

Message from the Chair

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One of the major initiatives in the Department of Pathology for 2009 is the establishment of a Division of Informatics. In collaboration with the School of Medicine, significant resources have been committed to recruit an outstanding Division Director and several additional faculty members over the next few years. The Department of Pathology, Division of Informatics will work to enhance medical informat-

ics, public health informatics and bioinformatics across UAB departments, centers and schools. This new Division will be able to take advantage of UAB's already established high performance computing and high speed connectivity to the Lambda Rail, as well as the Alabama Supercomputer Facility in Huntsville, AL. Faculty in the Division of Informatics will work closely with the UAB Health System to develop methods and expertise to utilize health care information for research and improved health care delivery.

A second focus will be the develop-

ment of a robust bioinformatics program in conjunction with the Comprehensive Cancer Center, and the Center for Clinical and Translational Science (part of the CTS National Consortium). The Division will also be actively engaged in the training of graduate students, residents, and fellows in the field of informatics.

I look forward to reporting on the growth of this new Division in future newsletters.

Best wishes,
Kevin A. Roth, M.D., Ph.D.

Faculty Profile: Isam-Eldin Eltoum, M.D., M.B.A.



Dr. Eltoum graduated from Khartoum University, Sudan, where he worked as a faculty member with an interest in the area of pathology of tropical diseases.

Nirag C. Jhala, M.D.
Rakesh Patel, Ph.D.
Walter C. Bell, M.D.
Marisa B. Marques, M.D.
Majd Zayzafoon, M.D., Ph.D.
Angie Schmeckebier
Margaret Dotzler

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pleted a pathology residency training program at George Washington University followed by a Cytopathology fellowship and a Surgical Pathology fellowship at UAB. He was asked to remain as a staff member in the Department of Pathology where he has now advanced to the rank of full professor. At UAB, Dr. Eltoum developed expertise in the area of diagnostic surgical and cytopathology as well as cancer chemoprevention. He is an active member of several regional and national pathology societies where he served on various committees and is a member of two NIH study sections. He also heads the section of cytopathology where he and his colleagues have published extensively. In recognition of their effort in education and

research, in 2003, the Cytopathology Section was designated as a Center of Excellence in Cytopathology. For the last 5 years, Dr. Eltoum and his team have remained in the top five highly published and cited authors in Cancer Cytopathology, the leading journal in cytology. In addition to being an ad hoc reviewer of numerous journals, he is a member of the editorial board of AJCP and Cancer Cytopathology, and is an Associate Editor of CytoJournal. Additionally, Dr. Eltoum has a Masters Degree in Business Administration which has helped him to secure an admission to the Inaugural Class of Healthcare Leadership Academy here at UAB which started in Jan 8, 2009. Dr. Eltoum has a large extended family and enjoys visiting Africa every summer to help his family in Sudan.

Faculty Profile: Stephen A. Moser, Ph.D.



Stephen Moser is a tenured Professor in the Division of Laboratory Medicine. He has been the associate director of the clinical Microbiology laboratory since he came to UAB in 1992 from Washington University, where he worked for 9 years. During his PhD training in Medical Microbiology at Ohio State University, Steve was a National Science Foundation graduate trainee and was elected to the Phi Kappa Phi National Honor Society, followed by 3 years of post-doctoral fellowship at NIH. Steve is recognized internationally as an expert in microbiology in general, with special emphasis in mycology, and has held multiple leadership positions in professional societies, councils and committees. In fact, he is currently an editor of the Journal of Clinical Microbiology. His

research interests include in vitro susceptibility of fungi as well as diagnostic methods and molecular typing. In 1999, he founded and became the director of the Fungal Reference Laboratory at UAB. His vast bibliography demonstrates his involvement in clinical research and patient care in collaboration with infectious disease specialists.

