

Program

Welcome

Jan K. Bennett, President, ARCS Atlanta Chapter Guest Recognition ARCS Mission and History

Presentation of 2006 ARCS Atlanta Scholars

Lunch

Introduction of Keynote Speaker Colleen Nunn

Laura S. H. Holgate

Vice President for Russia/New Independent States Programs
Nuclear Threat Initiative

Moderator

Bill Liss, Business, Financial & Consumer Editor, WXIA-TV

Closing Remarks

Jan K. Bennett

Presenting Sponsor



Raymond R. Christman President and Chief Executive Officer

From the President

Welcome to the 15th annual ARCS Atlanta Scholarship Awards Luncheon!

As we begin the celebration of the 15th year since our founding, we are pleased to announce that we have achieved a significant milestone. With the award this year of \$249,000, the ARCS Atlanta Chapter will have given a cumulative total of some \$1.8 million to support some of the best and brightest scientific minds in Georgia. We've come a long way since 1992 when we awarded our first three scholarships totaling \$15,000.

Today, 45 academically gifted science and engineering students from Emory University, the Georgia Institute of Technology, Morehouse College and the University of Georgia will be recognized and awarded scholarships to help complete their education. We are so proud of their accomplishments, and look forward to their collective ability to contribute to our future quality of life.

There are many who make these gifts possible. First, there are the 134 ARCS members whose dues fund several scholarships. Then there are those ARCS members who have gone the extra mile to provide additional support for the scholars. Finally, there are corporations, foundations and families who believe in what we do and who have joined with us to create even more scholarships. We hope that some of you today will hear our message and be inspired to become our newest ARCS donors.

The ARCS Foundation began in 1957, and since then, through 14 local chapters, has contributed more than \$57 million to deserving students. One of the greatest aspects of the ARCS Foundation is that 100% of every dollar raised goes to scholarship.

I'd like to extend sincere thanks and gratitude to our many donors, to our Presenting Sponsor, the Federal Home Loan Bank of Atlanta, and to the Scholarship Awards Luncheon Committee, chaired by Kay Weiss and Liz Troy, for their commitment to bringing us this wonderful celebration.

Jan Kesling Bennett

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We are proud to recognize the following donors who have contributed to the Atlanta Chapter of Achievement Rewards for College Scientists throughout our brief history. Each donor has given a cumulative gift of \$25,000 or more.

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Laura S. H. Holgate Vice President for Russia/ New Independent States Programs

Nuclear Threat Initiative

Laura S. H. Holgate joined the Nuclear Threat Initiative in February 2001. The Nuclear Threat Initiative is a public charity devoted to reducing toward zero the risk that nuclear, biological or chemical weapons will ever be used, and to preventing their proliferation. Founded in January 2001 by media magnate Ted Turner and former Senator Sam Nunn, NTI has established a solid record of achievement based on analysis, advocacy and action.

Prior to joining NTI, Ms. Holgate directed the Department of Energy's Office of Fissile Materials Disposition where she was responsible for consolidating and disposing of excess weapons plutonium and highly enriched uranium in the US and Russia. She served as Special Coordinator for Cooperative Threat Reduction at the Department of Defense where she provided policy oversight of the "Nunn-Lugar" Cooperative Threat Reduction program of US assistance to Russia and other former Soviet states. Ms. Holgate served for two years as Special Assistant to Assistant Secretary of Defense for International Security Policy Ashton B. Carter. At the Arms Control and Disarmament Agency (ACDA), she worked on the Clinton Transition Team and as Special Assistant to the Acting Director of ACDA, Ambassador Thomas Graham.

Her academic credentials include an A.B. from Princeton in politics, an S.M. from M.I.T. in political science, and two years on the research staff at Harvard's Center for Science and International Affairs at the Kennedy School of Government, where she authored several articles and book chapters. A member of the Council on Foreign Relations, she was awarded a CFR International Affairs Fellowship in 1999. She is a member of the International Institute for Strategic Studies and serves on the Executive Board of Women in International Security. She was recently appointed to advisory panels for the Pacific Northwest National Laboratory and the Oak Ridge National Laboratory. She was awarded the Defense Medal for Outstanding Public Service and a certificate of commendation from the Department of Energy. Ms. Holgate is a frequent invited speaker at international conferences and Congressional hearings, and is regularly quoted in print and broadcast media. Ms. Holgate and her husband live in Arlington, Virginia.

ARCS At A Glance

Chapters

Atlanta, Georgia
Chicago, Illinois
Denver, Colorado
Honolulu, Hawaii
Los Angeles, California
Lubbock, Texas
Metro Washington, D.C.
Northern California
Orange County, California
Phoenix, Arizona
Pittsburgh, Pennsylvania
Portland, Oregon
San Diego, California
Seattle, Washington

Mission

The ARCS Foundation provides scholarships to academically outstanding United States citizens studying to complete their degrees in science, medicine and engineering thereby contributing to the worldwide advancement of science and technology.

