UAB SCHOOL OF MEDICINE
Department of Microbiology
Micro Newsletter | Fall 2013

World Class Collaboration

Searching for a way to boost the country's higher-education system, the government of South Korea began a five-year initiative called World Class Universities in 2008. The program provided funding for collaborative projects between South Korean educators and distinguished "world-class" scholars from other countries. Out of the 1,000 applications received, more than 400 were from professors and researchers in the United States. The applicants were from prestigious universities including Massachusetts Institute of Technology, Boston University, and UAB.

UAB Microbiology Department professor **David Briles, Ph.D.**, was chosen to be one of the participants in the program. He spent 60 days a year for five years at SungKyunKwan University (SKKU). Established in 1398, the University now has two campuses—one in Seoul that focuses on the humanities and one in Suwon, about 30 miles south of Seoul, that focuses on science and engineering. SKKU is known as one of the best medical schools in South Korea and is affiliated with the well-known Samsung Medical Center.

David Briles, Ph.D. (front row), student Brandon Hatcher (back row), and members of Dr. Dong-Kwon Rhee's lab pose in front of a Buddhist Temple.

A Routine Way of Life

Microbiology labs do have their similarities; however, Briles found working at SKKU to be a little different from working at UAB.

"We were just under the takeoff lane for a major US airbase (Osom) that regularly sent fighter jets to monitor the DMZ and make sure the North Koreans knew that the US was there and was watching. Every summer North Korea raised tensions, and our barometer of the tension was the frequency of fighter jet take offs. I could watch them out of my office window during the day and my apartment window at night. Even if we were not looking for them, we could hear them loud enough to stop conversations," says Briles.

All In a Day's Work

Briles worked in the lab of Dr. Dong-Kwon Rhee at the SKKU Pharmacy School. Dr. Rhee, who received his Ph.D. in Chicago, focuses his work on drug targets and vaccine antigens in *Streptococcus pneumoniae*.

"My classes always had a lot of student involvement so the students could get practice speaking scientific English and discussing their research in English," explained Briles. "I think the most important thing was that they learned a different perspective of science that involved developing ideas on the students' part. This differs significantly from the traditional Korean approach, which is memorize-memorize and never ever ask questions."

Briles' SKKU students were also able to spend some time with his UAB students. "Brandon Hatcher spent a month in Suwon with me a few years ago, and Christina Croney spent two months in Korea this summer at Samsung Medical Center. She worked in pediatric infectious disease with JayJean Kim. Before Christina came back to the US this July, she left a draft of a paper with Dr. Kim describing her results while she was there. We expect it to be published soon."

Beyond the Classroom

In addition to spending time in the lab, Briles traveled extensively. "I traveled around the country giving lectures, generally by taking the KTX (300 km/hr) train in the morning, giving the lecture and coming back to Suwon, my home base, in the evening. I attended several scientific meetings each year and gave presentations. I also traveled twice to China to visit collaborators there and once to Japan for the same reason."

Continuing Collaborations

At the end of the five-year program, Dr. Rhee's lab received the highest World Class Universities score in the area of Biological Sciences. A mutual dedication to research allowed Briles, Dr. Rhee, and many Korean scholars to cement relationships that will continue beyond the initial program.

"I have ongoing collaborations with three or four labs in Korea, and I have developed extremely good friendships in many other labs," says Briles. "The students told me when I left, I have a lot of friends for life in South Korea."

Spring Immunology Symposium Brings People Together

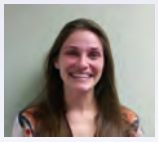
Nobel Prize Laureate Dr. Rolf Zinkernagel

UAB was host for the Spring Immunology Symposium held June 22-23, 2013. This was the second year for the regional meeting that was created by faculty from Vanderbilt University Medical Center and Emory University School of Medicine. The symposium showcases immunology research being done in the Southeast as researchers share new work, exchange ideas and build collaborations.

The Microbiology department played an important role in hosting this event. Hubert Tse, Ph.D., was one of the organizers of the meeting, which was sponsored by the Immunology Autoimmunity and Transplantation Steering Committee. Frances Lund, Ph.D., microbiology department chair, and Casey Weaver, M.D., microbiology department secondary faculty member, were co-directors of the steering committee.