Besides microbiology, Steve has an interest in Medical Informatics. In particular, he has studied the application of methodologies to facilitate the collection, management, and evaluation of information produced in medicine. His efforts and mentoring of Stephen Brossette, M.D. Ph.D., UASOM class 1999 and former UAB Pathology resident, led to the system which is the basis of MedMined, Inc (<http://www.cardinal.com/medmined/>), recently acquired by Cardinal Health. From this work, Steve Moser holds two US Patents for methods for analyzing sets of temporal data. Steve Brossette, current Vice President of Cardinal

Health, adds: "I am very grateful to Steve for his friendship, guidance, and support. He gave me financial and computing resources, access and insights into lab data, and steady advice at a time when few outside of Pathology believed that an MD/PhD student doing research in computer science and medical informatics was a good idea. Steve, Jay McDonald, and John Smith supported me when others didn't. Fortunately, it worked. We published, secured funding, obtained an informatics fellowship from the National Library of Medicine, wrote a patent, and were able to lay the research foundation for my company, MedMined."

Over the past 16 years, dozens of UAB residents and fellows have learned from Steve Moser and are grateful for his dedication. In his spare time, he serves as Chair of the Faculty Affairs Committee since his re-election to the UAB Faculty Senate last summer.

Spotlight on Pathology Support: Gordon S. Hearn



Gordon S. Hearn has been secretary to the Cytopathology Faculty for four

years. When first informed of the position, Gordon thought they said "Psychopathology" and thought, "Sure! Why Not? Sounds like fun!" In addition to supporting the five doctor team, Gordon oversees the Cytopathology Fellowship Program, and assembles the weekly Multi-disciplinary Tumor Board and the Hepatobiliary Conference. Gordon

has worked very hard making a name for himself as the "answer man" to other staff throughout the department. Gordon enjoys sharing his knowledge and teaching others and feels a sense of accomplishment knowing that people turn to him for advice and assistance. Gordon served from 1983 to 1991 in the United States Marine Corps in field artillery, but was predominantly "like 'Radar' on M*A*S*H". Gordon also served in Operation Desert Storm. Since returning home, Gordon has made acquaintances with people affected by Mantle Cell Lymphoma, Prostate

Cancer, Colon Cancer and AIDS. This has made him more aware of the importance of his role in supporting Pathology doctors. After all, these diagnoses would not have been possible without the hard work of a Pathologist. Gordon understands the anxiety while waiting for test results, and has channeled this into giving his utmost to the faculty in the performance of their duties. "It's not just a glass slide. It's a patient, their family, and their future." In his spare time, Gordon is the unofficial chaplain for Kelly Ingram Post 668 of the Veterans of Foreign Wars,

"It's not just a glass slide.
It's a patient, their family,
and their future."

—Gordon Hearn

Accolades

Two Pathologists receive awards from Dean Robert Rich for Excellence in Research Scholarship and Education Scholarship

Resident Accolades: According to **Dr. Fred Silva**, Executive Director of the United States and Canadian Association of Pathologists (USCAP), UAB residents are "Among the top ten programs in the world in terms of acceptance of scientific abstracts submitted for the prestigious Stowell-Orbison Awards Competition for pathologists in training." Congratulations to our residents. Over 2800 abstracts were submitted.



Victor Darley-Usmar, Ph.D. —Professor of Pathology has been named the President of the Society for Free Radical Biology and Medicine.



Casey Weaver, M.D. — Professor of Pathology was awarded the University of Alabama at Birmingham School of Medicine Excellence in Education Scholarship Award by Dr. Robert Rich.

School of Medicine Excellence in Research Scholarship Award by Dr. Robert Rich.



Peter G. Anderson, D.V.M., Ph.D. —Professor of Pathology was awarded

the University of Alabama at Birmingham School of Medicine Excellence in Education Scholarship Award by Dr. Robert Rich.