Achievements

For the 2005-2006 academic year, ARCS chapters awarded \$4,160,000 to 521 scholars at 46 schools. During the 48-year history of ARCS, over \$57,000,000 has been awarded to financially assist students of high achievement.

Scholarship Donors and Fundraising

The more than 1,600 members of ARCS are women volunteers who willingly and enthusiastically donate their time, efforts and financial support. Because all scholarship fund solicitation and administration expenses are underwritten or donated by ARCS members, 100% of all contributions go directly to scholarships.

ARCS Foundation, Inc. provides a way for corporations, civic organizations and individuals in the community to combine resources and efforts to support American scholars, helping to ensure a better future for all. ARCS awards for basic scientific education are the largest of any private membership organization in the United States.

Web Site: ARCSFOUNDATION.ORG

Γ. Christopher Bond

Second Year ARCS Scholar

Ph.D. Candidate, Epidemiology The Zeist Foundation, Inc. ARCS Fellowship



Chris earned his B.A. in Biology at LaSalle University in 1991 and Ph.D. in English from the University of Notre Dame. His previous doctoral dissertation focused on rhetoric in scientific writing – particularly the scientific article and the peerreview process. Chris' early career was spent teaching writing – first at Notre Dame and then as an assistant professor at Rowan University in New Jersey. He has also worked as a science and

medical writer for educational institutions and within the pharmaceutical industry. Chris' current projects include a health services study of vaccination practices at dialysis clinics and work on a textbook of cardiovascular epidemiology. Chris is married and has a 7-year old daughter.

Jill R. Bordelon

First Year ARCS Scholar Ph.D. Candidate, Neuroscience

James R. Kuse Foundation ARCS Fellowship



Jill graduated summa cum laude with a B.S. in Psychology from Louisiana State University. During her undergraduate years, Jill's research was divided between studying the effect of smoking cessation on food intake in women and understanding the effects of stereotypes on source memory. Jill came to Emory University to purse a Ph.D. in Neuroscience in order to explore the basic biological mechanisms underlying

reward and memory. She is currently a fifth year student in Dr. Chris Muly's laboratory. Jill's research focuses on determining the cortical anatomical location of receptors and signaling proteins critical for memory functions. She has presented her work at five neuroscience conferences, has published a first-author research article in *Cerebral Cortex* and has been awarded a Kirschstein National Research Service Award from the National Institute of Mental Health.

Siobhan M. Craige

Second Year ARCS Scholar

Ph.D. Candidate, Nutrition & Health Science Dr. William Torres and ARCS Century Fellowship

Siobhan's interest in science was developed early on due to her interest in nature, especially in bugs and spiders. While pursuing a degree in Biology at Emory University, she participated in ESEP (Elementary Science Education Partners), where she taught hands-on science to underprivileged children in the Atlanta Public Schools. Siobhan spent a semester abroad in Brazil working with a researcher at the Instituto Nacional de Pesquisas

da Amazonia studying medicinal plants, in particular, *Croton Cajucara Benth*. She worked as a technician for Dean Jones in the department of Biochemistry at Emory focusing on nutritional studies involving glutathione, cysteine and age-related macular degeneration (ARMD). Her graduate research concerns nutrition, aging and age-related illness.

Jennifer C. Felger

Second Year ARCS Scholar

Ph.D. Candidate, Nutrition & Health Science
Mr. and Mrs. Charles B. Rice
ARCS Fellowship
ifer received her B.S. in Psychology from the



Jennifer received her B.S. in Psychology from the University of Florida. At Emory she is a student in both the Graduate Program in Neuroscience and the Center for Behavioral Neuroscience (CBN). Her current research focuses on the contribution of cytokines and inflammation to the development of neuropsychiatric disorders in the medically ill. She is developing an animal model of cytokine-

induced behavioral, neurobiological and endocrine changes using interferon alpha. This model will then be used to test pharmacological agents to reverse these alterations. Jennifer has received support from the CBN scholars program and a National Research Service Award from the National Institute of Mental Health. Outside of lab, she enjoys running, kickboxing, and participating in various community service activities.

Monica L. Gerth

Second Year ARCS Scholar
Ph.D. Candidate, Chemistry
The Teem Family ARCS Fellowship



After growing up on Army bases around the country and around the world, Monica eventually found herself graduating with a B.S. in Chemistry from The Evergreen State College. Curiosity brought her to the South and to Emory, where her Ph.D. research involves engineering deoxyribonucleoside kinases to improve the activation of nucleoside analog pro-drugs such as AZT. She was awarded a GAANN fellowship for 2002-03

and the Chemistry Department's Osborne R. Quayle Fellowship for 2004-05. Outside the lab, Monica enjoys swimming, reading and volunteering with Refugee Family Services as a family literacy mentor. Upon completion of her degree, she plans to pursue a post-doctoral research position in academia.