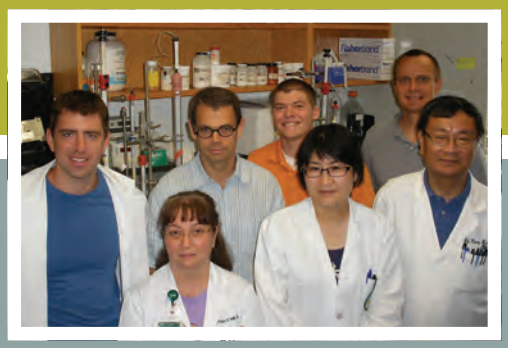
Nobel Prize Laureate, Dr. Rolf Zinkernagel, of the University Hospital in Zurich, Switzerland; Dr. Emil Unanue of Washington University School of Medicine; and Dr.John Cambier of the Denver School of Medicine, were distinguished keynote speakers. Faculty members at Emory, HudsonAlpha, Vanderbilt, University of Tennessee at Memphis, Georgia Regents University, University of Florida and UAB presented their work.

New Hires

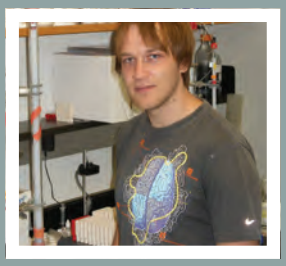


Shayna Chambless
Program Coordinator
Chair's Office

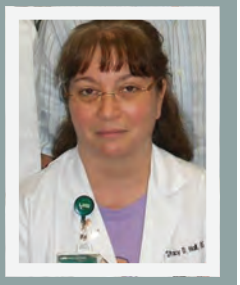
Jessica Gunnin
Human Resources
Chair's Office



New and departing visiting scientists in Dr. Jan Novak's lab include: Drs. Lai, Franc, and Raska who are now visiting the laboratory, and **Dr. Maillard** who will be leaving after a one-year stay. Dr. Maillard will present results of his work at the Annual ASN Renal Week in November in Atlanta, Georgia. The title of his presentation is "*Proteomic Analysis of Engineered IgA1-IgG Immune Complexes Reveals Association with Activated Complement C3*."



Congratulations to **Stacy Hall** who has been promoted to Research Associate in Dr. Jan Novak's laboratory.



Useful Links

Faculty Directory

Annual Retreat **New!**

Employee Site

Microbiology Seminar Series

BBRB Conference Rooms Schedule **New!**

We're on the web:
http://www.uab.edu/microbiology

University of Alabama at Birmingham
Department of Microbiology

845 19th Street South, BBRB 276-11
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35294-2170

*Submit information for the newsletter via email to Ella Robinson at erobnson@uab.edu.

Faculty News

2013 Distinguished Faculty Lecturer Announced

John Kearney, Ph.D., was selected by UAB to receive the 2013 Distinguished Faculty Lecturer award. This is one of the highest honors a UAB faculty member can receive. He will receive a $5,000 award and will be the keynote speaker at the 50th Anniversary of the UAB Distinguished Faculty Lecture. The event will be held at the Alumni House on November 13th at 6:30pm.

Peter Burrows, Ph.D., has been awarded the Tokyo University of Science President Award. Tokyo University of Science (TUS) was founded in 1881 as The Tokyo Academy of Physics by graduates of the Department of Physics at the University of Tokyo. The President Award is given to prominent researchers from abroad and allows for a short-term visit to the TUS campus in Chiba as a Visiting Professor. During his visit, Professor Burrows will give a lecture and seminar and discuss ongoing research activities with the faculty of the TUS Research Institute of Biological Sciences.

David Chaplin, M.D., Ph.D., has been named Associate Dean for Faculty Development in the UAB School of Medicine. In this new position, Chaplin will focus on increasing development opportunities for faculty. "My vision is to develop programs that will be useful for people at each stage of their careers," said Chaplin.

Dr. David Bedwell has been elected to a three-year term on the School of Medicine Faculty Council, effective January 1, 2014. This school-wide committee reviews all promotions and tenure appointments within the School of Medicine at UAB. The Council reviews both clinical appointments and appointments in the basic science departments. In addition to having served on this committee a number of years ago, Bedwell has served as a member and Chair of the microbiology department Promotion and Tenure Committee.

