I am pleased to report that the Burnett School is making great strides in meeting our goals on all fronts, thanks to the dedication and exceptional hard work of our faculty, their research teams, and the school staff.

The Burnett School of Biomedical Sciences (BSBS) building at Lake Nona is fully functional with state-of-the-art facilities and core equipment that are shared by all the research teams. The cutting-edge transgenic animal facility at The Burnett School is a major part of UCF’s animal facility which received Association for Assessment and Accreditation of Laboratory Animal Care International accreditation this year. The remodeled Biomedical Science Annex is functioning well as the home of six research teams. Space made available to us in HPAlII was remodeled and fully equipped, and is functioning as a biotechnology teaching laboratory.

A recently implemented shuttle service, and video conferencing of seminars and meetings, are helping us bridge the gap posed by the 23 miles separating the BSBS building at Lake Nona and the main campus. The shuttle service has expanded to include Saturdays to accommodate students performing experiments during the weekend.

Our academic programs keep growing in quality and quantity. The faculty conducted a two-day retreat to thoroughly review and update the syllabi of all of the courses offered by the school. The school continues to flourish in enrollment as it currently has 2,650 undergraduate majors, and more than 16,365 students were enrolled last year in our courses. Of the 52 presentations given in the Life Sciences I & II categories at the Showcase of Undergraduate Research Excellence (SURE), our students received one first place, two second places and four honorable mentions. Of the 1,739 students in The Burnett Honors College, 234 are from our school. Of the 269 active Honors in the Major (HIM) students, 18 are in the Burnett School. We are in the top five within the LEAD Scholars Program with 51 active LEAD Scholars.

For the 2011 academic year, three Burnett School students won the university’s most prestigious award, the Order of Pegasus. We consider undergraduate participation in research an extremely important part of their education. For example, 106 undergraduates were mentored in BSBS laboratories. Of these, 10 were HIM, 11 were in the Research and Mentoring Program, and 14 were Program for Undergraduate Research Experience members. Five undergraduate students were co-authors in peer-reviewed, scientific journal publications—one student was first author; 14 presented at SURE; and eight BSBS undergraduates were co-authors on presentations at scientific meetings.

As our graduate programs are producing tomorrow’s biomedical scientists. Last year, 58 students completed M.S. degrees, and 15 students completed Ph.D. degrees in our school. We are also making progress in providing a technically trained managerial workforce by offering M.S./M.B.A. and Ph.D./M.B.A. combinations in collaboration with the College of Business Administration.

Our efforts to collaborate with the major health care organizations in Orlando have received a major boost. This is due in part to Florida Hospital establishing the Burnett School’s endowed chair in Cardiovascular Science. With this generous endowment, we have recruited a truly world-class scientist, Dr. Sam Parthasarathy, who in achieving their goals. A fourth-year student wrote to me and thanked BP for its generosity, which will help her achieve her goal of becoming a pediatric surgeon. She stated, “The support this scholarship has provided has inspired me to one day help others achieve their goals.” We in the Burnett School consider the success of our students as our greatest reward.

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Continued, page 2

IN THIS ISSUE:
- Research News
- Faculty News
- Faculty Accomplishments
- Student Achievements
- Alumni & Giving
RESEARCH NEWS

Letter from the Director, continued

previously held an endowed chair with The Ohio State University. Upon joining the Burnett School in November, he is expected to build collaborative research programs with Florida Hospital and other Central Florida scientists while providing leadership to the school’s research enterprise.

The faculty of the Burnett School is supported by more than $15.8 million per year from nationally competitive sources. Our faculty published articles in high-impact journals such as Nature Medicine, J. Experimental Medicine, J. Molecular Cell Biology, Proceedings of the National Academy of Science and PLoS Pathogens. This year, six new faculty members are joining the Burnett School, making a total of 43 faculty members in the school. We have initiated our recruitment for additional faculty to join the school next year.

The Burnett School contains two recruitment initiatives that focus on the sciences and those that want to help build the future of our nation. "We reached out to UCF’s biomedical research and education enterprise according to the plans I presented to UCF in 2002 and received the necessary commitments from Vice President M.J. Soileau, Provost Gary Whitehouse and President John Hitt.

BP Donates to Young Scientists

Thirty young scientists from the UCF College of Medicine received $1,000 scholarships thanks to a generous donation from BP and Florida Oil Holdings. The BP Scholars Program, which began this year, supports undergraduates at the medical school’s Burnett School of Biomedical Sciences.

