

Christopher J. Mingone, PhD

SUMMARY

A passionate teacher and mentor who has a diverse background and a proven record of success in biomedical education and research. Carries talent to successfully manage various groups while planning and implementing complex projects and educating end-users. Holds a strong track record in research and product development. Presents scientific material to various audiences at local and national scientific meetings. Passion for knowledge and new challenges; quickly adapts and excels in new programs and areas.

EDUCATION

NEW YORK MEDICAL COLLEGE, Valhalla, NY

Doctor of Philosophy in Physiology – 2006 (Dissertation Defended 11/2005)

Master of Science in Physiology – 2002

ROCHESTER INSTITUTE OF TECHNOLOGY, Rochester, NY

Bachelor of Science in Biotechnology – 1999

PROFESSIONAL ACCOMPLISHMENTS

BERRY COLLEGE, Rome, GA

Experience it Firsthand

Jan 2012- Present

**Clinical Assistant Professor of Health Professions/
Pre-Med Pre-Health Advisor**

Jan 2015- Present

Visiting Assistant Professor of Biology

Jan 2012-Dec 2014

Freshman Advisor

Aug 2015-present

Advisor

Allied Health Club

Jan 2015-present

Student Government Freshman Class advisor

Student Government Sophomore Class advisor

Student Government Faculty Advisor

Aug 2016-17

Raadysaan Biotech Company

Marketing/investing liaison and consultant.

May 2014-present

Medical College GA- NWGA Medical School

Advisory Board -

Jan 2015-present

Professional contributions

➤ **Classes taught**

- Principles of Cell Biology
- Genetics
- Zoology
- BCC100- Freshman Seminar
- BCC150- Intro to the Health Professions

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- Research- Team of students in a research projects studying cardiovascular genetics. Using the drosophila as a model for human disease pathways, we are studying the effect of stress and gene expression and heritability and how various stresses that alter signaling pathways in the disease state of humans, can resemble an environmental stress, resulting in altered genes and signaling in not only the parent but the offspring as well.
- Research Student Presentations
- Discover Berry
- Firsthand Friday
- Freshman service Day
- Hosted Guest Speaker, Dr. Sachin Gupte, M.D., Ph.D. "Glucose-6-phosphate dehydrogenase and stem cells in vascular biology" University of South Alabama
- Judge- Berry Student Research Symposium on Academic excellence
- Judge- Berry Elementary School Science Fair
- Hosts various visitors in class
- Recommended Students accepted into Graduate school, Pharm.D., Research internships, Medical school

Adjunct -Georgia Highlands College, Rome, GA

- Classes taught
 - Principles of Cell Biology/Lab
 - Zoology/Lab

ADVENTIST HEALTH SYSTEMS, GORDON HOSPITAL, Calhoun, GA **Jan 2010 – Aug 2011**
Paving the way in Healthcare and Clinical Information Technology to Extend the Healing Ministry of Christ

Clinical Informatics Liaison/Physician Educator

Project management in rollout and system implantation and physician education. Work with Physicians to translate needs and develop solutions to problems. Managed and guided successful implementation of Cerner's Computerized Physician Order Entry (CPOE) within the hospital and the community for Inpatient, Outpatient, Surgical and ER arenas.

- Manage and educate over 200 doctors, midlevel providers and nurses in the community including Cardiologists, Surgeons and Emergency Physicians.
- Mastered an Electronic Medical Record and multiple documentation programs
- Improved patient care, efficiency and reduced medical errors and cost by ~0.75 million dollars/ year
- Built a strong rapport with physicians in which trust and dependability were earned and required.
- Managed the logistics of training medical providers.
- Met government standard of "Meaningful Use" of an EMR for reimbursement.
- Worked with hospital administration to ensure and meet Joint Commission and government mandates.