Jan Novak, Ph.D., has been elected to serve on the Glomerular Diseases Advisory Group of the American Society of Nephrology for a 3-year term.

Undergraduate Honors Program Student spearheads interdisciplinary effort between Researchers in the Departments of Microbiology, Chemistry, Biology and Pharmacology & Toxicology to develop Mass Spectrometric Imaging at UAB

By Janusz Kabarowski, Ph.D.

Basic biomedical research is typically aimed at answering the fundamental questions of how, when, where and why important biological processes occur in the body and determining their relevance to human disease. A good example of this paradigm would be the production of a biologically active molecule in a tissue or organ at specific times in response to defined signals that orchestrate changes in the behavior of cells required for the proper function of that tissue or organ. Uncontrolled production of such a signaling molecule could lead to abnormal cellular behavior and thereby result in life-threatening diseases such as cancer. In contrast to experimental tools available for determining how, when and why such molecules act in the body, the fundamental question of exactly where in any particular tissue or organ they are produced or accumulate to exert their important functions is challenging to address and requires more sophisticated experimental methods. To this end, Miranda Collier, an Undergraduate student in the University Honors and Chemistry Scholars Programs and a Barry M. Goldwater Scholar, has been working with Drs. Janusz Kabarowski (Associate Professor in the Department of Microbiology), Steve Barnes (Professor of Pharmacology & Toxicology and Director of the UAB Targeted Metabolomics and Proteomics Laboratory), David Graves (Professor and Chair of the Department of Chemistry) and Steve Watts (Professor of Biology, Director of Aquatic Animal Research Core for the Nutrition and Obesity Research Center and Co-Director of

(Continued from page 3)

Zebrafish Research Facility at UAB) to establish such a method at UAB.

To drive this effort, Miranda built on her initial research experience with Dr. Barnes in which she used liquid chromatography-mass spectrometry (LC-MS) to investigate dietary modifications of zebrafish lens crystallin proteins. In 2012 as an International Summer Research Project in the Department of Physical & Theoretical Chemistry at Oxford University, England, she carried out research in the laboratory of Dr. Justin Benesch using ion mobility mass spectrometry to determine how the lens protein αB-crystallin interacts to form dimers. Miranda's visit was sponsored by Professor Dame Carol Robinson, DBE, FRS, a Royal Society Research Professor and a Dr. Lee's Professor of Chemistry.

The method being set up by the Interdisciplinary Team utilizes a type of mass spectrometry in which a tightly focused laser beam is used to spatially visualize small molecules directly in frozen tissue sections such as those taken routinely in research laboratories and clinics for pathological or histological examination. Initial establishment of this method (called Matrix-Assisted Laser Desorption/Ionization-Imaging Mass Spectrometry, or MALDI-IMS) has centered on using zebrafish as a model to study lipid changes in the lens associated with ageing and to investigate effects of certain dietary components on this process.

MALDI-IMS technology allows one to see precisely where in a given tissue or organ a biological molecule is produced or accumulates, thus helping researchers gain a deeper molecular understanding of disease. For example, in the area of cancer research and therapy it can be applied to investigate different molecular signatures and their spatial characterization in tumors, surrounding tissues and non-involved organs. It can also identify where and to what extent a candidate therapeutic agent accumulates within its target organ (in a patient or in an animal-based pre-clinical research study), a vital step to improving our knowledge of the molecular mechanism of drug action. MALDI-IMS will therefore be a valuable addition to the "toolbox" of imaging technologies available at UAB to facilitate the translation of basic research into the clinical setting.

The interdisciplinary team of Drs. Kabarowski, Barnes, Graves and Watts has provided the impetus for this effort through its collective expertise in relevant areas of Biology, Chemistry and Mass Spectrometry, as well as through the pooling of vital resources and funds for the purchase of equipment, reagents and computer software. As a result of this and similar collaborative efforts, exceptionally talented undergraduate students like Miranda have been able to take advantage of the great research opportunities afforded to them through the University Honors Program and make a real and meaningful difference to the progress in biomedical research at UAB.