Allison Lange Second Year ARCS Scholar Ph.D. Candidate, Biochemistry, Cell & Development Biology Mellon Private Wealth Management ARCS Fellowship



Allison received her B.A. degree in Genetics, Cell, and Developmental Biology from Dartmouth. As an undergraduate, she worked in a lab at Washington University focusing on the regulation of ion channel activity. She also worked in the product safety division at Monsanto studying mechanisms of drug toxicity. At Emory, she has won numerous awards, including Best Poster Presentation at the Emory Graduate Student

Research Symposium and Outstanding Graduate Presentation at the Southeastern Regional Yeast Meeting. Her current research combines biochemical, genetic and physical techniques to investigate the mechanisms of nucleocytoplasmic transport in *Saccharomyces cerevisiae*.

Jeffrey W. Mercante

First Year ARCS Scholar



Ph.D. Candidate, Microbiology and Immunology SunTrust Directed Funds: Greene-Sawtell Foundation and ARCS Century Fellowship

Jeff received his B.A. degree from Southern Methodist University. He then attended Louisiana State University where he received his M.S. in Microbiology studying an *in vitro* transposon-based system for the genetic manipulation of the zoonotic pathogen Brucella. Shortly thereafter Jeff came to Emory University to pursue a Ph.D. degree in Microbiology. He is currently a fifth year

student in the Microbiology and Molecular Genetics Program working in the laboratory of Dr. Tony Romeo. His research has focused on understanding the molecular aspects of CsrA, a small global regulatory protein found in a diverse array of bacteria, including *Escherichia coli*. In his spare time Jeff enjoys traveling and fixing his Vespa.

Erin L. Murray

Fourth Year ARCS Scholar
Ph.D. Candidate, Epidemiology
Georgia Gulf Corporation ARCS Fellowship



Erin graduated magna cum laude with a B.S. degree and College Honors in Mathematics from Westminster College. She graduated with an M.S.P.H. degree in Epidemiology from Emory University's Rollins School of Public Health. Erin's current research interests are influenza and other respiratory infections, particularly in developing countries. Her dissertation will examine the effects of environmental risk factors on acute lower

respiratory infections in Bangladeshi children less than five years of age. In her free time, Erin enjoys competing in triathlons and volunteering as a cycling coach for Special Olympics.

Troy D. Querec

ec First Year ARCS Scholar Ph.D. Candidate, Immunology The Eleven Eighty-Three Fund and ARCS Fellowship



Troy received his B.S. in Biochemistry from the University of Maryland. There he was fortunate to be accepted into the Science, Technology, and Society Scholars Program where he studied how societal policies and science influence each other. He then worked as a scientific technician for two years of Fox Chase Cancer Center where he gained invaluable laboratory experience. Troy is a fifth year student in the laboratory of Dr. Bali Pulendran. His first publication in the *Journal of Experimental Medicine* focuses on the cellular

signaling pathways that are activated by the yellow fever vaccine 17D (YF-17D) to give potent and long lasting protective immune responses. Currently he is working on YF-17D human clinical and case studies. The completion of his thesis research will provide indepth information regarding the mechanisms of the very effective yellow fever vaccine; this information can be applied to the design of other vaccines.

Jennifer L. Sorrells

First Year ARCS Scholar Ph.D. Candidate, Chemistry ARCS Fellowship (Anonymous Donor)



Jennifer received her B.A. degree in Chemistry from The College of Wooster, Ohio. After studying phospholipids analogues for her undergraduate thesis and generating protein kinase inhibitors in a post-graduate year at Vanderbilt School of Medicine, she came to Emory. Currently a fourth year student, Jennifer conducts dissertation research in the laboratory of Dr. Fredric Menger. Her research focuses on self-assembly of amphiphilic molecules

in aqueous solutions. Jennifer has presented her research at domestic and international conferences and has published several papers in peer-reviewed journals, including the *Journal of the American Chemical Society*. Outside of the laboratory, Jennifer enjoys getting lost during her international travels, camping in the great outdoors and creating concoctions in the kitchen.

Shana Topp

First Year ARCS Scholar Ph.D. Candidate, Chemistry Marcia and John Donnell ARCS Fellowship



Shana is a graduate of Emory University, where she received a B.S. in Biology and Chemistry with Highest Honors. She also received a Masters degree in Chemistry from Emory. Under the mentorship of Dr. Justin Gallivan, Shana's research focused on developing biomaterials that form reversible networks in response to calcium ions. Now a Ph.D. candidate and Woodruff Fellow in Emory's Department of Chemistry, Shana has

characterized these biomaterials and is developing secondgeneration materials. She also maintains a research focus on reengineering the ligand specificity of the E. coli chemotaxis system. She aspires to a career in teaching and academic research.

Janette M. Villalobos

Second Year ARCS Scholar Ph.D. Candidate, Chemistry Madeline and Howell E. Adams, Jr. Charitable Trust



Janette is a native of Miami, Florida. Following two years at Miami-Dade College, she received her B.S. degree in Chemistry from the University of Florida where she conducted her senior research thesis in the area of fluorine chemistry with Drs. William Dolbier and Merle Battiste. In 2001, she

began her graduate work at Emory University

under the guidance and support of Dr. Lanny S. Liebeskind. Her current research involves synthetic methods development with emphasis on biomimetic cross-coupling reactions of thio-organic compounds. Janette plans to pursue a career in the pharmaceutical industry after completion of post-doctoral studies. While at Emory, she received the GAAN fellowship in 2002. When not in the lab, Janette enjoys spending time with Reese, her family and her Jack Russel Terrier, Spanky.