CRYOLIFE, INC., Kennesaw, GA **Jan 2007 - Nov 2009**
A leader in the emerging field of tissues engineering, surgical adhesives and implantable biomaterials

Scientist, Tissue Technologies, R&D

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Executed cross -functional and cross-divisional projects to support development and production of cardiovascular grafts. Facilitated meetings with marketing and cross-functional teams to support product. Planned experiments and applied scientific principles associated with the research and development of identified goals in order to demonstrate feasibility of specific products. Involved in process optimization and product enhancement activities, as well as, internal and external collaborations. Worked closely with R&D and corporate leadership.

- Created vascular graft from animal tissue. Identified and evaluated sterilization processes for the potential product. New process reduced production time by 60% and improved product release by 50% to 75%.
- Effectively managed /educated lab technicians and coordinator in scientific theory as well as techniques.
- Presented scientific data with clinical implications to surgeons and marketing groups.
- Introduced and developed/optimized new analytical methods.
- Developed several Intellectual Property disclosures and potential patents.
- Knowledge of medical device regulations.
- Developed a working relationship with many of the senior leaders of CryoLife, Inc.
- Led department's American Heart Association Heart Walk Fundraiser team for two consecutive years to meet our financial goal of over \$20,000.

**EMORY UNIVERSITY DEPARTMENT OF CARDIOLOGY AND
GA-TECH & EMORY DEPARTMENT OF BIOMEDICAL ENGINEERING** **2005 - 2007**
Postdoctoral Fellow

Flow-induced atherosclerosis and associated signaling mechanisms using in-vitro and in-vivo analysis.

NEW YORK MEDICAL COLLEGE DEPARTMENT OF PHYSIOLOGY **1999 - 2005**
Doctoral Student

Cardiovascular control, cardiopulmonary smooth muscle response and cellular/oxidant signaling

Dissertation: Mechanisms Regulating Nitric Oxide- Mediated Vascular Relaxation through Soluble Guanylate Cyclase by Hypoxia, Thiol Redox and Heme Metabolism

Postdoctoral and graduate student responsibilities: developed and tested hypotheses resulting in manuscript publications, dissertation and presentations for national and local meetings as well as mentored students.

- Co-authored multiple manuscripts and published abstracts.
- Presented data and scientific information to audiences of various backgrounds.
- Introduced novel techniques to support grant applications and dissertation.
- Collected data, statistically analyzed and interpreted results in a scientific manner, and prepared coinciding manuscripts and grants.
- Edited and revised manuscripts as well as participated in grant applications and renewal.
- Engaged, trained and supervised college and master students.
- Updated and maintained the multimedia library for physiology department, in support of Journal Club and various seminars.
- Research led to funding of over \$5 million for Principal Investigators' grants at NYMC and Emory for NIH RO-1, AHA grants and program project grants.

Honors & Awards

2014 Senior Appreciation Award for extraordinary encouragement and support
2013 Finalist- Student Government Award for Teaching Excellence
2005 1st Place, New York Medical College Annual Graduate School Research Forum
2004 Finalist, Cournand and Comroe Young Investigator Award in Cardiopulmonary, Perioperative, and Critical Care, ***American Heart Association Scientific Sessions***
2004 New York Medical College Annual Graduate Student Research Forum
2003 Highlights in Graduate Student Research in Respiration, *Experimental Biology Conference*

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Scientific Software and Computer Skill

- Cerner Electronic Medical Record
- PACS radiology
- AGFA cardiology documentation
- Tracemaster
- Powerlab data acquisition system
- Scion Image, Sigma Scan, Sigma Plot
- Densitometry (Kodak 1D and Jandel Scientific)
- Prism GraphPad, SPSS and GB Stat
- Scientific search engines and databases (Medline, PubMed, FDA and patent databases)
- Adobe Photoshop and Acrobat
- Endnote, Microsoft PowerPoint, Excel, Word

Scientific Training and Techniques

- Proteomic/Molecular Tools and Techniques
- HPLC
- Cell Culture/Organ Culture Techniques
- Animal Surgical Techniques
- Fluorescence Microscopy
- Vascular Function in-vitro/in-vivo
- Histology
- DSC
- Analytical Chemistry Technique