Pictured from left to right: Dr. Steve Barnes (Professor in the Department of Pharmacology & Toxicology, Director of the Targeted Metabolomics and Proteomics Laboratory), Dr. Steve Watts (Professor in the Department of Biology, Director of Aquatic Animal Research Core for the Nutrition and Obesity Research Center and Co-Director of Zebrafish Research Facility), Miranda Collier (UAB Honors and Chemistry Scholars Program Undergraduate student and Barry M. Goldwater Scholar), Bruker Autoflex Speed MALDI-TOF/TOF Mass Spectrometer, Dr. Janusz Kabarowski (Associate Professor in the Department of Microbiology) and Dr. David Graves (Professor and Chair of the Department of Chemistry).

M.D./Ph.D. vs Ph.D.

As the nature of biomedical research is shifting from the traditional investigator-initiated research in individual laboratories to a team-based, large-scale, translational initiative, many students question M.D./Ph.D. or Ph.D.—which is the right choice?

"Faculty Perspective: The Evolution of Biomedical Science and You" in ASBMB Today, August 2013, is an article by microbiology department professor Louis Justement, Ph.D., that focuses on this quandary.

"It is important to assess future career options in terms of the role that a given career will have in the evolving biomedical workforce," says Justement, who serves as associate director of the Medical Scientist Training Program at UAB. "This should include an assessment of the necessary knowledge-based and skill-based competencies that will be important for future career success."

Justement says thinking about the evolution of biomedical science and how a person will fit into the process plays an important role in helping a student make the right decision.

UAB Beckman Scholars Attend 2013 Symposium

UAB's five (3 finishing, 2 starting) Beckman Scholars attended the Beckman Foundation's Scholars Symposium, July 25-27, at the Beckman Center of the National Academy of Sciences and Engineering in Irvine, California.
Timothy Fernandez, **Dhruv Patel**, and **Michael Longmire** presented their research at the three-day symposium.
Fernandez, one of UAB's three inaugural Beckman Scholars, was one of six students out of a nationwide pool of Beckman Scholars chosen earlier this year to give a plenary 30 minute presentation at the conference. His mentor, **Jamil Saad, Ph.D.**, introduced Fernandez at the symposium. Saad also represented the 15 Beckman UAB mentors at this year's symposium.

Fultz Competes in National Billiards Tournament

Congratulations to Dr. Patricia Fultz and her teammates, Nice Lags, who competed in the 2013 APA National 9-ball Team Championships at the Riviera Hotel and Casino in Las Vegas, August 15-19.
The team earned a slot in the national championship by winning their bracket at the Birmingham APA Team Championship held at the Pelham Civic Complex in June.
Fultz and Nice Lags play out of Bumpers Billiards in Hoover.

Student News

Post-Doctoral Fellows to Speak at International Meetings

Two post-doctoral fellows in **Dr. Jan Novak**'s lab have been selected to present their work at international meetings.
Dr. Kazuo Takahashi was selected for a talk at the 12th Annual World Congress of Human Proteome Organization (HUPO) in September 2013 in Yokohama, Japan, in the section of young investigators. His presentation based on his work at UAB is titled "*Synthesis of Galactose-deficient IgA1 O-glycans by GalNAc-transferases: Implications for the Pathogenesis of IgA Nephropathy.*"

Dr. Colin Reily was selected for a talk at the Annual ASN Renal Week in November in Atlanta, Georgia, in the section "New Frontiers in Renal Pathology." His presentation is titled *"Abnormal STAT3 Signaling Enhances Production of Autoantigen in an Autoimmune Disease, IgA Nephropathy."*

Congratulations to graduate students, **Juan Rodriguez-Barrantes** (Kearney lab) and **Stephanie Garcia** (Wu lab) for receiving NIH F31 grant awards. Rodriguez-Barrantes' grant is titled "*Protective Effects of Anti-Bcla Antibodies in Bacillus Anthracis Infection.*" *Garcia's grant is titled "Dispersion of Streptococcus Mutans Biofilms by a Novel Small Molecule."*

Two graduate students, **Tyler Stewart** (Novak lab) and **Jeff Vahrenkamp** (Turnbough lab) received Hiramoto Travel Awards to present their research results at scientific research meetings. Stewart will travel to the Annual ASN Renal Week in November in Atlanta, Georgia, and present "*Aberrant O-glycosylation of IgA1 in IgA Nephropathy (IgAN) and the Role of Sialyl-Tn Antigen.*" Vahrenkamp attended the FASEB meeting Mechanism and Regulation of Prokaryotic Transcription where he presented a poster. The meeting was held in June in Saxtons River, Vermont.