Andrea F. Forte

Fourth Year ARCS Scholar

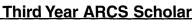


Ph.D. Candidate, Human-Centered Computing Cooley Family Foundation ARCS Fellowship

With an undergraduate background in the humanities, Andrea's path to the sciences was not typical, but one she hopes sill become more common with the development of multidisciplinary programs. She received a B.A. degree in Foreign Languages and Literature from Western Michigan University where she earned multiple merit-based awards. After completing a Master's degree in Library and Information Science from the

University of Texas, an interest in human-computer interaction led her to a professional position as an interface designer. Andrea returned to school to explore the design of effective computer-based environments for human learning and communication. She is working with Amy Bruckman to understand how social technologies can be better designed to support human learning.

Brian H. Fralix





Ph.D. Candidate, Industrial & Systems
Engineering
ARCS Century Fellowship

Brian earned a B.S. in Mathematical Sciences from Clemson University. At Georgia Tech he is pursuing a Ph.D. specializing in stochastic systems. His research interests are in the areas of Palm theory (used to study how a queue behaves at the time of a particular event), Markov chains on general spaces (in particular, stability conditions for Markov chains), and the theory of weak

convergence of queueing processes. His current projects include finding conditions when queueing processes can be approximated by Markov jump processes. After graduation, Brian plans to pursue a career in academia.

Donavon R. Gerty

First Year ARCS Scholar

Ph.D. Candidate, Mechanical Engineering Sally and Warren Jobe ARCS Fellowship



Donavon received his B.S. degree in Mechanical Engineering from University of Dayton. While finishing his undergraduate work, he co-oped with Hamilton Sundstrand in Rockford, Illinois for several semesters. Donavon is a fifth year Ph.D. student at Georgia Tech in the Fluid Mechanics Research Lab under the instruction of Dr. Ari Glezer. His research concentrates on implementing forced convective cooling for small-scale

electronic devices. He has presented his thesis research at two fluid dynamics conferences, as well as presenting work for a secondary project at an electronics packaging conference. His outside interests including playing various sports, and he recently completed the Peachtree Road Race.

Shelby Highsmith, Jr.

First Year ARCS Scholar

Ph.D. Candidate, Mechanical Engineering Harriett and Sandy Miller ARCS Fellowship



Shelby completed a dual-degree program at the University of Notre Dame, majoring in Aerospace Engineering and Philosophy. He then worked as a program manager in Propulsion Technology Development for Honeywell Engines & Systems overseeing multidisciplinary research programs. An assignment in the accident investigation group inspired Shelby to pursue a Ph.D. studying mechanics of materials, fatigue and fracture

mechanics with Prof. Steve Johnson. After declaring a minor in International Affairs, he received a fellowship from the Sam Nunn Security Program to study issues in technology and international security. Outside of school, Shelby writes on three weblogs and is communications director for a political action group. He plans to pursue a government-related career in science and technology policy.

Lori M. Houghtalen

First Year ARCS Scholar

Ph.D. Candidate, Industrial & Systems Engineering Debby and Jim Robbins and Kathy and Dennis Berry ARCS Fellowship



Lori received her B.S. in Industrial Engineering from the University of Tennessee. She earned her M.S. in Industrial Engineering at Georgia Tech. She is currently working towards her Ph.D. under the supervision of Professors Ozlem Ergun and Joel Sokol. Her thesis research is in collaborative logistics applied to the air cargo industry, and she has presented her active research at the INFORMS annual meeting as well as at the annual

NSF DMI conference. Lori is interested in the general problem of how to incorporate behavior into models and solution techniques, using tools from optimization and game theory. She looks forward to applying these ideas to social science and service industry applications.

Timothy P. Koehler

First Year ARCS Scholar

Ph.D. Candidate, Mechanical Engineering ARCS Century Fellowship



Tim received his B.S. degree in Mechanical Engineering from Tulane University. He completed his M.S. degree at Georgia Tech, studying the initial conditions of turbulent liquid jets using Laser-Doppler velocimetry. Tim is currently a fifthyear student pursuing his Ph.D. in the laboratory of Dr. Said Abdel-Khalik and Dr. Minami Yoda. His current research focuses on characterizing thermocapillary effects in thin liquid layers. Tim

has presented his research at one fusion energy conference and coauthored two articles in *Fusion Science and Technology*. Outside of science, Tim enjoys running and bicycling.

Matthew E. Kontz

First Year ARCS Scholar

Ph.D. Candidate, Mechanical Engineering Graves Foundation ARCS Fellowship



Matthew received a B.S.E. from Walla Walla College, and an M.S.M.E. from Georgia Tech. His research at Georgia Tech has been centered on haptic control of hydraulic machinery. His research interests include: control of dynamics systems, haptic robotics and control of fluid power systems. Industrial experience includes summer internships at Honeywell and Caterpillar and independent consulting work for Ross Controls. Matt is a stu-

dent member of both IEEE and ASME. He was the 2001 Walla Walla College Engineer of the Year and received the 2005 ASME IMECE Best Paper Award for the Fluid Power System Technology Division.