PROFESSIONAL TRAINING

Manuscript Reviewer

American Journal of Hypertension
American Journal of Physiology: Heart and Circulatory Physiology
American Journal of Physiology: Regulatory, Integrative and Comparative Physiology

Professional Organizations

National Association of Advisors for Health Professions
American Heart Association Cardiopulmonary, Perioperative and Critical Care Council
American Physiological Society
Wildlife Conservation Society

Professional Activities

2012-Present Judge- Berry Student Research Symposium on Academic excellence
2012-Present Judge- Berry Elementary School Science Fair
2010- Present American Heart Certified Basic Life Support
2008-2009 CryoLife International Vascular Advisory Board
2008 Kepner-Tregoe Project Management Workshop (21 credits; 2.1 CEU)
2007-2009 CryoLife R&D Directors' Quarterly Meetings
2007-Present Education PlayStation, Inc. Therapeutic Services Board of Advisors Member
2005-2006 Emory University Cardiology Division Seminar and Journal Club
2004 Mentor: New Yorkers Caring for New Yorkers Summer Fellowship in Research
2002-2006 Instructor of Cardiovascular Reflex Laboratory Demonstration for Medical Students
2002-2006 Coordinator of Departmental Seminars and Weekly Journal Club
2002-2006 Supervisor of Departmental Library and Educational Multimedia Services
2002-2006 Department of Physiology Graduate Student Research Forum
2002-2006 New York Medical College Annual Graduate Student Research Forum
2001-2002 Vice President of Graduate Student Association

Community & Volunteer Activities

2014- present Berry College Service Day
2009-present Soccer Coach

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2008-2015 Treasurer -The Forest and Maple Village HOA
2008-2010 Volunteer in Children's Ministry at Rockbridge Community Church
2008-Present NorthWest Georgia Astronomical Association Member
2006-2015 Science Mentor and Volunteer at Education PlayStation, Inc.
2006 Hands on Adairsville Summer Feeding Program
2000-2004 Member, Tarrytown Volunteer Fire Department
2002-2003 2nd Lieutenant, Conqueror Hook and Ladder Company No. 1, Tarrytown, NY
2002-2003 Yeoman, Fire Boat No. 5, Tarrytown, NY
Certifications: New York State Boating Safety

PUBLICATIONS

Manuscripts

1. Wolin MS, Gupte SA, **Mingone CJ**, Neo BH, Gao Q, Ahmad M. Redox regulation of responses to hypoxia and NO-cGMP signaling in pulmonary vascular pathophysiology. *Ann N Y Acad Sci.* 2010 Aug;1203:126-32. Review.
2. **Mingone CJ**, Gupte SA, Chow JL, Ahmad M, Abraham NG, Wolin MS. Heme oxygenase-1 induction depletes heme and attenuates pulmonary artery relaxation and guanylate cyclase activation by nitric oxide. *Am J Physiol Heart Circ Physiol.* 2008 Mar;294(3):H1244-50.
3. **Mingone CJ**, Gupte SA, Chow JL, Ahmad M, Abraham NG, Wolin MS. Protoporphyrin IX generation from delta-aminolevulinic acid elicits pulmonary artery relaxation and soluble guanylate cyclase activation. *Am J Physiol Lung Cell Mol Physiol.* 2006 Sep;291(3):L337-44. (**Article was Focus of Editorial**)
4. Miriyala S, Gongora Nieto MC, **Mingone C**, Smith D, Dikalov S, Harrison DG, Jo H. Bone morphogenic protein-4 induces hypertension in mice: role of noggin, vascular NADPH oxidases, and impaired vasorelaxation. *Circulation.* 2006 Jun 20;113(24):2818-25.
5. Ahmad M, Turkseven S, **Mingone CJ**, Gupte SA, Wolin MS, Abraham NG. Heme oxygenase-1 gene expression increases vascular relaxation and decreases inducible nitric oxide synthase in diabetic rats. *Cell Mol Biol (Noisy-le-grand).* 2005 Sep 30;51(4):371-6.
6. **Mingone CJ**, Gupte SA, Ali N, Oeckler RA, Wolin MS. Thiol oxidation inhibits nitric oxide-mediated pulmonary artery relaxation and guanylate cyclase stimulation. *Am J Physiol Lung Cell Mol Physiol.* 2006 Mar;290(3):L549-57.
7. Turkseven S, Kruger A, **Mingone CJ**, Kaminski P, Inaba M, Rodella LF, Ikehara S, Wolin MS, Abraham NG. Antioxidant mechanism of heme oxygenase-1 involves an increase in superoxide dismutase and catalase in experimental diabetes. *Am J Physiol Heart Circ Physiol.* 2005 Aug;289(2):H701-7.
8. **Mingone CJ**, Gupte SA, Quan S, Abraham NG, Wolin MS. Influence of heme and heme oxygenase-1 transfection of pulmonary microvascular endothelium on oxidant generation and cGMP. *Exp Biol Med (Maywood).* 2003 May;228(5):535-9.
9. **Mingone CJ**, Gupte SA, Iesaki T, Wolin MS. Hypoxia enhances a cGMP-independent nitric oxide relaxing mechanism in pulmonary arteries. *Am J Physiol Lung Cell Mol Physiol.* 2003 Aug;285(2):L296-304. (**Article was Focus of Editorial**)
10. Abraham NG, Quan S, Mieyal PA, Yang L, Burke-Wolin T, **Mingone CJ**, Goodman AI, Nasjletti A, Wolin MS. Modulation of cGMP by human HO-1 retrovirus gene transfer in pulmonary microvessel endothelial cells. *Am J Physiol Lung Cell Mol Physiol.* 2002 Nov;283(5):L1117-24.