Public Defenses

Christina M. Croney

"Selection and Evolution of *Pneumococci* in Response to Conjugate Vaccines"

Mentors: David E. Briles, Ph.D., Marilyn J. Crain, M.D., M.P.H.

Committee: Peter D. Burrows, Ph.D., Moon H. Nahm, M.D., D. Ashley Robinson, Ph.D.

Kristopher Genschmer

"The Development of an *in vitro* Surrogate Assay for Screening Protective Antibodies Against Pneumococal Surface Protein A (PspA)"

Mentor: David E. Briles, Ph.D.

Committee: Scott R. Barnum, Ph.D., William Benjamin, Ph.D., Moon H. Nahm, M.D., Allan J. Zajac, Ph.D.

Sam Jordan

"Identification and Biochemical Investigations of Rhamnose and Glycoprotein in Mycoplasmas"

Mentor: Kevin F. Dybvig, Ph.D.

Committee: David E. Briles, Ph.D., Dan Bullard, Ph.D., Janet L. Yother, Ph.D., Hui Wu, Ph.D.

Melissa M. Walker

"The Role of Choline-Binding Protein A (PcpA) in the Mechanism of Disease and Protective Immunity"

Mentor: David E. Briles, Ph.D.

Committee: Scott R. Barnum, Ph.D., William Benjamin, Ph.D., Mamie T. Coats, Ph.D., Jessy Deshane, Ph.D., Suzanne Michalek, Ph.D., Shaper Mirza, Ph.D.

Welcome New Students!

Microbiology Graduate Theme - Entering Class 2013


Danielle Chisolm


Alex Dalecki


Alex Jureka


Joshua Justice


Alex Kleinpeter


Hui Wu

Immunology Theme Students 2013 - 2014


Nathan Boyd


Sarah Dulson


Ken Hough

Upcoming Events

October 18-20, 2013 – Research Retreat

This year's Microbiology Research Retreat will be held at the Alabama 4-H Center in Columbiana, on October 18-20.
Microbiology Department graduate Kimberly Benton, Ph.D., will be the keynote speaker for this event. Benton, a graduate student in **Dr. David Briles**' lab from 1990 to 1997, is currently Deputy Director, Division of Cellular and Gene Therapies at the Center for Biologics Evaluation and Research, FDA. Her duties focus on oversight of review and regulatory activities and policy development for cellular therapy, gene therapy, xenotransplantation, related products such as therapeutic vaccines, and combination products involving cell or gene therapies.

More information about the three-day event is available at http://www.uab.edu/medicine/microbiology/research-retreat-2013.

October 25, 2013 – Bertram M. Marx Lecture

The 2013 Bertram M. Marx Lecture will be held October 25, at 3:00 p.m. at UAB Heritage Hall, room 102. Michael B. A. Oldstone, M.D., Professor, Department of Immunology and Microbial Science and Head, Viral-Immunobiology Laboratory, The Scripps Research Institute, will speak on "Anatomy of Viral Persistence: Mechanisms of Immune Evasion and Treatment." A reception will follow the presentation.
Oldstone, a New York native, attended the University of Alabama in Tuscaloosa, receiving his bachelor's degree in 1954. After a tour of duty in the US Army, he went on to attend John Hopkins McCullom Pratt Institute of Biochemistry and the University of Maryland School of Medicine. He received his M.D. in 1961.
The Bertram M. Marx Lectureship brings noted scientists in the field of cancer biology to the UAB campus to discuss their research results.
The Marx family established the lectureship in 1985 to honor the memory of the late Bertram Marx, one of the founders of Marx Brothers, Inc. The Birmingham-based company opened in 1919 and has continued to be a leading supplier of processed coconut for 94 years.
The Marx family also supports the Bertram M. Marx Graduate Student Research Grants Program, which has been active since 1982. Each year, two graduate students interested in cancer research are selected by the Comprehensive Cancer Center's internal committee to receive these awards.