Charlotte Walker Kotas

Fourth Year ARCS Scholar

Ph.D. Candidate, Mechanical Engineering ARCS Century Fellowship



Charlotte earned her B.S. in Mechanical Engineering from the University of Tennessee and an M.S. from Georgia Tech. A former winner of the National Science Foundation Graduate Fellowship, she is currently working on a Ph.D. focusing on experimental fluid mechanics and acoustics. Her research explores the role of fluid flows in hearing and focuses on how these fluid flows may be used by fish to interpret the acoustic cues in

their environment. Her research has been presented to the American Physical Society's Division of Fluid Dynamics, where it won an award in the Gallery of Fluid Motion in 2005, and to the Acoustical Society of America, where is won a Best Student Paper Award in Animal Bioacoustics in 2006.

Anne-Marie Albanese Lerner Fourth Year ARCS Scholar



Ph.D. Candidate, Mechanical Engineering Siemens Energy & Automation, Inc. ARCS Fellowship

Anne-Marie received her B.S. in Mechanical Engineering from Washington University in St. Louis. She began her graduate work at Georgia Tech in the acoustics and dynamics group. Her research interests include vibration control, semi-active control algorithms, noise control and smart materials, as well as examining better ways to recruit, retain and educate engineering students.

Her current project, entitled "A stability and controllability analysis of magnetorheological elastomers in state-switched absorbers," involves using a material sensitive to magnetic fields to semi-actively control vibration in host devices. This project could be potentially useful in controlling vibration of everyday items such as airplane wings, car seats and washing machines. In her spare time, Anne-Marie enjoys spending time with her husband and their two loveable dogs, cheering on the Yellow Jacket football team, and making a mess of the kitchen, also known as "cooking."

James R. Luedtke

Fifth Year ARCS Scholar

Ph.D. Candidate, Industrial & Systems Engineering Betsy and Harald Hansen ARCS Fellowship



Jim has a B.S. in Industrial Engineering from the University of Wisconsin-Madison and an M.S. in Operations Research from Georgia Tech. Jim's research lies in the field of optimization with emphasis in integer and stochastic programming. Currently, he is working on a project investigating solution methods for problems in which some of the constraints are random. Jim has gained industry experience with internships at W.L. Gore,

Agilent Technologies and ExxonMobil. When not optimizing, Jim enjoys hiking and bicycling and spending time with his wife, Leigh.

Steven M. Morris

Second Year ARCS Scholar

Ph.D. Candidate, Industrial & Systems Engineering Patsy and Jere Drummond ARCS Fellowship



Steven earned his B.S. in Mathematics from Vanderbilt University and an M.S. in Industrial and Management Engineering from Rensselaer Polytechnic Institute. Prior to deciding to pursue his doctorate degree, he served as a submarine officer in the U.S. Navy including a three-year assignment as an Instructor and Assistant Professor at the U.S. Military Academy at West Point in the Department of Systems Engineering. His current research involves improving the

security and resiliency of our nation's food supply chain. In his spare time, Steve referees youth and high school soccer matches.

Michael J. Pennock First Year ARCS Scholar

Ph.D. Candidate, Industrial & Systems Engineering ARCS Century Fellowship



Michael received his B.S. and M.S. degrees in Systems Engineering from the University of Virginia where he received the Biomimicry Research prize for work in genetic programming. While at UVA, Michael worked for the Center for Risk Management of Engineering Systems and conducted research in the areas of critical infrastructure protection, project risk management, and optimal highway maintenance management. After graduating, Michael worked as a

systems engineer for the Northrop Grumman Corporation on the Missile Defense National Team where he focused on developing system architectures for the US missile defense system. In 2004 he entered the Ph.D. program at Georgia Tech. Michael currently works for the Tennebaum Institute for Enterprise Transformation where his thesis research focuses on the economic valuation of enterprise transformation

Dylan T. Shepardson

First Year ARCS Scholar

Ph.D. Candidate, Industrial & Systems Engineering Imlay Foundation, Inc. ARCS Fellowship



Dylan has degrees in Physics from Amherst College and UC Berkeley and is working toward a Ph.D. in Algorithms, Combinatorics, and Optimization at Georgia Tech. Dylan is interested in applications of optimization techniques to problems in social and biological sciences. His research at Georgia Tech has involved problems in neurobiology and voting theory, and he is currently working on an algorithm for developing self-assembling neuronal models. Dylan has lived

overseas and enjoys traveling and virtually all sports.

