

Message from the Chair

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The discipline of Pathology is evolving in exciting new directions and an area that is receiving increasing attention is computational pathology. One definition for computational pathology that has been proposed by the Association of Pathology Chairs is the following: "Computational Pathology is an approach to diagnosis that integrates multiple sources of data (electronic medical records, imaging data, laboratory information including -omic data, and external databases), analyzes such data based on mathematical model-

ing algorithms, and reports such data in an integrated and dynamic manner. Computational pathology goes beyond classical "informatics" and current laboratory information systems capabilities and makes pathology more akin to a discipline like systems biology."

It is perhaps a bit anxiety provoking to consider that the future of our discipline is more closely aligned with systems biology than histology and biochemistry, but we "old-school" pathologists need to embrace this change. Our clinical and research training programs will need to evolve rapidly in order to prepare our graduates for what will surely be an exciting

future in pathology. By increasing our departmental focus on molecular diagnostics, genomics, informatics and systems biology, we can become a nationally-recognized leader in both diagnostic and investigational pathology.

I feel that the UAB Department of Pathology is well-positioned to take on this challenge and I look forward to enhancing the interdisciplinary collaboration, both cross-divisional and inter-departmental, that will be necessary to advance computational pathology at UAB.

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

Faculty Profile: Lance Williams, M.D.

Pathology In Focus Editorial Committee

Editor-in-Chief:

C. Bruce Alexander, M.D.

R. Pat Bucy, M.D., Ph.D.

Rakesh Patel, Ph.D.

Walter C. Bell, M.D.

William Benjamin, M.D.

Majd Zayzafoon, M.D., Ph.D.

Angie Schmeckebier

Dept. of Pathology Website:
www.path.uab.edu

Newsletter E-Mail:
pathinfofocus@uab.edu



Dr. Lance A. Williams, III. is an exciting new addition to the Department of Pathology. Dr. Williams is an Assistant Professor in Laboratory Medicine (Transfusion Medicine and Apheresis).

Growing up in rural Virginia, his early life was filled with school, sports, and outdoor life. These experiences taught him the value and importance of learning so that he could teach others, teamwork, and respect for the world around him. His grandfather, a farmer, was his

biggest influence growing up. He taught a young Dr. Williams to have confidence in himself and faith in others.

Dr. Williams took these values with him after high school, using them as a paratrooper in the U.S. Army, and later in furthering his education at Longwood University, where he studied Biology with a concentration in Medical Technology, while being awarded the Delius-Rorrer History Medallion and the McGovern Scientific Excellence Award. After graduation, he worked as a medical technologist at Duke University before deciding to pursue his degree in medicine.

He attended Ross University School of Medicine where he excelled in both Pathology and clinical medicine. His background in laboratory science led him to choose Pathology as his specialty and he completed his residency at East Carolina University. During residency, Dr. Williams found that he missed direct patient care / interactions and decided to pursue subspecialty training, first at Yale University for Transfusion Medicine, then later at Virginia Commonwealth University for Hematopathology.

Cont'd...

Faculty Profile: Lance Williams, M.D.

During residency and fellowship, he found clinical research and teaching to be his major passions. Dr. Williams' clinical research and interests range from the proper use of blood products to the variety of clinical applications of apheresis technology. From a teaching standpoint, he is most interested in conceptual-based learning as a way to develop medical students, residents and fellows with a more broad-based

knowledge from which to learn and grow as doctors and leaders.

When not at work, he enjoys many outdoor activities, such as running, biking, hiking, golf, and occasionally skydiving. He also enjoys cultural activities around Birmingham, live music, and travel. He looks forward to a long career at UAB and strives to have fun every day.

Faculty Advisory Council (FAC):

Contributors: Rajeev Samant & R. Pat Bucy

FAC is an elected committee composed of two members per every division in the Department of Pathology. FAC works with a mission to represent and promote faculty members' interests to foster academic and clinical development. It is a liaison functioning as advisor/consultant to the Chair and Division Directors for ensuring problem free faculty activity. The FAC keeps the following goals

- ◆ Obtain faculty feedback on Departmental activities/policies and identify areas that could be improved in the Pathology Department. These communications can be anonymous
- ◆ Survey the faculty for ideas aiming to improve our academic and clinical activities and advocate new

ideas and projects proposed by faculty to the Chair and coordinate their implementation.