Molecular Diagnostics Laboratory



The UAB Molecular Diagnostics Laboratory recently expanded to room S212 of the Spain-Wallace building. This 900 square foot addition houses several new pieces of equipment including a large capacity automated extractor (Roche Ampliprep), three real-time PCR systems (Roche Taqman, Roche LightCycler, and Cepheid SmartCycler), and a Genetic Analyzer (capillary electrophoresis -

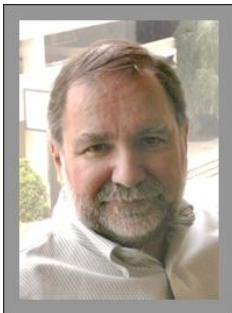
Applied Biosystems). Recently implemented assays include transferring the HIV-1 RNA quantitation from manual extraction and competitive PCR to real-time PCR on the TaqMan and Ampliprep, and STAT testing on organ and tissue donors by Nucleic Acid Testing for HBV, HCV, and HIV. Validations are beginning for EBV quant, BK virus quant, JAK2 quant, and T-cell Gene Rearrangement. Future menu additions will include HCV RNA quant, HCV genotype, Parvo B19, HSV 1 / 2, and CMV quant as well as assays for hemo/oncology diseases including BCR-ABL, IgH gene rearrangement, *k-RAS* mutations, etc. The

Molecular Lab is also actively involved in the training of molecular genetic pathology fellows and other pathology fellows and residents at UAB. The Molecular lab is currently staffed by four medical technologists under the direction of Yongsheng Ren, MD, PhD, and William H Benjamin Jr, PhD.



Molecular Diagnosis Team (l-r): Yongsheng Ren, MD, PhD (Section Head), William H. Benjamin Jr., PhD, Andy Farr, MT(ASCP), Gina Coshatt, MT(ASCP), CLSp(MB) (Supervisor), Donna Ewing, MT, Rita Peters, MT(ASCP)

Victor Darley-Usmar is Named President of SFRBM



**Victor
Darley-
Usmar,
Ph.D.,**
was
elected
President
for the
term

2009-10 of the Society for Free Radical Biology and Medicine (SFRBM) at their 15th Annual Meeting. Established in 1987, the Society for Free Radical Biology and Medicine (formerly The Oxygen Society) is a professional organization comprised of over 1,400 scientists, researchers and clinicians with an interest in the field of free radical chemistry, biology and medicine. In the Society's Statement of Purpose, they emphasize a "balanced approach to understanding both the advantageous and deleterious properties of free radicals and reactive oxygen and nitrogen species."

Dr. Darley-Usmar originally became involved with free radical research after completing post-doctoral studies in Oregon and a lectureship in Japan on mitochondrial biology. In 1985, he returned to the UK to join Wellcome Research Labs, the manufacturer of the xanthine oxidase inhibitor, allopurinol. At this time, the importance of free radicals in disease was beginning to gain recognition, and in 1995 he joined the Department of Pathology at UAB to participate in the newly-created Center for Free Radical Biology of which he is now the Director.

Dr. Darley-Usmar was interviewed by the Society for Free Radical

Biology and Medicine's newsletter, *SFRBM dot*, where he outlined the Society's new 5-year Strategic Plan and described his goals and vision for his tenure as President as overseeing the implantation of this plan. Dr. Darley-Usmar outlined the Strategic Plan for the SFRBM as restructuring their core leadership and to better serve the needs of the members. Dr. Darley-Usmar states that another important aspect of the Strategic Plan is the external engagement of the society. As the foremost authority in the area of free radical biology, the Society has an important role to play in both making free radical research as accessible as possible, and at the same time maintaining the integrity of the field through outreach committees tasked to interact with other scientific organizations such as the American Heart Association and the National Institutes of Health.

According to Dr. Darley-Usmar, free radical biology will continue to evolve from simply being the measurement of oxidative stress, toward investigating free radical mediated events that control biological responses in health and disease.