Andrew K. Smith Second Year ARCS Scholar Ph.D. Candidate, Industrial & Systems Engineering C. Tycho and Marie Howle Foundation ARCS Fellowship



Andrew earned a B.S. degree in Mathematics with a second major in Linguistics from the University of North Carolina at Chapel Hill. He than began his Ph.D. studies in the Applied Statistics group at Georgia Tech, where his research focuses on nonlinear dimension reduction, a new area of study with numerous applications, including image processing and voice recognition. Currently, he is working on the development of a unified theoretical framework for methods in this area. He also recently co-authored a book chapter giving a

survey of the techniques of dimension reduction. Outside of school, Andrew's hobbies include badminton and playing the piano.

Patrick W. Yaner

Fourth Year ARCS Scholar

Ph.D. Candidate, Computer Science Scientific-Atlanta Foundation ARCS Fellowship



Patrick graduated from North Carolina State University cum laude with B.S. degrees in both Applied Mathematics and Computer Science. He is currently studying artificial intelligence and cognitive science in his pursuit of his Ph.D. Patrick has worked at the Naval Surface Warfare Center in Dahlgren, Virginia, as a student trainee in mathematics. Recently he has studied techniques

for content-based image retrieval in the context of medical imagery at the National Library of Medicine in the Lister Hill National Center for Biomedical Communications. Patrick's research at Tech has focused on visual reasoning and specifically associative visual retrieval. He is also interested in visual analogical problem solving, multi-modal analogy and addressing the issues of retrieval and mapping as they relate to the problem solving task with respect to analogy and visual analogy, in particular.

Ruben G. Alexander

Second Year ARCS Scholar

Senior, Biology Major

Georgia Pacific Foundation ARCS Scholarship



Ruben is from Decatur, Georgia. He has been on the Dean's list consistently since his freshman year and is one of the top ranking scholars in his class. During his tenure at Morehouse, he has served as a member of the Health Careers Society as well as co-founder of an innovative public health awareness organization, EduHealth. Additionally, he serves as a vital member of the Alpha Rho chapter of Alpha Phi Alpha Fraternity.

Ruben has had notable research experiences at Northwestern University and the University of Pennsylvania. He appreciates the valuable experiences that he has received from research. He plans to pursue graduate work in the medical field, possibly in the area of neurobiology.

Amanuel Beyene

First Year ARCS Scholar Senior, Chemistry Major ARCS Century Scholarship



Amanuel is from Alexandria, Virginia. He participated in a National Science Foundation Undergraduate Research Experience in Chemistry at Columbia University where he studied the phase behaviors of polystyrene colloids, and then participated in a student exchange program at Stanford University. There he conducted research in methods to produce nanoparticles with supercritical carbon dioxide and was awarded a grant to

conduct research. In addition, Amanuel was a Hands on Atlanta volunteer where he taught chess to elementary students and is a proud member of the National Society of Collegiate Scholars. Outside of classes and research, he is also a filmmaker.

Austin X. Dixon

First Year ARCS Scholar Junior, Biology Major Herz ARCS Scholarship



Austin is from Albany, Georgia. He is a member of Morehouse's Health Careers Society, Honors Program, Morehouse Business Association, MBA Investment Club, Nippon Club, Golden Key and the National Society of Collegiate Scholars. His research interests are in diabetes. Work experiences include biology, math and chemistry tutor, research assistant, teacher assistant, cameraman, resident assistant, film director and Next-

Step conference volunteer. Austin is also a Gates Millennium Scholar, National Dean's List honoree and was selected the 2005-2006 Mr. Alpha Lambda Delta Academic Honor Society. He continues to work with the honor society on current projects. Outside interests are weightlifting, football and tennis.

Curtis Jamison

First Year ARCS Scholar Senior, Biology Major AT&T ARCS Scholarship



Curtis is from Gautier, Mississippi. He has done biomedical research and has shadowed physicians at various universities and hospitals. He is currently researching the effects of obesity in the cardiovascular system in mice at Morehouse School of Medicine. Outside of science, he enjoys playing basketball and running. He hopes to use the medical field to offer people a better quality of life. He is applying to medical school for the 2007 academic year.

Ross H. McMillan

Second Year ARCS Scholar

Senior, Biology Major Sue and John Wieland and ARCS Century Scholarship



Ross is from Tallahassee, Florida. He is on the Dean's List and the Honor Roll, and a member of Phi Beta Kappa national honor society. As a MARC/U*STAR scholar he worked under the mentorship of Dr. Valerie Haftel on neuro-degeneration in diabetic mice. Furthermore, he has completed summer research programs in hematology at the University of Toronto and

neuroscience at Stanford University. In his spare time, Ross is a track and field All-American, secretary of the Morehouse College student advisory council, and a member of the Alpha Rho Chapter of Alpha Phi Alpha Fraternity.

Desmond A. Moore

First Year ARCS Scholar
Junior, Biology Major
ARCS Century Scholarship



Desmond is from Chicago, Illinois. He has participated in the MBRS-RISE program, and is currently a member of the MARC/U*STAR program, Undergraduate Research Scholars program, National Society of Collegiate Scholars, Dean's List and Honor Roll. Desmond has volunteered his service in Ghana as an Urban Scholar and in South Africa with Operation Crossroads Africa. He is presently conducting

research in the laboratory of Dr. Andreas Bommarius of the Chemical & Biomolecular Engineering Department of Georgia Tech. His research focuses on improving protein engineering by the design of a folding reporter using the blue fluorescent protein. He has presented his research at the 18th Annual Mapp symposium, where he earned second place on his poster presentation. Desmond plans to obtain an M.D./Ph.D. or Ph.D. in biomedical engineering. Outside of science, Desmond enjoys painting, playing tennis and basketball.