- ◆ Recommend optimal solutions to the Chair and Division Directors on faculty and policy related matters that need to be addressed.
- ◆ FAC members welcome comments and/or questions from their respective divisions prior to each division faculty meeting. These comments are directly conveyed to the Chair with appropriate confidentiality and anonymity.
- ◆ The FAC meets at least once quarterly to coordinate council activity and will meet at a short notice if it has to act on an urgent matter. It meets periodically with the Chair and a member of FAC participates at the Pathology

Directors Group (PDG) meetings.

Committee minutes and records are considered confidential and open to inspection only for reasons satisfactory to the committee. FAC has its active existence in the Department of Pathology for over a decade and **all faculty members are encouraged to contact their FAC division representative with problems or proposals.** The current members of FAC are: Pat Bucy, Malay Basu, Deniz Peker, Rajeev Samant (Chair), Lance Williams, Shi Wei and Yang Yang.

Please visit <http://www.uab.edu/medicine/pathology/about-the-department/useful-links/fac-advisory-council> for more details and feel free to contact any of the FAC members with concerns or suggestions.

Accolades:



Dr. Gregory Davis has been appointed Chief Coroner/Medical Examiner for Jefferson

County by the Jefferson County Commission. Dr. Davis is also serving as President of the National Association of Medical Examiners in 2014.



Dr. Yabing Chen was asked to join the Journal of Biological Chemistry's editorial

board for a five-year, three-month term.

Dr. Chen was also invited to speak in the 2013 AHA meeting in a cardiovascular symposium on "Molecular Mechanisms of Vascular Calcification".



Dr. Michael Conner was re-appointed to a one year term

for the CAP Reproductive Medicine Committee. He was also reappointed to another two year term for the following: Society of Gynecologic Oncology (SGO) Membership Committee, the SGO Educational Committee, and the SGO Educational E-Learning & Program Development Subcommittee.

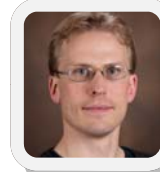
Dr. Connor was also nominated for the SGO Harry Long Award. This award recognizes outstanding SGO members for their contributions to multidisciplinary mentorship, collegiality, or teaching in the field of gynecologic oncology.



Dr. Deniz Peker was appointed as Associate Program Director for the Anatomic Pathology residency program.



Dr. Lalita Shevde-Samant has been selected to be Co-Director of the Cancer Biology Theme graduate program.



Dr. Adam Wende was appointed as an Associate Scientist in the UAB Nutrition Obesity Research Center.

Spotlight on Administration: Kim Sprouse-Howell



Ms. Kim Sprouse-Howell works in Pathology Administration as the Human

Resource Business Officer.

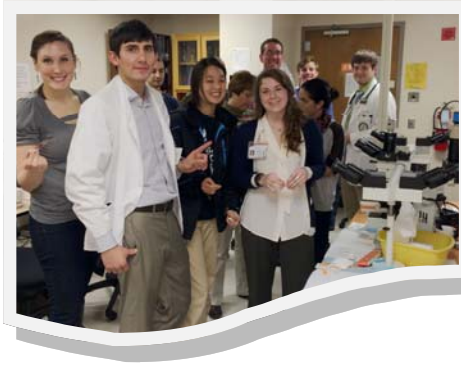
She received her Bachelor's Degree in Psychology from the University of Alabama at Birmingham and her Master's from Kansas State University in Industrial/Organizational Development. She holds the Sen-

ior Professional Human Resource certification. She has worked in the field of Human Resources and Administration for over 25 years; 15 of those years have been spent at UAB. She worked for the Department of Pathology in 2005 and rejoined the department a few years ago. In addition, she has worked for UAB's Organizational Learning and Development Department for 10 years providing leadership development, coaching, seminars and retreats. She is a member of the Birmingham Society for

Human Resource Management where she teaches HR certification courses and serves on the Legislative Affairs Committee. She has made several trips to Washington DC serving as one of Alabama's delegates for the national chapter.

In her spare time she enjoys spending time with her children, traveling, gardening and reading. She loves to learn and try new things. She considers herself to be a lifelong learner.