Glycoimmunobiology2013

November 22, 2013 – Glycoimmunobiology Workshop/Minisymposium

The "Glycoimmunobiology 2013" workshop/minisymposium, coordinated by Jan Novak, Susan L. Bells, and Matthew B. Renfrow, will be held at UAB on November 22, 2013. Speakers will include UAB faculty as well as outside leading scientists.
Understanding glycosylation of glycoproteins in health and disease will offer not only better tools for diagnostic purposes but will also generate knowledge for future glycan-targeting intervention. The 2013 workshop will bring together investigators who will review current "state of the art" and discuss possible future interdisciplinary studies to elucidate the role of glycosylation in various aspects of immune responses.
The workshop/minisymposium is sponsored by UAB School of Medicine Dean's office and the Immunity, Autoimmunity, and Transplantation steering committee. The administrative staff from the Department of Microbiology chair's office is helping with the meeting organization.
More information about the workshop is available at:
http://www.uab.edu/medicine/microbiology/glycoimmunobiology-2013/welcome

Faculty Meetings

October 8, 2013 – 1:15 - 2:15
***CANCELLED* November 6, 2013 – 3:00 – 4:00**
December 3, 2013 – 1:15 – 2:15

Seminar Series

{OCTOBER}

October 1, 2013

"Hook-up and Break-up in the Snout: Pneumococcal Biofilm Colonization and Signals Involved in Transition to Infection"
Anders Hakansson, Ph.D., Assistant Professor, Department of Microbiology & Immunology, The Witebsky Center for Microbial Pathogenesis and Immunology, The University at Buffalo (Host: David Briles)

October 22, 2013

"What Regulates Human B Cell Tolerance: GWAS or Gene Mutations?"
Eric R. F. Meffre, Ph.D., Associate Professor of Immunobiology and of Medicine, Yale University (Host: Fran Lund)

October 25, 2013 - 3pm - Bertram M. Marx Lecture

"Anatomy of Viral Persistence: Mechanisms of Immune Evasion and Treatment"
Michael B. A. Oldstone, M.D., Professor, The Scripps Research Institute, Department of Immunology and Microbial Science, La Jolla, CA (Host: Fran Lund)

October 29, 2013 1:00 P.M.

Chris Allen, Ph.D., Assistant Professor, UCSF Medical Center, University of California San Francisco (Host: John Kearney)

{NOVEMBER}

November 5, 2013

Arlene Sharpe, Ph.D., Professor, Department of Pathology, Harvard Medical School *(Host: David Chaplin)*

November 12, 2013

Yasmine Belkaid, Ph.D., Chief, Mucosal Immunology Section, Laboratory of Parasitic Diseases, NIAID (Host: Daniel Silberger, Graduate Student)

November 19, 2013

Richard Kuhn, Ph.D., Professor, Department of Biological Sciences, Purdue University (Host: Elliot Lefkowitz)

November 26, 2013

"CbpA Mediates Cardiac Microlesion Formation During Severe Invasive Pneumococcal Disease"
Carlos Orihuela, Ph.D., Associate Professor, Department of Microbiology & Immunology, UT Health Science Center (Host: David Briles)

December 3, 2013

Virus Structure and Assembly
Peter Edward Prevelige, Jr., Ph.D., Department of Microbiology, UAB

{DECEMBER}

December 10, 2013

Stacy Schultz-Cherry, Ph.D., Associate Member, Department of Infectious Diseases, St. Jude Children's Research Hospital (Host: Constance Agamasu Graduate Student)

December 17, 2013

"From Gene to Community then Back: Microbiology in the Post-microbiome Era"
Felicia Qi, Ph.D., Professor, Department of Microbiology and Immunology, University of Oklahoma College of Medicine (Host: Hui Wu)

Just Published

Publications

Barnum

Hu, X., V.M. Holers, J.M. Thurman, T.R. Schoeb, T.N. Ramos, and **S.R. Barnum**. 2013. Therapeutic inhibition of the alternative complement pathway attenuates chronic EAE.*Mol Immunol.* 54(3-4):302-8.

Ramos, T.N., D.C Bullard, K.McDonald, D.F Crawford, and **S.R. Barnum**. 2013. Intercellular Adhesion Molecule-1 Modulates the Development of Murine Experimental Cerebral Malaria Independent of Endothelial Cell Expression. *J. Biol. Chem*., 288:10962-10966.