"We reached out to UCF’s biomedical program specifically because we’re into institutions that focus on the sciences and those that want to help build the future of sustainable energy," said Demitra Baldwin, a marketing director at BP and Florida Oil Holdings.


UCF Scientists Discover Gene That Suppresses Inflammation

A research team led by Dr. Pappachan Kolattukudy, director of the Burnett School of Biomedical Sciences, has identified a protein that has the power to suppress inflammation, which could be a crucial clue to the root causes of disorders from arthritis to heart disease.

The team discovered Monocyte Chemotactic Protein-1 Induced Protein (MCPIP), which impedes inflammation by inhibiting another protein that triggers an inflammatory response in the body. The research could spur new drug development to fight inflammatory diseases.

Kolattukudy and his team discovered MCPIP in 2006 while researching heart disease. The next step of the research will be to find drug candidates that can promote or inhibit MCPIP function for therapeutic applications.

The research team includes Kolattukudy, Jian Liang, Yasser Saad, and Jing Wang from the Burnett School of Biomedical Sciences, College of Medicine, at UCF; Quinlin Yang from the University of Alabama at Birmingham; and Dongfei Qi, Tianhua Lei, and Mingui Fu from the University of Missouri-Kansas City, School of Medicine.

The team’s findings were published in the December 2010 issue of The Journal of Experimental Medicine.

New Florida Hospital Chair in Cardiovascular Science

A generous endowment from Florida Hospital allowed the Burnett School to recruit a truly world-class cardiovascular scientist to our faculty. Dr. Sampath Parthasarathy was appointed as the Florida Hospital Chair in Cardiovascular Science. He will promote and coordinate collaborative research programs with cardiovascular scientists in Florida Hospital and other institutions in Central Florida, as well as provide leadership to the research programs in the Burnett School.

Dr. Parthasarathy, Ph.D., M.B.A., F.A.H.A, is a biomedical scientist with research focuses on lipids, lipoproteins, oxidative stress, and the biology of endothelial cells and macrophages with emphasis on chronic diseases, including atherosclerosis, diabetes and heart failure. His other research interests include gynecological and oncology research.

Dr. Parthasarathy has been credited with the co-discovery of an oxidized low-density lipoprotein that plays a critical role in cardiovascular disease. His work has received more than 23,000 citations, and he is a member of an elite group of the top fraction of a percent of the most highly cited authors in the world in his field, designated as one of ISI’s Highly Cited Authors, which is the world authority on measuring research impact.

Dr. Parthasarathy held an endowed chair at The Ohio State University before joining the Burnett School. He serves on the editorial board of several journals and has served in numerous national and international peer review committees. He has been continuously funded by National Institutes of Health with multiple grants for more than 25 years. He has won numerous awards including a special recognition award from the American Heart Association; the Ranbaxy Award for outstanding research contributions; a special recognition award by the American Association of Cardiologists of Indian Origin; and the lifetime achievement award from the South Asian Society for Atherosclerosis, Thrombosis, and Vascular Biology. He also has presented the Van Deenen Memorial Lecture. He has mentored more than 200 graduate students and postdoctoral fellows.
Grant Aids UCF’s Fight Against Diabetes

UCF professor Dr. Henry Daniell has been awarded a $512,000, three-year grant from the Juvenile Diabetes Research Foundation (JDRF) to investigate a potential oral treatment for Type 1 diabetes, which is predominantly diagnosed in children and young adults—an oral vaccine would relieve them of the need to learn to inject themselves with insulin.

Working with genetically modified lettuce, Dr. Daniell has conducted groundbreaking research to create insulin from plants that could reactivate production of the protein in the pancreas.

“Dr. Daniell’s research is quite promising, and we’re thrilled to be able to fund a local scientist working on such important work to our community,” said Martin Bernstine, executive director of JDRF’s Central Florida chapter.

UCF Licenses Bacteria Test for Possible Crohn’s Treatment

Thanks to the work of Dr. Saleh Naser from the Burnett School, the UCF Research Foundation has licensed a promising diagnostic test to RedHill Biopharma Ltd., an Israeli biopharmaceutical company that is developing a treatment for Crohn’s disease. Dr. Naser developed the patented technology to test for the Mycobacterium avium paratuberculosis bacterium (MAP). It is estimated that nearly half of the people who suffer from Crohn’s disease have MAP in their system. About 700,000 people in the U.S. alone suffer from this inflammatory disorder of the gastrointestinal tract. There is no cure.