Peripheral Blood Smear Workshop for UASOM Pathology Interest Group (PIG)



"Is my central pallor too big?" one student asked. "Wait, is that a soccer ball?" another student jested. It was a room full of medical students, eagerly engaged in review the results of their first peripheral blood smears. All made possible by UASOM's inaugural Pathology Interest Group (PIG) and a cou-

ple hemato-pathologists and a tech that generously stayed after hours.

On January 13, 2014 PIG hosted a peripheral blood smear workshop for medical students in the West

Pavilion bone marrow lab. The event coordinated by Dr. Vishnu Reddy, and Belinda Hyche, Hematology section supervisor who provided the laboratory supplies. The event began with a hands-on demonstration of blood smear preparations led by Senior Medical Technologist Sheila Gray. Once their fingers

had stopped bleeding, the students then attended a presentation given by Dr. Deniz Peker. Next they reviewed the freshly stained slides back in the lab. The event concluded with a catered meal for all.

PIG also hosted a frozen section workshop last semester with Dr. Walter Bell, as well as many other events featuring several guest faculty and residents from the department. PIG continues to seek opportunities to build camaraderie between current pathologists and future ones.

Alex Mann
PIG President
UASOM MS3

Pathology Faculty Publications:

Dr. Zdenek Hel had the following article accepted for publication: Bowers, N., Helton, S., Huijbregts, R.P.H., Goepfert, P., Heath, S., and Z. Hel. Neutrophils in HIV-1-infected individuals express high levels of PD-L1 and exert immunosuppressive activity. *PLOS Pathogens*.

Dr. Anurag Purushothaman: Purushothaman A, Toole BP. Serglycin proteoglycan is required for multiple myeloma cell adhesion, in vivo growth and vascularization. *J Biol Chem*. 2014 Jan 8. [Epub ahead of print]

Dr. Ralph Sanderson's manuscript "Heparanase regulates secretion, composition, and function of tumor cell-derived

exosomes" was chosen as a "Best of 2013" by the *Journal of Biological Chemistry* (for details, see email below from the editor of JBC). Camilla Thompson, a grad student in Dr. Sanderson's lab was the first author. Also included from the Sanderson lab were co-authors Anurag Purushothaman and Vishnu Ramani. Here is the complete article citation: Thompson, C.A., A. Purushothaman, V.C. Ramani, I. Vlodavsky, and R.D. Sanderson. 2013. Heparanase regulates secretion, composition, and function of tumor cell-derived exosomes. *J Biol Chem*. 288:10093-10099.

Dr. Jianhua Zhang: Giordano S, Darley-Usmar V, Zhang J (2013)

Autophagy as an essential cellular antioxidant pathway in neurodegenerative disease. *Redox Biology* NIHMSID #555510

Boyer-Guittaut M, Poillet L, Liang Q, Bôle-Richard E, Ouyang X, Benavides GA, Chakrama F-Z, Fraichard A, Darley-Usmar VM, Despouy G, Jouvenot M, Delage-Mourroux R, Zhang J (2013) The role of GABARAPL1 (GEC1) in autophagic flux and mitochondrial quality control in MDA-MB-436 breast cancer cells. *Autophagy* *In press*.

From the Chief Residents:

We want to thank everyone who helped with recruitment this year, especially all of the residents who volunteered for breakfasts and lunches. We would also like to acknowledge Dr. James R. Hackney as well as Karen Lewis for all their hard work this year in making our recruiting efforts a success. We are very excited about the possibilities for the incoming class and we are looking forward to match day!

We commend everyone for their hard work in the recent CAP self-inspection. These inspections play an important role in preparing UAB laboratories for CAP inspections. More importantly, these interim inspections assist our laboratories in providing the best service possible to patients.

We appreciate the positive attitude and professionalism displayed despite challenging conditions during the recent snow storm.

Taylor Deal and Benjamin Hill
Chief Residents, 2013-2014

Future Fellowships

Upcoming fellowship positions accepted by current and previous residents are listed below. Congratulations to everyone!