Abstracts from Presentations at Scientific Meetings:

1. Jenny Sung, Savannah McKenzie, Meghan Albritton, **Christopher J. Mingone**. Role of exercise to potentially reverse effects of epigenetic modifications caused by parental high fat diet. *Berry College School Student Research Symposium on Academic Excellence* April 2016
2. Rebecca A. Martin, Nia A. Sanders, **Christopher J. Mingone**. Heritability of Epigenetic Modifications Resulting from High Saturated Fat Diets: Parental Contributions to Offspring *Berry College School Student Research Symposium on Academic Excellence* April 2015
3. Jane-Marie Rainer, Jenny Sung, Mekayla D. Mekara, Anastasia F. Kolokusek, **Christopher J. Mingone**. Effects of Exercise on Epigenetic Modifications of Offspring Induced by Parental Diet High in Saturated Fat as Determined by Fluctuating Asymmetry *Berry College School Student Research Symposium on Academic Excellence* April 2015
4. Sarah Meyers, Austin Marlow, Daniel Alligood, **Christopher Mingone**, Zahava Wilstein, A Mathematical Description of Human Vascular Remodeling in Response to Hypertension *Berry College School Student Research Symposium on Academic Excellence* April 2015
5. D. Austin Marlow, Michael L. Simhachalam, Samer R. Hajmurad, **Christopher J. Mingone**. Parental Stress Induced by a Diet High in Saturated Fat Results in Epigenetic Modifications in Unexposed Offspring Determined by Fluctuating Asymmetry *Berry College School Student Research Symposium on Academic Excellence* April 2014
6. Boyd, A., Marlow A., Leroux Mariah., Howell, W., **Mingone, CJ**. A Diet High in Saturated Fat Decreases Fitness in the Offspring. *Berry College School Student Research Symposium on Academic Excellence* April 2013
7. William A. Howell, Mariah D. Leroux, D. Austin Marlow, Alice E. Boyd, **Mingone CJ**. A Method For Developing A High Fat Diet To Study Genetic Effects On *Drosophila Melanogaster* And Its Offspring. *Berry College School Student Research Symposium on Academic Excellence* April 2013
8. **Mingone, CJ.**, Gupte, SA., Chow, JL., Abraham, NG. and Wolin, MS. Protoporphyrin IX Generation from δ -Aminolevulinic Acid Elicits Pulmonary Artery Relaxation and Soluble Guanylate Cyclase Activation. *Experimental Biology Conference* San Francisco, CA. The FASEB Journal. 20:2006
9. **Mingone, CJ.**, Ahmad, M., Kaminski, PM., Turkseven, S., Gupte SA., Abraham, NG. and Wolin, MS. Induction of Heme Oxygenase-1 by Cobalt Chloride Impairs Relaxation of Bovine Pulmonary Arteries to Nitric Oxide. *Experimental Biology Conference* San Diego, CA. The FASEB Journal. 19:2005
10. **Mingone, CJ.**, Ahmad, M., Turkseven, S., Wolin, MS. and Abraham, NG. Heme Oxygenase-1 Modulates Vascular Responses in Diabetic Rats via Guanylate Cylcase Activation: Role of Superoxide Dismutase *Experimental Biology Conference* San Diego, CA. The FASEB Journal. 19:2005
11. Ahmad, M., **Mingone, CJ.**, Kaminski, PM., Abraham, NG. and Wolin, MS. Organ Culture with Cobalt Chloride lowers Basal Superoxide Levels and Hypoxia-Elicited Contraction in Bovine Pulmonay Arteries. *Experimental Biology Conference* San Diego, CA. The FASEB Journal. 19:2005
12. Ahmad, M., **Mingone, CJ.**, Abraham, NG. and Wolin, MS. Heme Oxygenase-1 Increases Vascular Relaxation and Decreases Inducible Nitric Oxide Synthase Expression in Diabetic Rats. *Experimental Biology Conference* San Diego, CA. The FASEB Journal. 19:2005
13. **Mingone, CJ.**, Gupte, SA., Ali, N., Oeckler, RA., Olson, SC., and Wolin, MS. Guanylate Cyclase Activation by Nitric Oxide is Modulated Through Oxidation of Vicinal Thiols. *American Heart Association Scientific Sessions*. Cournand and Comroe Young Investigator Award in Cardiopulmonary and Critical Care. *Circulation*. 110:111-249 (2004).