Dr. Naser received a U.S. patent for his method of detecting MAP from blood samples.

RedHill is developing a drug, RHB-104, which will treat Crohn’s patients who have MAP bacterium.

Hope for Huntington’s Disease Patients

Patients suffering from Huntington’s disease have new hope for a cure because of a research team led by UCF professor Dr. Ella Bossy-Wetzel.

Laboratory tests on skin cells and post-mortem brain tissue of Huntington’s disease patients determined that an overactive protein triggers a chain reaction that causes brain nerve cells to die. Toning down the activity of that protein, known as DRP1, prevented the chain reaction and kept those cells alive, according to the research team.

Huntington’s disease is an inherited, incurable neurodegenerative disease affecting 35,000 people annually. The disease gradually kills nerve cells in the brain, stripping away a person’s physical abilities and causing hallucinations, antisocial behavior, and paranoia. People diagnosed with the disease usually die 15 to 20 years from the onset of symptoms.

The research findings can be found online in the journal Nature Medicine and were featured in the cover story of the March edition.
NEW FACULTY

Victor L. Davidson—Professor

Dr. Victor L. Davidson’s research focuses on how specific enzymes control the transfer of reactive electrons and the activation of molecular oxygen, while minimizing oxidative damage that causes diseases and aging. He has been continuously funded by the NIH since 1984 and is currently a recipient of an NIH Method to Extend Research In Time (MERIT) award. He has published more than 150 articles in journals including Science and PNAS. He is a regular member of the Macromolecular Structure Function E (MSFE) NIH study section and in 2010 he was elected a Fellow of the American Association for the Advancement of Science.

Dr. Davidson received his Ph.D. in chemistry from Texas Tech University in 1982. After postdoctoral training at Purdue and a research position at the University of California at San Francisco, he joined the University of Mississippi Medical Center where he was professor of biochemistry until 2011.

Stephen J. King—Associate Professor

Dr. Stephen J. King’s research focuses on linkages between molecular motors, the cytoskeleton, and neurodegenerative diseases. His research is funded by the NIH and he is a member of the NIH-SYN (Synapses, Cytoskeleton, and Trafficking) study section. He has published more than 20 articles in journals including PNAS and Nature.

Dr. King received his Ph.D. in molecular, cellular, and developmental biology in 1996 at the University of Colorado at Boulder. After a postdoctoral fellowship studying cytoskeletal motors at the Department of Biology at Johns Hopkins University, he started his laboratory at the University of Missouri-Kansas City.

Michal M. Masternak—Associate Professor

Dr. Michal M. Masternak’s research interest is genetic control of aging and longevity. He is presently working on molecular mechanisms of endocrine alterations responsible for the effects of longevity genes and his work is funded by the National Institute on Aging. Dr. Masternak has more than 25 articles in journals including PNAS and PLoS.

Dr. Masternak received his Ph.D. in biological sciences from Karol Marcinkowski University of Medical Sciences (Poznan, Poland) in 2002. He worked as a postdoctoral fellow at the Department of Internal Medicine at Southern Illinois University before he was promoted to the Assistant Professor position in 2004.

Kyle H. Rohde—Assistant Professor

Previously, Dr. Kyle H. Rohde studied the human pathogen Mycobacterium tuberculosis under the mentorship of Dr. David Russell at Cornell University. At UCF, he will continue his research on M. tuberculosis gene regulation, strategies for survival within host macrophages, and the evolution of phenotypic diversity in M. tuberculosis clinical isolates. His work has been published in journals such as Science, PLoS Pathogens, and Cell Host and Microbe.

Dr. Rohde earned his Ph.D. in microbiology and immunology from The University of Oklahoma Health Sciences Center. He was a postdoctoral fellow and senior research associate in the Department of Microbiology and Immunology at Cornell University.

Herve Roy—Assistant Professor

As a research scientist under the mentorship of Dr. Michael Ibba at the Ohio State University, Dr. Herve Roy initially focused his research on mechanisms that ensure the fidelity of protein translation. He explored several noncanonical pathways that use aminoacylated tRNAs outside of the context of protein biosynthesis. More recently, he has focused his efforts on a tRNA-dependent mechanism of membrane lipid modification used by certain bacteria as a mechanism of resistance against a wide spectrum of antimicrobial agents. He has published more than 35 articles in journals such as the Journal of Biological Chemistry, PNAS, and Science.