2014-2015

Taylor Deal: Hematopathology, UCLA

Caitie Halverson: Dermatology, UAB

Ben Hill: Transfusion Medicine, UAB

Chris Kragel: Hematopathology, Duke University

Zhiyong Ren: GI, University of Utah

Amy Treece: Pediatric Pathology, Children's Hospital of Philadelphia

Jessie Xu: Hematopathology, Harvard

Deyin Xing : GYN, Johns Hopkins

Jason Wicker: Hematopathology, UAB

2015-2016

Taylor Deal: Dermatopathology, UCLA

Alex Hanna: Surgical Pathology, UAB

Ben Hill: Hematopathology, UAB

Jason Brazelton: Hematopathology, University of Michigan

Matt Cain: Forensics, UAB

Erik Kouba: G/U, Indiana

Yaolin Zhou: Molecular, Cleveland Clinic

Xiaoyan Cui: Surgical Pathology, MD Anderson

Awards:

Xiaoyan Cui won the Tandar Chaudhuri Award in the 2013 Cancer Center Annual Retreat with her poster presentation entitled "The Utility of PHH3 in Breast Cancer Grading." Congratulations!

Residency Program Director:

C. Bruce Alexander, M.D.

Residency Program Support:

Karen Lewis
934-4060
kflewis@uab.edu

From the Graduate Students:

Graduate Program Director:

Rakesh Patel, Ph.D.

Graduate Program Support:

Cynthia Brown

934-2848

Accolades/Awards:

Robert Bone—was named an American Society for Microbiology Science Teaching Fellow as part of ASM's 2013-2014 Science Teaching Fellowship Program. The program is designed to help fellows deepen their understanding and strengthen their skills for science teaching positions.

Angela Gullard—won the UAB School of Dentistry Dean's Travel Award/Institute of Oral Health Research Travel Award to attend the 2014 ADR meeting.

Publications/Presentations:

Robert Bone—gave an oral presentation entitled "Inhibition of Ca²⁺-

independent Phospholipase A2 by a Novel Fluoroketone Compound Ameliorates iPLA2 β -Induced Beta-cell Detriments and Type 1 Diabetes Development" at the 48th Annual Southeastern Regional Lipid Conference in Cashiers, NC on November 13-15, 2013.

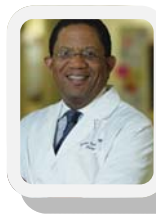
Angela Gullard—Abstract entitled "SMOC2 Expression in Normal and Abnormal Root Formation" has been selected for oral presentation at the 2014 AADR/CADR Annual Meeting in Charlotte, NC (March 19-22, 2014).

Jack Heath—"Diabetic vascular calcification is inhibited by smooth muscle-specific OGT deletion and decreased O-GlcNAcylation." was selected as a Best Basic Science Paper in the 2013 American Heart Association Scientific Sessions, November 16-20, 2013. Dallas, TX.

ciation Scientific Sessions, November 16-20, 2013. Dallas, TX.

Stephanie Wall—published the following review article: S.B. Wall, M.R. Smith, K. Ricart, F. Zhou, P.K. Vayalil, J.-Y. Oh, A. Landar. Detection of electrophile-sensitive proteins. *Biochimica et Biophysica Acta (BBA) - General Subjects*. Volume 1840. Issue 2. February 2014. Pages 913-922

From the Dean...



Dear colleagues;

The ice and snow on Tuesday presented tremendous challenges for all of us. The nation watched as thousands of people across Birmingham were stranded on roadways, in schools or at work. I know that some of you didn't even make it home until Thursday. I hope by now everyone has had the opportunity to reunite with friends and family. My wife Janice, our son Benjamin and I, and other members of the

School of Medicine leadership team, camped out in the dean's office suite Tuesday night. We all enjoyed the camaraderie but, like you, we wished we were home. Being frozen in at work is not what we anticipated when we left Minnesota!

Character, concern and compassion for others are most important during challenging times. Over these past few days the character, concern and compassion of our students, faculty and staff for our patients and their families who found themselves spending the night in the Kirklin Clinic or in

our Emergency Departments has been stellar. I am extremely proud of the UAB Medicine family and grateful for your professionalism, commitment and dedication. Whether you were stuck at work, stayed on duty to care for patients and their families, looked after loved ones at home or helped a neighbor or a stranger, thank you. You make UAB – and our community – great.