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14. **Mingone, C.J.**, Oeckler, R.A., Gupte, S.A., Wolin, M.S. Thiol Oxidation Inhibits NO-mediated Bovine Pulmonary Artery Relaxation and Soluble Guanylate Cyclase Activation. The FASEB Journal 18: A327, 2004
15. Ahmad, M., **Mingone, C.J.**, Abraham, N.G., Wolin, M.S. Type-1 Diabetes Modulates Pulmonary Artery Contraction & Responses to Hypoxia in a Manner Reversed by Heme Oxygenase-1 Induction. The FASEB Journal 18: A640, 2004
16. **Mingone, C.J.**, Gupte, S.A., Abraham, N.G., Wolin, M.S. Mechanisms of Regulation of Soluble Guanylate Cyclase by Heme and Heme Oxygenase in Pulmonary Microvascular Endothelial Cells. The FASEB Journal. 17: A414, 2003
17. Wolin, M.S., **Mingone, C.J.**, Gupte, S.A., Volti, G.L., Abraham, N.G. Influence of Heme and Heme Oxygenase on the Regulation of Soluble Guanylate Cyclase and Aspects of Oxidant Stress in Pulmonary Microvascular Endothelial Cells. 2nd International Conference on Heme Oxygenase (HO/CO) and Cellular Stress Response. 228: 605, 2002
18. Gupte, S.A., Arshad, M., Viola, S., **Mingone, C.J.**, Wolin, M.S. Inhibition of the Pentose Phosphate Pathway Attenuates Intracellular Calcium Release and Influx, and Elicits Bovine Coronary Arterial Relaxation. The FASEB Journal. 16: A1135, 2002
19. **Mingone, C.J.**, Gupte, S.A., Kura, R., Wolin, M.S. The Nitrosothiol SNAP Elicits Pulmonary Artery Relaxation Under Hypoxia *via* a Novel Mechanism Independent of Cyclic GMP and Potassium Channels. Circulation. 104: (II) 249, 2001

References available upon request