Andre K. Okoreeh

First Year ARCS Scholar Junior, Biology Major Lisa Bankoff ARCS Light Scholarship



Andre is currently a junior at Morehouse College in pursuit of a triple major in Biology/-Physics/Chemistry with a minor in Mathematics. Originally from Compton, California, Andre entered Morehouse researching at Morehouse School of Medicine in immunology and biochemistry. His research spans from DNA damage and repair at Ohio State University to biophysics collaboration with Morehouse and

Spellman in analysis of chitosan complexes. At Morehouse, he is a MARC/U*STAR scholar and president of Circle K/Kiwanis Club. Also, he is a member of Beta Kappa Chi Scientific Honor Society. Andre plans to pursuit an M.D./Ph.D. with a focus in biophysics or bioengineering. Currently, Andre has concentrated his research in Biochemistry at Morehouse College.

Eric S. Toone

First Year ARCS Scholar Senior, Chemistry and French ARCS Century Scholarship



Recently returned from a year long study abroad program at the University of Nantes, in France, Eric is looking forward to assisting in continued research on Glucokinase Regulation and its potential effects on Non-Insulin Dependent Diabetes Mellitus, in the lab of Dr Lance Shipman. Aspiring to become a future M.D./Ph.D., Eric wishes to pursue a career in medicine and to continue conducting biochemical research after

the completion of his undergraduate studies. Beyond his interests in science, Eric has an affinity for foreign languages – French, as well as proficiency in Japanese and Spanish. He also enjoys running, weightlifting and playing football.

William D. Ulmer

First Year ARCS Scholar
Senior, Biology Major
ARCS Century Scholarship



William is from Chattanooga, Tennessee. He participated in the Yale University School of Medicine's BioStep Research Program in 2005. At Yale, William worked in the lab of Dr. Albert Sinusas on Targeted Imaging of Post-MI Angiogenesis Using a Tc-99m Labeled NC100692 Compound in a Canine Model. At Morehouse, he is an Honor Roll student. He is a member of several organizations including Beta Kappa Chi,

Alpha Epsilon Delta and the Health Careers Society. Outside of science, William is pursuing a minor in Spanish and has studied abroad in Mexico and the Dominican Republic.

Christopher D. Black

Ph.D. Candidate, Exercise Physiology Linda T. Mauldin ARCS Fellowship



Christopher graduated magna cum laude with a B.A. in Biology from Hendrix College. Completing a research project studying the effects of exercise on individuals with chronic fatigue syndrome, he earned an M.A. in Exercise Science at UGA. Christopher is currently pursuing a Ph.D. under the guidance of Dr. Gary Dudley. His primary research lies in the area of skeletal muscle physiology and skeletal muscle injury. In col-

physiology and skeletal muscle injury. In collaboration with the Shepherd Center in Atlanta, he and Dr. Dudley are examining the use of exercise to improve the health of individuals with spinal cord injury. Christopher hopes to pursue a career in academia.

Kara A. Dyckman

First Year ARCS Scholar
Ph.D. Candidate, Psychology
Susie and Bill Deyo and
Debbie and Bill Liss ARCS Fellowship



Kara received her B.A. degree in Psychology from Bucknell. She is currently a fifth year student in the Cognitive/Experimental Psychology program under the advisement of Dr. Jennifer McDowell. Her research focuses on neural plasticity, and she has been using neuroimaging technologies to investigate changes in brain activity as participants practice a task. She is also interested in

how the principles of neural plasticity can be applied to the development of cognitive rehabilitation programs for people with mental illness or brain injury. Kara has published research articles and presented her work at three international conferences. She has received scholarships from the John and Mary Franklin Foundation and the American Psychological Foundation. In her free time, Kara performs as a member of the Canopy Studio trapeze repertory company.

Sarah A. Eisenstein

First Year ARCS Scholar

Ph.D. Candidate, Neuroscience ARCS Century Fellowship



Sarah received her B.S. degrees in Neuroscience and Psychology from Tulane University and her M.A. in Psychology from Southeastern Louisiana University. Sarah is currently a third year student at Georgia and conducts her research in the laboratory of Dr. Andrea Hohmann. Her research focuses on the comorbidity of vulnerability to drug sensitization and psychiatric disorder in a rodent model. Sarah has presented past research at

several conferences. Besides research, she enjoys spending time with friends, family and pets, as well as listening to music.