—Dr. Selwyn Vickers

Update on Community Pathology Practice Program (CPPP):

The Community Practice Pathology Program was initiated early in 2013. The program, under the auspices of the Department of Pathology and the University of Alabama Health Services Foundation, provides both surgical and clinical pathology services to community hospitals. The program places academic faculty, who live in the community that they serve, and allows them to leverage the broad-base knowledge and expertise of the entire Department of Pathology at UAB. This depth of diagnostic and technical skill, although frequently needed, is not routinely available in a community practice setting. This program minimizes the cost of clinical services to hospital administration and maximizes the available of expertise, when needed. CPPP pathologists are locally focused on providing accurate pathologic diagnosis, reduction of send-out tests (thereby, reducing patient care delays), optimization of clinical laboratory operations (cost and appropriateness), appropriate utilization of blood product use, regulatory and administrative oversight, and clinical consultations to medical staffs in order to improve patient safety,

healthcare quality, and resource utilization.

The first clinical site for the program is Baptist Health's three hospitals (Baptist South, Baptist East and Prattville Baptist) in Montgomery, Alabama. The program is now staffed with three, full-time pathologists, who live in the Montgomery area and are focused on the clinical, technical, accreditation, and consultative needs of Baptist Health. These individuals hold academic appointments at UAB and are also affiliated with the UAHSF.

CPPP commenced operation at Baptist Health on September 30, 2013. Since that time, it has achieved the following: built a trusting and collegial relationship with the Baptist Health clinicians; worked collaboratively with Baptist Health administration to update all policies and procedures; facilitated the successful completion of a mandatory laboratory inspection by CAP; served as CLIA laboratory directors for the three laboratories, aided with the implementation of new hematology and clinical chemistry instrumentation at all three hospitals, reactivated

the Blood Utilization Committee, and established a computer imaging capability allowing the Baptist Health pathologists to do ad hoc consultations with pathologists in the Department of Pathology at UAB. Collectively, the CPPP pathologists are actively involved in medical staff committees at each of the three hospitals, are the Medical Director of the School of Medical Technology, and consult proactively with clinicians at Baptist Health.

- Walter C. Bell, M.D.

- John A. Smith, M.D.

Pathology Grants Awarded:

MALAY BASU

HSF/GEF
"UAB Infrastructure for Storage and Analysis of Next-Generation Sequence Data"
 \$195,000 11/01/13-10/31/14

STEVEN CARROLL

Children's Tumor Foundation
"Exosomes as Biomarkers for Pexiform Neurofibroma-MPNST Progression"
 \$6,000 09/01/13-02/28/14

JOHN CHATHAM

UAB/CCVC
"William W. Featheringill Post-Doctoral Fellowship (Helen Collins)"
 \$75,000 10/01/13-09/30/14

VICTOR DARLEY-USMAR

HSF/GEF
"Accelerating Translational Bioenergetics at UAB"
 \$167,000 11/01/13-10/31/15

VICTOR DARLEY-USMAR

NIH/Georgia Regents University
"Cellular Bioenergetics as a Predictor of Diabetic Neuropathy"
 \$100,000 10/01/13-09/30/14

ISAM ELTOUM

NIH/Albert Einstein College of Medicine of Yeshiva University
"Molecular Methods to Improve Cervical Cancer Screening in HIV+ Women"
 \$456,592 05/01/13-03/31/17

WILLIAM GRIZZLE

SAIC-Frederick, Inc.
"Tissue Resource Site (TSS) in Support of the Cancer Genome Atlas (TCGA) Program"
 \$58,968 08/21/13-03/31/14

ZDENEK HEL

UAB/CFAR
"The Role of Neutrophil-Mediated Immune Suppression in HIV-1/TB Co-Infection"
 \$50,000 10/15/13-10/14/14

DOUG HURST

METAvisor Research & Support, Inc.
"Improving Oncolytic Herpes Simplex Virus for Metastatic Breast Cancer"
 \$80,000 01/01/14-12/31/15

YI-PING LI

NIH/NIDCR
"Inhibiting Periodontitis by Targeting Cathepsin K and Attenuating TLR Signaling"
 \$1,837,500 01/01/14-11/30/18