When asked what challenges lay ahead for the SFRBM, Dr. Darley-Usmar responded that "...as scientists we are all challenged regularly to self-examine and question our contributions to society as a whole. This can be at the educational level, during the performance of basic research, or during direct reduction-to-practice such as medicine. The challenge specifically for free radical biology will be

to maintain strong science in an era of ever decreasing resources and competition from emerging fields. The society also has an important role to play both in boosting the morale of young investigators entering the field, and also in reassuring the older generation of scientists who are also facing severe competition for resources. Programs such as our outstanding young investigator awards also serve a great purpose in reminding us why we do this job and the satisfaction it can bring at all levels."

"...as scientists we are all challenged regularly to self-examine and question our contributions to society as a whole."

- Victor Darley-Usmar, Ph.D.

New Transfusion Safety Officer

UAB Hospital and the Kirklin Clinic now have a transfusion safety officer (TSO), Susan Suter, RN. TSOs are common in Europe and Canada but still scarce in our country. We are extremely excited to be a leader in developing this role. The TSO position was created thanks to Sherry Polhill, MT (ASCP), MBA, Clinical Laboratories Administrative Director, and Anthony Patterson, FACHE, Associate Vice-President of University Hospital, who recognized the importance of a dedicated person to oversee transfusion safety.

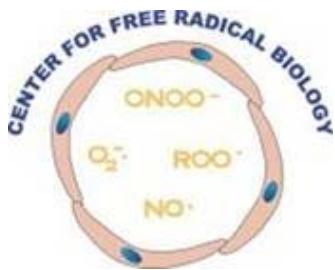
Transfusion safety is a process that involves the blood center, the transfusion service, and the physicians and nurses who prescribe and administer blood products. "The transfusion process not only requires an infection-free product,

but also guarantees that the patient is appropriately tested prior to administration of blood products, that transfusion is performed correctly, and that the patient is monitored and evaluated in strict adherence to a standardized approach," Susan says. With this intent, Suter has met with most nurse managers to offer her services for staff education regarding blood transfusion or any other issue related to it. She is also conducting daily audits of blood product use, from distribution at the Blood Bank to the patient's bedside, its administration, and proper documentation. Following each audit, Susan sends a report to the nurse manager as a tool for education on the unit. Other activities of the TSO include decreasing waste of blood component units due to mishandling, keeping

track of transfusion reactions, and participating in the multidisciplinary Blood Utilization and Management Committee. It has become apparent from Susan's conversations with nurses that they want to learn more about the risks of transfusion and the signs and symptoms when a reaction occurs.

Overall, the TSO functions as an ambassador between the transfusion service and all of the clinical areas, ensuring that everyone involved in the process of transfusing is providing optimal care to our patients. In the near future, the electronic "TSO News" will reach thousands of UAB medical providers on a quarterly basis as an additional tool to educate and maintain the flow of communication. Stay tuned!

Center for Free Radical Biology



The Center for Free Radical Biology is pleased to announce that several UAB CFRB Trainees have won awards for their presentations at the 15th Annual Meeting of the Society for Free Radical Biology and Medicine in Indianapolis. Please join me in congratulating both mentors and trainees on their awards.

Anne Diers— received a Young Investigator Award for her presentation entitled "Redox Modulation of Breast Cancer Cell Migration: Implications for Anti-Metastatic Therapy". Anne is a graduate student in Aimee Landar's laboratory.

Brad Hill— received a Young Investigator Award for his presentation entitled "Mitochondrial Bioenergetics Regulates Protein Modification by Lipid Electrophiles". Brad is a post-doctoral fellow in Victor Darley-Usmar's laboratory.

Joo-Yeun Oh— received a Young Investigator Award for her

presentation entitled "A New Model for Redox Cell Signaling: The Accumulation of the Covalent Modification of Signaling Proteins by Lipid Electrophiles". Joo-Yeun is a post-doctoral fellow in Aimee Landar's laboratory.

Dario Vitturi—received a Young Investigator Award for his poster entitled "Sodium Nitrate Prevents Hypertension Associated with the Hemoglobin-Based Blood Substitute HBOC-201". Dario is a graduate student in Rakesh Patel's laboratory.