Tannia Gutierrez

First Year ARCS Scholar

Ph.D. Candidate, Psychology Joseph G. and Inez Crawford Burtchaell Foundation ARCS Fellowship



Tannia received her B.S. in Biopsychology and B.A. in Spanish Literature from the University of California San Diego. She was a research technician for The Scripps Research Institute in La Jolla, California, where she was involved in various drug abuse projects and also studied the SIV virus in rhesus macaque monkeys. Encouraged to follow a research career by

mentors at Scripps, Lisa came to UGA. She received an M.S. degree, and is currently doing thesis research in the laboratory of Dr. Andrea Hohmann. Her research focus is neuropathic pain and how cannabinoids aid in suppressing some of the symptoms associated with neuropathic pain. Tannia has published a manuscript in *Brain Research*, and is working on a second manuscript for the *British Journal of Pharmacology*. She has also presented work at Society for Neuroscience conferences. Outside of science, Tannia enjoys traveling, as well as exercising and meeting people from different cultural backgrounds.

Benjamin M. Hasselbring

First Year ARCS Scholar

Ph.D. Candidate, Microbiology ARCS Century Fellowship



Benjamin received his B.S. degree in Microbiology from Indiana University. At UGA his doctoral studies are on *Mycoplasma pneumoniae* under the guidance of Dr. Duncan C. Krause. The aims of his research center around establishing the hierarchy of the protein interactions required for development and function of the *M. pneumoniae* terminal organelle, and identifying structural components of the molecular apparatus contained

within the terminal organelle that empowers *M. pneumoniae* gliding motility. Benjamin's research has yielded thirteen presentations at nine conferences, four invited seminars, and will have culminated in six publications among the journals *Molecular Microbiology*, *Journal of Bacteriology and Proceedings of the National Academy of Sciences*.

Dawn M. Penn

First Year ARCS Scholar

Ph.D. Candidate, Foods and Nutrition Sartain Lanier Family Foundation, Inc. ARCS Fellowship



Dawn received her B.S degree in Nutrition from Penn State University and completed her Dietetic Internship at Iowa State University. She then received her M.S. degree in Foods and Nutrition at UGA. She gained clinical experience in the field of nutrition and obesity working as a clinical research assistant/dietitian at the VA Hospital/Duke University. She returned to UGA to pursue her

doctoral degree under the direction of Dr. Ruth Harris. Her current research focuses on the role of the adipokine, leptin, in regulating fat cell growth using *in vitro* cell culture and in vivo models of genetic and diet induced obesity. Dawn has presented her research at national conferences and has published in the *American Journal of Physiology-Regulatory, Integrative and Comparative Physiology* as well as co-authoring a book chapter. In her spare time, Dawn enjoys cycling, running and spending time with her friends, family and dog.

Brianna L. Peterson

First Year ARCS Scholar



Ph.D. Candidate, Pharmaceutical and Biomedical Sciences Harry and Caroline Gilham Foundation and Nita Stokes ARCS Fellowship

Brianna received her B.S. in Chemistry from the University of Wisconsin-La Crosse and an M.S. in Forensic Science from the University of Illinois at Chicago. She worked as a Forensic Toxicologist before coming to UGA. She is currently in her fourth year in the Ph.D. program and is a member of the Interdisciplinary Program of Toxicology. Her

research is performed under the guidance of Dr. Brian S. Cummings and focuses on the role of calcium independent phospholipase A2 in oxidant-induced neural cell death. Brianna is a fellow of the American Foundation for Pharmaceutical Education. So far she has published four peer-reviewed articles, including a review in *Biomedical Chromatography* covering analytical techniques for lipidomic analysis, which was the most downloaded paper for that journal in the first half of 2006. Outside of academics, Brianna enjoys playing rugby.

Rebecca L. Tomlinson

Third Year ARCS Scholar
Ph.D. Candidate, Genetics
Kay and Buddy Weiss ARCS Fellowship



Rebecca graduated from Louisiana State University with B.S. degrees in Biochemistry and Psychology and minors in Chemistry and Zoology. At UGA, she is pursuing a Ph.D. in Genetics under the direction of Michael and Rebecca Terns. Her work is focused on understanding the assembly and trafficking of the enzyme, telomerase. This enzyme is active in over 90% of human cancers but is inactive in the majority of adult human

somatic tissues, making it a promising anti-cancer target. Rebecca was the recipient of the NIH training grant in Genetics. She is currently supported by a UGA Dissertation Award. Upon graduation, she hopes to pursue a career in science writing. Eventually, Rebecca would like to teach undergraduates in a small university setting.

Laura E. Williams

Ph.D. Candidate, Microbiology Teed Poe and Mary O'Connor ARCS Fellowship



Laura received her B.S. in Biology from Illinois Wesleyan University. During her undergraduate education, she was a summer research intern at Eli Lilly in Indianapolis, where she conducted research in the infectious diseases division and the prostate cancer division. Prior to graduate school, Laura was a research fellow at the Centers for Disease Control and Prevention in Atlanta,

where she studied antifungal resistance. At UGA, under the guidance of Dr. Anne Summers, she is studying the distribution and diversity of plasmids, which play an important role in the spread of antibiotic resistance in the foodborne pathogen *Salmonella enterica*. She is interested in pursuing a career as a professor.

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