Dr. Roy earned his Ph.D. in structural biochemistry and molecular biology from the Université Louis Pasteur de Strasbourg (France) in 2002.

Alexander Cole

Congratulations to Dr. Alexander Cole for his promotion to full professor. His broad research focus is on the innate host defense of mucosal surfaces. Specifically, he examines the mechanisms by which Staphylococcus aureus is carried in certain individuals’ nasal passageways. Dr. Cole is also the co-discoverer of the anti-HIV-1 peptide Retrocycin, and is studying its mechanism of action, as well as developing it into a topical microbicide to prevent HIV-1 transmission. He is also currently principal investigator of three NIH grants, as well as a contract funded by the NIH-sponsored HIV Vaccine Trials Network.

Dr. Cole joined the Burnett College of Biomedical Sciences in August 2003, and was tenured and promoted to associate professor in 2006.
Promotions and New Staff Members

Greg Norris
Greg Norris was recently promoted to associate director of finance and administration of the Burnett School. Greg now oversees all financial and personnel matters.

Kumail Merchant
Kumail was molecular biology and microbiology major in the Burnett School with a minor in psychology. He was member of The Burnett Honors College, former LEAD Scholar, and was the academic liaison for the UCF Pre-Professional Medical Society. He is working as a scribe in the Florida Hospital Emergency Room, and started medical school in the fall 2011 at the UCF College of Medicine.

Kyle Simpson
Kyle is a member of The Burnett Honors College and is a molecular biology and microbiology major in the Burnett School. He served as a resident assistant for the Department of Housing and Residence Life, student health specialist for the Student Government Association, and peer ambassador for The Burnett Honors College. He plans on attending the University of Alabama-Birmingham School of Optometry.

Order of Pegasus

Jacqueline Boehme
Jacqueline was a member of The Burnett Honors College and a molecular biology and microbiology major in the Burnett School. She is currently attending Harvard Medical School. She is a National Merit Hispanic Scholar and has participated in biomedical research for three years, including stem cell therapy for heart failure and bacterial toxin research.

Poarche Hicks
Poarche Hicks was recently hired as the new assistant to the director. Poarche now assists the director in all administrative functions.
Inspired to Donate

A fund honoring UCF’s First Lady Frances Millican will ease the financial burden for students pursuing graduate degrees in biomedical sciences and medicine.

The Frances Millican Endowed Graduate Fellowship has been established by a couple through a bequest in their estate plan. “Currently our graduate students need support and we don’t have enough of that in terms of funding for students who want to get their Ph.D.,” said the donor, who along with his wife wishes to remain anonymous.

For each contribution made toward the graduate program, the donors will match it up to $250,000.

The selection committee for the fellowship will include faculty and administrators from the college. This committee will review each application and make recommendations for recipients. The applicant must be enrolled at UCF as a full-time graduate student in the biomedical science Ph.D. program—the amount given to the student will be decided by the committee. The selected graduate student will receive an annual disbursement, which may be maintained for up to five consecutive years while the student is enrolled in the program.

Chatlos Foundation Helps Attract Ph.D. Students

The Chatlos Foundation—a private, philanthropic foundation based in Longwood, Florida—has committed a $50,000 gift to support one graduate fellowship for five years in the Burnett School. The recipient will be known as the Chatlos Fellow.

“The Chatlos Foundation is truly honored to partner with the UCF College of Medicine in our support of the Chatlos Fellow Scholarship,” said William J. Chatlos III, vice president of the foundation.

In 1953, William Chatlos, a native of Bridgeport, CT, founded The Chatlos Foundation, Inc., after a lifetime of building homes, and apartment and office buildings.

The gift is part of a campaign that will help the Burnett School recruit and retain outstanding Ph.D. students. The school is seeking community partners who will donate $10,000 to fund one year’s tuition for a Ph.D. student, or a five-year tuition gift of $50,000.

Honoring His Love of Teaching Science

A Greensburg, PA, doctor and his wife have made a major gift to the Burnett School to honor their father, Dr. Rudy J. Wodzinski, a longtime faculty member in the Department of Molecular Biology and Microbiology at UCF.