Jarlestedt, K., C.I. Rousset, A. Stahlberg, H. Sourkova, A.L. Atkins, **S.R. Barnum**, R.A. Wetsel, M. Pekny, C. Mallard, H.Hagberg, and M. Pekna. 2013. Complement-derived peptide C3a ameliorates memory impairment after neonatal hypoxic-ischemic brain injury. *FASEB J*., 27:3797 -3804.

Gong, B., Y. Pan, W. Zhao, L. Knable, P. Vempati, L. Ho, J. Wang, S. Yemul, **S.R. Barnum,** and G.M. Pasinetti. Complement-derived anaphylatoxin C5a-mediated AMPA-pCREB signaling pathway is a novel mechanism underlying effects of IVIG immunotherapy in Alzheimer's disease. *Mol. Immunol.* 56:619-629.

Bedwell

Keeling, K., D. Wang, M. Du, Y. Dai, S. Murugesan, B. Chenna, J. Clark, V. Belakhov, J. Kandasamy, S. Velu, T. Baasov, and **D. Bedwell**. 2013. Attenuation of Nonsense-Mediated mRNA Decay Enhances In Vivo Nonsense Suppression. *PLoS One.* 8: e60478.

Aeffner, F., B. Abdulrahman, J. Hickman-Davis, A. Amer, N. van Rooijen, **D. Bedwell,** E. Sorscher, and I Davis. 2013. Heterozygosity for the ΔF508 CFTR mutation imparts a survival advantage in influenza. *J Infect Dis.* 208(5):780-9

Briles

Croney, C.M., M.H. Nahm, S.K. Juhn, **D.E. Briles**, and M.J. Crain. 2013. Invasive and noninvasive *Streptococcus pneumoniae* capsule and surface protein diversity following use of conjugate vaccine. *Clin Vaccine Immunol*. [Epub ahead of print]

Daniels, C.C., K.H. Kim, R.L. Burton, S. Mirza, M. Walker, J. King, Y. Hale, P. Coan, D.K. Rhee, M.H. Nahm, and **D.E. Briles**. 2013. Modified Opsonization, Phagocytosis, and Killing Assays to Measure Potentially Protective Antibodies Against Pneumococcal Surface Protein A. *Clin Vaccine Immunol*. [Epub ahead of print]

Haughney, S.L., L.K. Petersen, A.D. Schoofs, A.E. Ramer-Tait, J.D. King, **D.E. Briles**, M.J. Wannemuehler, and B. Narasimhan. 2013.Retention of structure, antigenicity, and biological function of pneumococcal surface protein A (PspA) released from polyanhydride nanoparticles. *Acta Biomater*. 9(9):8262-71.

Burrows

Liu, J., M.D. Lange, S.Y. Hong, W. Xie, K. Xu, L. Huang, Y. Yu, G.R. Ehrhardt, M. Zemlin, **P.D. Burrows**, K. Su, R.H. Carter, and Z. Zhang. 2013. Regulation of VH replacement by B cell receptor-mediated signaling in human immature B cells. *J Immunol.* 190(11):5559-66.

Chaplin

Nabe, T., K. Matsuya, K. Akamizu, M. Fujita, T. Nakagawa, M. Shioe, H. Kida, A. Takiguchi, H. Wakamori, M. Fujii, K. Ishihara, S. Akiba, N. Mizutani, S. Yoshino, and **D.D. Chaplin**. 2013. Roles of basophils and mast cells infiltrating the lung by multiple antigen challenges in asthmatic responses of mice. *British Journal of Pharmacology.* 169:462-476.

Zindl, C.L., J.F. Lai, Y.K. Lee, C.L. Maynard, S.N. Harbour, W. Ouyang, **D.D. Chaplin**, and C.T. Weaver. 2013. IL-22-producing neutrophils contribute to antimicrobial defense and restitution of colonic epithelial integrity during colitis. *Proceedings of the National Academy of Sciences USA.* 110:12768-12773.

Alberti, M.O., J.S. Deshane, **D.D. Chaplin**, L. Pereboeva, D.T. Curiel, and J.C. Roth. 2013. A myeloid cell-binding adenovirus efficiently targets gene transfer to the lung and escapes liver tropism. *Gene Therapy.* 20:733-741.