UPENDER MANNE

UAB/CCC
"Metabolic Remodeling in Colorectal and Renal Cancers"
 \$125,000 08/01/13-07/31/14

JOSEPH MESSINA

VA-IPA
John Franklin
 \$138,948 09/01/13-08/31/15

JOSEPH MESSINA

UAB/CCC
"Role of ER Stress in Cancer"
 \$50,000 12/01/13-11/30/14

MOON NAHM

NIH/University of Rochester
"A Multiplex Label-Free Chip for Pneumococcal Serology"
 \$64,024 09/09/13-09/08/14

RAKESH PATEL

Rythrx Therapeutics, LLC
"Collaboration Agreement Between Rakesh Patel (UAB) and Rhthrx Therapeutics, LLC"
 \$24,256 09/24/13-09/30/14

RALPH SANDERSON

HSF/GEF
"Nanosight NS300 for Nanoparticle Tracking"
 \$51,435 11/01/13-10/31/14

JOHN SHACKA

Michael J. Fox Foundation (MJFF)
"Alpha-Galactosidase A and Glycosphingolipid Metabolites as Putative Biomarkers for PD"
 \$196,488 01/01/14-06/30/15

LALITA SHEVDE-SAMANT

UAB/CCC
"Investigation on Merlin on Pancreatic Cancer Progression"
 \$50,000 09/01/13-08/31/14

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 at: pathinfocus@uab.edu.

Thank you.

Angie Schmeckebier

Dear UAB Department of Pathology Friends and Colleagues:

The UAB Department of Pathology is recognized nationally for excellence in biomedical research, undergraduate and graduate medical education, and diagnostic pathology. This rise to prominence has been accomplished through the hard work and dedication of numerous Department of Pathology faculty and trainees who have made UAB a phenomenal environment for pathology education and clinical practice. Several decades ago, the former Departments of Anatomic Pathology and Clinical Pathology of the University of Alabama School of Medicine merged into a single Department of Pathology of the UAB Health System. More than 250 residents have received their graduate training in Pathology at UAB and have gone on to populate the state, region and the nation. In fact, the vast majority of Pathologists in the state of Alabama have received some or all of their training here at UAB. This program of excellence in graduate medical education has been appropriately balanced by a world-class graduate program that has similarly trained generations of scientists who fill academia, industry and government service. Our department has been bolstered in recent years by an ever increasing number of post-doctoral fellows, clinical fellows and junior faculty members who have achieved academic, research, and/or clinical excellence, and ascended to leadership positions at UAB or other institutions.

Please consider making a gift to the Department of Pathology at UAB to support our missions of clinical practice, teaching, research and service. Any amount would be most gratefully received and would be fully deductible*. One could direct it to a particular area of need, to fund current and future endowed professorships or create new awards, prizes or similar recognition opportunities to honor yourself, a family member, a favorite professor, etc.

We would be pleased to assist you and your professional advisors in including the UAB Department of Pathology in your estate plan or in exploring other giving strategies. A simple tear off sheet is found below.

* One should always check with their tax advisor.

Thank you for your serious consideration of this request.

Please fill out each of the 3 Sections:

A1—Enclosed, please find my contribution to the UAB Department of Pathology in the amount of:

___ \$50
___ \$100
___ \$500
___ \$1000
___ Other: _____

Please make all checks payable to the UAB Department of Pathology and return them to Ms. Lynne Roden, Departmental Administrator, 500 22nd Street South; Suite JNWB 404, Birmingham, AL 35294-0500.

Cont'd...

A2—Please contact me to discuss further:

Name: _____

Address: _____

Telephone Number: _____

E-mail Address: _____

*Please indicate your preferred means of communication.

B—I wish to direct this gift to the Department towards:

___ Where the need is the greatest

___ Teaching

___ Research

___ Named Chairs or Professorships

___ Awards for teaching/research/clinical excellence

___ Naming opportunities (Rooms, collections, equipment, etc.)

C—Person(s) and complete address to be acknowledged for tax purposes:

Do you want this gift to be anonymous? Yes ___ No ___

Do you want to honor a particular person or event?

Specifics: _____

D—If you prefer to donate via credit card, please call the UAB Development office at (205) 975-5659.