For more information about the Center for Free Radical Biology, please contact Samantha Gromka at 975-9561 or log on to their website at <http://cfrb.uab.edu>.

From the Chief Residents

We hope that everyone had a happy holiday season and a great beginning to 2009!

Recruiting season for next year's resident class has come to a close. We thank all residents who volunteered their time to take applicants to meals and to show them around our department and hospital. We had many great candidates this year and are looking forward to a successful Match Day in March.

Jeremy Henderson and Diane Peterson
Chief Residents, 2008-2009



USCAP Meeting 2009

Several of our residents and fellows will present abstracts at the annual United States and Canadian Academy of Pathology Meeting in Boston, Massachusetts, in March. Presenters are listed below, with faculty mentors listed at the end in parentheses.

Shuting Bai: "Characterization of CXCR4 Expression in Chondrosarcoma of Bone" (Dr. Gene Siegal) and "Clinical and Pathological Features of Renal Carcinomas Arising in Patients with Autosomal Dominant Polycystic Renal Disease" (Dr. Omar Hameed)

Emily Reisenbichler: "Evaluation of the Predictive Ability of a CK5/p63/CK8/18 Antibody Cocktail in Stratifying Breast Papillary Lesions on Needle Biopsy: An Algorithmic Approach" (Drs. Omar Hameed and Amy Adams [now at Emory University])

Shi Wei: "Estrogen/Progesterone Receptor (ER/PR) and HER2 Expression Profiles in Breast Cancers (BCs) with Isolated Bone Metastasis (IBM) Are Different from Those in BCs with Metastasis to Other Sites" (Dr. Omar Hameed) and "Juxtatumoral Stromal Reactions in Uterine Endometrioid Adenocarcinoma and Their Association with Prognostic Factors" (Drs. Lea Novak and Michael Conner)

Xiaojun Wu: "The Impact of Placental Examination in the Autopsy of the Structurally Normal Stillborn" (Dr. Stephanie Reilly)



Amanda Crowe, Jeremy Henderson, and Meiklejohn McKenzie will attend the spring meeting of the College of American Pathologists (CAP) Residents Forum as Alabama delegates on March 7 in Boston, Massachusetts, prior to the start of the USCAP meeting.



ASFA Meeting 2009

Amberly Nunez will present the abstract "Procedure Complications Occurring during Plasma Exchange for Cryoglobulinemia" at the American Society For Apheresis Meeting in May in San Diego, California. Faculty mentors are Drs. Marla Troughton and Marisa Marques.



Congratulations!

...to **Marian Kraemer**, who was appointed as a junior member to the CAP Histotechnology Commit-

tee, which is ancillary to the Surgical Pathology Committee.



Upcoming Meetings

ACLPS

The ACLPS 2009 Annual Meeting will be held in June 4 – 6 in Redondo Beach, California. Abstract submissions will be accepted through February 20.

CAP

The CAP 2009 Annual Meeting will be held on October 11 – 14 in Washington, D.C. Abstract submissions will be accepted February 2 through March 27.

ASCP

The ASCP 2009 Annual Meeting will be held on October 29 – November 1 in Chicago, Illinois. Abstract submissions will be accepted through April 30.



Outgoing Reception

The 2009 Outgoing Reception will be held on Thursday, May 21. Time and location will be announced at a future date.

From the Chief Residents cont'd...

Dr. Reddy's Birthday Party



Residents and fellows helped Dr. Vishnu Reddy celebrate his 60th birthday, at a surprise party in the department conference room on January 20.

Resident Social



Residents and their guests enjoyed an evening of food and fellowship at Silver Coin Indian Grill on December 18.