Dokland

Fraser, K.B., .M.S Moehle, J.P.L. Daher, P.J. Webber, J.Y. Williams, C.A. Stewart, T.A.Yacoubian, R.M. Cowell, **T. Dokland**, T. Ye, D. Chen, G.P. Siegal, R.A Galemmo, E. Tsika, D.J. Moore, D.G. Standaert, K. Kojima, J.A. Mobley, and A.B. West. 2013. LRRK2 Secretion in Exosomes is Regulated by 14-3-3. *Hum. Mol. Genet*. [Epub ahead of print]

Frolova

Foy, N.J., M. Akhrymuk, A.V. Shustov, **E.I. Frolova**, and I. Frolov. 2013. Hypervariable domain of nonstructural protein nsP3 of Venezuelan equine encephalitis virus determines cell-specific mode of virus replication. *J Virol.* 87 (13):7569-84.

Frolov

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Grant Awards

Todd Green

National Institute of Allergy and Infectious Diseases/NIH/DHHS

Structural Basis of Vesicular Stomatitis Virus Transcription and Replication. Start date: 8/9/13

Ming Luo

National Institute of Allergy and Infectious Diseases/NIH/DHHS

Mechanism of Paramyxovirus Replication. Start date: 8/1/13

Jan Novak

National Institute of Diabetes and Digestive and Kidney Diseases/NIH/DHHS. Molecular Basis of Pathogenicity of IgA1-containing Immune Complexes. Start date: 8/1/13 (formerly R56 now funded as an R01)

Adrie Steyn

Department of Defense. Real Time Measurement of Host Bioenergetics During Mycobacterium Tuberculosis Infection. Start date: 8/15/13

Extended Family

Congratulations to **Jenna Pate** and her husband on the birth of their daughter, Ryleigh Jane Pate, on July 20, 2013. Ryleigh weighed 7lbs

Congratulations to **Ruba Ghanam** and **Dr. Jamil Saad** on the birth of their son, Adam Jamil Saad, on July 19, 2013.

Around Campus and About Town

October 10, 2013
Light the Night
5:30 p.m.
The Summit - Free
Join the Leukemia and Lymphoma Society in celebrating and commemorating the lives touched by blood cancers here in the Birmingham area by walking for a cure for cancer. There will be food, entertainment, illuminated balloons and goodies available beginning at 5:30 p.m. All walkers who raise $100 or more will receive a Light the Night t-shirt. For more information go to http://www.lightthenight.org/al.

November 3, 2013
1:00 – 3:00 p.m.
Holiday Open House
Assistance League of Birmingham
1755 Oxmoor Road
Homewood, AL 35209
Purchase unique seasonal items as well as hundreds of other crafts, jewelry and art sold by talented craftsmen at the Shops of Assistance league: PrimeTime Treasures and Encore Upscale Thrift Shop. Encore will showcase the latest fashions and décor and the newly opened boutique, Encore Collection, featuring designer clothing. Light refreshments will be available as you enjoy your holiday shopping experience.

November 9, 2013
9:00 a.m. – 2:00 p.m.
Colorsmacked! 5k - Talladega
Talladega Superspeedway
$50 - $60
Run the 5K and prepare to be ColorSmacked! – mottled, streaked, bombarded, plastered, and otherwise punished with color. Smackings are safe for all ages, so bring the whole family out for a day you'll never forget! A portion of the proceeds of this colorful event will benefit The Exceptional Foundation of Birmingham. Show your true colors and support a good cause! Pre-registration is **REQUIRED**. Prices go up two weeks before the race so register now! For more information about The Exceptional Foundation go to http://www.exceptionalfoundation.org.

December 20-December 21, 2013
Friday 7:00 p.m.; Saturday 10:00 a.m., 1:00 a.m., 7:00 p.m.
Yuletide in Dogtown
Alys Robinson Stephens Performing Arts Center
Adults $10; Children $8
Local playwright – and the ASC's very own – Jerry Sims has created an interactive holiday musical adventure that is sure to delight adults and children alike. In this yuletide performance, the audience helps pups Spike, Fifi, Scotty, and Beauregard learn what the holidays really mean.