Dr. Steve and Tina Wodzinski contributed to the Rudy J. Wodzinski Memorial Endowed Scholarship Fund, which was established in 1998. The scholarship assists students who are pursuing either an undergraduate or graduate degree in molecular biology and microbiology and are committed to scholarship, learning, self-direction, creative problem solving and scientific inquiry—all attributes that Dr. Wodzinski possessed.

“He loved his profession, UCF and his students. He spoke of his department and his students as if they were members of our family,” said Dr. Steve Wodzinski.

Remembering Nancy Burnett

Mrs. Nancy Burnett was a great supporter of biomedical science at UCF. Along with her husband Al, she helped establish the Burnett College of Biomedical Sciences by donating $10 million in 2004. Their donation provided the momentum for building a vibrant biomedical research and education enterprise.

Black & Gold Stars

Two graduates from the Burnett School were honored for their professional achievements and commitment to the community during the UCF Alumni Association’s Black & Gold Gala.

Dr. Carmelo Licitra, who graduated from the Burnett School in 1975, was the College of Medicine’s honoree for the Professional Achievement Award. Dr. Gideon Lewis, a 2000 graduate of the Burnett School, received the Rising Star Award.

More than a dozen alumni were recognized during the annual awards ceremony.

Dr. Licitra is a physician at Florida Infectious Diseases Group, P.A., and is also a volunteer faculty member with the UCF College of Medicine. In introducing him for the award, Dr. Pappachan Kolattukudy, director of the Burnett School, thanked Dr. Licitra for “working hard” to keep infectious diseases under control.

The Rising Star Awards recognize recent UCF alumni who display promise and excellence in their careers. Dr. Lewis is board certified in Reconstructive Rear Foot/Ankle Surgery and Foot Surgery and completed his Podiatric Surgical Residency at Florida Hospital. After earning his Bachelor of Science degree in Molecular Biology and Microbiology at the Burnett School, Dr. Lewis received his M.D. from the University of California at San Francisco School of Medicine.
The Biomedical Sciences Graduate Student Association

The Biomedical Sciences Graduate Student Association (BSGSA) is open to all students enrolled in one of the Burnett School’s graduate programs. It serves as the official advocate and representative for graduate students in the master’s and Ph.D. programs. Members also organize events and activities that will improve their graduate research experience and will explore various career paths after graduation.

BSGSA has gained increasing participation from students and support from faculty, especially faculty adviser Dr. Alexander Cole. In addition to providing professional help to new biomedical graduate students, BSGSA organizes social events to unite students within the school. New students especially benefit from being a part of this association because they receive guidance and advice at every stage of the program.

The BSGSA general meetings are held in the Biomedical Sciences trailer at 6 p.m. on the third Thursday of every month. For more information, please visit www.biomed.ucf.edu/BSGSA.

Employee of the Month

Congratulations to Adriana Martinez, program assistant at the Burnett School, who was UCF’s April 2011 USPS Employee of the Month. She was nominated for her commitment to volunteer work and her selfless leadership and energy in coordinating “a myriad of tasks in regard to employee search processes.”

A passionate volunteer, Martinez has served as team captain on behalf of the Burnett School for the Greater Orlando Heart Walk, the UCF Relay for Life (the past two years) and for the Juvenile Diabetes Research Foundation. She has also “single handedly conducted the department’s participation in Knights Helping Knights and Toys for Tots holiday campaigns,” according to her nomination. Martinez also serves on the USPS Staff Council and two of its committees.

Children Tumor Foundation (CTF) Award Winner

Congratulations to Alejandra Petrilli Guinart who received the CTF Young Investigator Award. The award covers her stipend for two years. It also funds $5,000 for travel to the Neurofibromatosis Annual Conference for two years where she will present her work. This award usually funds post-doctoral fellows.

Burnett School of Biomedical Sciences Patents

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Share your news with classmates
Submissions will be published in the Alumni Updates section in a future issue of The Helix

FRANK YIANNAIAS (’87) is currently Vice President of Food Safety for Wal-Mart Inc. Past president of the International Association for Food Protection and author of the book Food Safety Culture: Creating a behavior based food safety management system.

MAIL TO: Carlee Thomas, Burnett School of Biomedical Sciences, College of Medicine, 6900 Lake Nona Boulevard, Orlando, Florida 32237.
Email carlee.thomas@ucf.edu

NAME (INCLUDING MAIDEN)

MAIL ADDRESS (CITY, STATE, ZIP)

PHONE

MAJOR/YEAR

EMAIL ADDRESS

CURRENT POSITION