From the Graduate Students

Graduate Student Publications:

Carolyn G. Durham: Schmitz JM, **Durham CG**, Ho SB, Lorenz RG: Gastric Mucosal Alterations Associated with Murine *Helicobacter* Infection. *J. Histochem. Cytochem.* 2009; doi:10.1369/jhc.2009.952473

Donna Crabtree: Qiao L, Hamamichi S, Caldwell KA, Caldwell GA, Yacoubian TA, Wilson S, Xie ZL, Speake LD, Parks R, **Crabtree D**, Liang Q, Crimmins S, Schneider L, Uchiyama Y, Iwatsubo T, Zhou Y, Peng L, Lu Y, Standaert DG, Walls KC, Shacka JJ, Roth KA, Zhang J: Lysosomal Enzyme Cathepsin D Protects Against Alpha-Synuclein aggregation and toxicity. *Mol. Brain* 2008; 1:17.

Presentations:

Angela Gullard will be presenting a poster at the American/International Association for Dental Research (AADR/IADR) 2009 Annual Conference entitled "Altered Dental Phenotype in Hyperactivated TGFbeta-1 Mouse CED Model". This poster is based on her work from her first rotation done under the mentorship of Xu Cao (Pathology) and Mary MacDougall (Institute of Oral Health Research, UAB).

Joshua Baalwa will give a poster presentation at the 16th Conference of Retroviral Infections (CROI), entitled "Ugandan Transmitted Subtype A, D and AD recombinant viruses: Molecular Pathways of Evolution and Immune Escape". Joshua's mentor is Dr. George

Shaw in the Department of Medicine.

Awards:

Lauren VanDuyn received a travel award from the American Society of Matrix Biology for her poster entitled "Calreticulin Plays a Role in Collagen Regulation" at the annual meeting in San Diego.

Anne Diers received a UAB Graduate Student Association Travel Grant and a UAB Center for Free Radical Biology Travel Grant.

Graduate Program Director:

Rakesh P. Patel, Ph.D.

Graduate Program Support:

Nicole Newton
934-2445
nicolen@uab.edu

Pathology Grant Awards

The following grants were recently awarded to pathology faculty:

SELVARANGAN PONNAZHAGAN

NIH—National Cancer Institute
rAAV Vaccine Vector

\$1,495,038 7/1/08-7/31/13

DANNY R. WELCH

DoD—Army Medical Research Acquisition Activity
BREAST Cancer Metastasis Suppressor 1 (BRMS1) Mediates Metastasis Suppression Via MiRNA Regulation

\$97,200 10/1/08-9/30/11

DANNY R. WELCH

DoD—Army Medical Research Acquisition Activity
Strategy to Reverse Osteolytic Breast Cancer Metastasis Using Apoptosis-Resistant Osteoblast in a Mouse Xenograft Model

\$97,200 10/1/08-9/30/11

ROBINNA GAIL LORENZ

Juvenile Diabetes Research Foundation International
The Gastrointestinal Ecosystem and Risk of Diabetes Development

\$675,000 9/1/08-8/31/11

RAKESH P. PATEL

NIH
Nitrate Dependent Protection Against Chlorine Induced Injury to the Cardio-Pulmonary System

\$298,146 Yr 1 9/1/08-8/31/10

RALPH D. SANDERSON

NIH—National Cancer Institute
Heparanase Regulation of Tumor-Host Interactions in Myeloma and Breast Cancer

\$1,528,346 9/5/08-7/31/13

ROBERT HARDY

NIH
Dietary Stearate Plus Chemotherapy in a Mouse Model of Breast Cancer Metastasis

\$50,000 10/1/08-9/30/09

RALPH D. SANDERSON

VA Merit
Heparanase Regulation of Myeloma Metastasis: Mechanism and Therapy

\$251,100 10/1/08-9/30/12

PETER G. ANDERSON

HSF/GEF Medical Education Initiative
Virtual Microscopy for the New Integrated Medical Curriculum

\$97,740 3/1/09-2/28/11

RALPH D. SANDERSON

Sigma-Tau Research, Inc.
Confidential Title

\$186,180 10/1/07-3/31/09

If anyone has any news items, accolades, etc. to be put in the quarterly newsletter, please send it to the Path In Focus e-mail address: pathinfocus@uab.edu.

Thank you.