharmaceutical and Biomedical Sciences, University of Georgia “A Tale of Two Signals: Keratinocyte Signaling Pathways as Potential Drug Targets for the Treatment of Skin Disease” (January 2012)

Department of Dermatology, University of California, Davis “A Tale of Two Signals: The Aquaporin 3-Phospholipase D2- Phosphatidylglycerol Signaling Module and Protein Kinase D” (June 2012)

Dermatology Resident Seminar Series, Medical College of Georgia “The Skin and Keratinocyte Biology” (August 2012)

Plexxikon, Inc. “Protein Kinase D as a Therapeutic Target for Treating Skin Diseases and Skin Cancer” (June 2013)

Dermatology Resident Seminar Series, Medical College of Georgia at Georgia Regents University “Psoriasis” (August 2013)

Department of Biochemistry and Molecular Biology, Medical College of Georgia at Georgia Regents University “Aquaporin-3: A Potential Target for the Treatment of Skin Diseases” (October 2013)

Department of Physiology, Medical College of Georgia at Georgia Regents University “Aquaporin-3: A Potential Target for the Treatment of Skin Diseases” (January 2014)

International Aldosterone Conference, Chicago, IL “Calpain 10 Underlies Angiotensin II-Induced Aldosterone Production in an Adrenal Glomerulosa Cell Model” (June 2014)

Department of Medical and Integrative Physiology (The “Adrenal Group”), University of Michigan “Twenty-Five Years (and Counting) of Cell Signaling in Adrenal Zona Glomerulosa Cells” (May 2015)

Department of Physiology, Medical College of Georgia at Georgia Regents University “Phosphatidylglycerol, Corneal Wound Healing and Sterile Inflammation” (October 2015)

Vision Discovery Institute Group Meeting, Augusta University “Phosphatidylglycerol, Corneal Wound Healing and Sterile Inflammation” (February 2016)

Department of Medicine, Medical College of Georgia at Augusta University “Phosphatidylglycerol: DAMPening Psoriasis” (April 2016)

- Department of Cell Biology and Anatomy, Medical College of Georgia at Augusta University
“DAMPening Psoriasis with Phosphatidylglycerol” (October 2016)
- Department of Physiology, Medical College of Georgia at Augusta University “DAMPening
Inflammation in Psoriasis with Phosphatidylglycerol” (December 2016)
- Department of Dermatology, Thomas Jefferson University “DAMPening Inflammation in
Psoriasis with Phosphatidylglycerol” (January 2017)
- International Aldosterone Conference, Orlando, FL “A Possible Role for Phospholipase D2 in
Low Sodium Diet-induced Aldosterone Production *in vivo*” (March 2017)
- University of Colorado School of Medicine Skin Disease Research Center and Charles C. Gates
Center for Regenerative Medicine Retreats, Denver, CO “Phosphatidylglycerol:
DAMPening Skin Inflammation in Psoriasis?” (September 2017)
- Belles of STEM: Modern Rosies at Augusta University (a student organization for women
pursuing STEM degrees), Augusta, GA “Anti-Inflammatory Effects of Glycerol in Skin”
(October 2017)
- Department of Physiology, Medical College of Georgia at Augusta University “Phosphatidyl-
glycerol as a Potential Treatment for Psoriasis” (February 2018)
- Department of Physiology, Jiangnan University (Wuhan, China) “Phosphatidylglycerol as a
Potential Treatment for Psoriasis” (April 2018)
- Department of Dermatology, Wuhan No. 1 Hospital (Wuhan, China) “A Potential New
Treatment for Psoriasis” (April 2018)
- Medical School, Jiangnan University (Wuhan, China) “A Career in Academia: My 25-Year
Trek” (April 2018)
- Department of Physiology, Jiangnan University (Wuhan, China) “The Medical Curriculum of the
Medical College of Georgia at Augusta University” (April 2018)
- Department of Basic Sciences, Shanghai University of Traditional Chinese Medicine (Shanghai,
China) “Research in Cell Signaling in the Bollag Laboratory” (April 2018)
- National Psoriasis Foundation, More than Skin Deep 2018 in Atlanta “A Potential New
Treatment for Psoriasis” (June 2018)
- Department of Pathology, Microbiology & Immunology, University of South Carolina, “Anti-
Microbial Peptides as Possible Activators of the Innate Immune System in Psoriasis”
(October 2018)

“Aquaporins – More than Water under the Bridge” Symposium, Experimental Biology Annual Meeting in Orlando, FL, “Aquaporin-3 in the Epidermis - More Than Skin Deep” (April 2019)

ABSTRACTS

Dr. Bollag is an author on well over 100 abstracts/poster presentations

PUBLICATIONS IN REFEREED JOURNALS:

- 1) Takuwa N, Y Takuwa, WB Bollag & H Rasmussen. The effects of bombesin on poly-phosphoinositide and calcium metabolism in Swiss 3T3 cells. *J. Biol. Chem.* 262: 182-188, 1987.
- 2) Isales CM, WB Bollag, L Kiernan & PQ Barrett. Effect of ANP on sustained aldosterone secretion stimulated by angiotensin II. *Am. J. Physiol.* 256: C89-C95, 1989.
- 3) McCarthy RT, CM Isales, WB Bollag, H Rasmussen & PQ Barrett. Atrial natriuretic peptide differentially modulates T- and L-type calcium channels. *Am. J. Physiol.* 258: F473-F478, 1990.
- 4) Ganz MB, J Rasmussen, WB Bollag & H Rasmussen. Effect of buffer systems and pH_i on the measurement of $[\text{Ca}^{2+}]_i$ with fura 2. *FASEB. J.* 4: 1638-1644, 1990.
- 5) Bollag WB, PQ Barrett, CM Isales, M Liscovitch & H Rasmussen. A potential role for phospholipase D in angiotensin II-stimulated aldosterone secretion. *Endocrinology.* 127: 1436-1443, 1990.
- 6) Bollag WB, PQ Barrett, CM Isales & H Rasmussen. Angiotensin II-induced changes in diacylglycerol levels and their potential role in modulating the steroidogenic response. *Endocrinology.* 128: 231-241, 1991.
- 7) Barrett PQ, CM Isales, WB Bollag & RT McCarthy. Modulation of Ca^{2+} channels by atrial natriuretic peptide in the bovine adrenal glomerulosa cell. *Can. J. Physiol.* 69: 1553-1560, 1991.

- 8) Isales CM, PQ Barrett, M Brines, WB Bollag & H Rasmussen. Parathyroid hormone modulates aldosterone secretion from the adrenal glomerulosa cell. *Endocrinology*. 129: 489-495, 1991.
- 9) Barrett PQ, CM Isales, WB Bollag & RT McCarthy. Ca^{2+} channels and aldosterone secretion: modulation by K^{+} and atrial natriuretic peptide. *Am. J. Physiol.* 261: F706-F719, 1991.
- 10) Bollag WB, PQ Barrett, CM Isales, M Liscovitch & H Rasmussen. Signal transduction mechanisms involved in carbachol-induced aldosterone secretion from bovine adrenal glomerulosa cells. *Mol. Cell. Endo.* 86: 93-101, 1992.
- 11) Bollag WB, J Ducote & CS Harmon. Effects of the selective protein kinase C inhibitor, Ro 31-7549, on the proliferation of cultured mouse epidermal keratinocytes. *J. Invest. Dermatol.* 100: 240-246, 1993.
- 12) Bollag WB, Y Xiong, J Ducote & CS Harmon. Regulation of *fos-lacZ* fusion gene expression in primary mouse epidermal keratinocytes isolated from transgenic mice. *Biochem. J.* 300: 263-270, 1994.
- 13) Bollag WB, J Ducote & CS Harmon. Biphasic effect of 1,25-dihydroxyvitamin D₃ on primary mouse epidermal keratinocyte proliferation. *J. Cell. Physiol.*, 163: 248-256, 1995.
- 14) Harmon CS, TD Nevins & WB Bollag. Protein kinase C inhibits human hair follicle growth and hair fiber production in organ culture. *Br. J. Dermatol.* 133: 686-693, 1995.
- 15) Colley WC, YM Altshuller, CK Sue-Ling, NG Copeland, DJ Gilbert, NA Jenkins, KD Branch, SE Tsirka, RJ Bollag, WB Bollag & MA Frohman. Cloning and expression analysis of murine phospholipase D1. *Biochem. J.* 326: 745-753, 1997.
- 16) Jung EM, S Betancourt-Calle, R Mann-Blakeney, T Foushee, CM Isales & WB Bollag. Sustained phospholipase D activation in response to angiotensin II but not carbachol in bovine adrenal glomerulosa cells. *Biochem. J.* 330: 445-451, 1998.
- 17) Jung EM, RD Griner, R Mann-Blakeney & WB Bollag. A potential role for ceramide in the regulation of mouse epidermal keratinocyte proliferation and differentiation. *J. Invest. Dermatol.* 110: 318-323, 1998.
- 18) Griner RD, F Qin, EM Jung, CK Sue-Ling, KD Branch, R Mann-Blakeney, RJ Bollag & WB Bollag. 1,25-Dihydroxyvitamin D₃ induces phospholipase D-1 expression in primary mouse epidermal keratinocytes. *J. Biol. Chem.* 274: 4663-4670, 1999.

- 19) Jung EM, S Betancourt-Calle, R Mann-Blakeney, RD Griner & WB Bollag. Sustained phospholipase D activation is associated with keratinocyte differentiation. *Carcinogenesis*. 20: 569-576, 1999.
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PATENTS AND PATENT APPLICATIONS:

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- 4) For “Aldosterone synthase inhibition improves glucose tolerance in Zucker diabetic fatty (ZDF) rats” by A Hofmann, C Brunssen, M Peitzsch, M Martin, J Mittag, A Jannasch, F Engelmann, NF Brown, SM Weldon, J Huber, R Streicher, A Deussen, G Eisenhofer, SR Bornstein & H Morawietz (*Endocrinology* 157: 3844-3855, 2016); posted December 9, 2016.
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