

Jay M. McDonald, MD

Robert and Ruth Anderson Professor and Chair

MESSAGE FROM THE CHAIR

I am pleased to report that the School of Medicine Search Committee for the Chair of Pathology has completed the first interviews of 10 candidates. Appropriately, in my opinion, no members of the Pathology faculty are on the search committee. The process is a lengthy one, but I am confident that UAB administration will hire a suitable replacement.

The Department continues to perform at a high level in all academic endeavors as demonstrated by the 105 publications in the first half of 2007(see below). Even in these difficult funding times, our faculty continue to excel and our research funding continues to grow. As of July 1, 2007 our total annual research funding is approaching **\$26 million**. During the last three years we have seen our NIH grant income increase dramatically:

October 2005	\$12,573,486
October 2006	\$15,463,167
Est. October 2007	\$17,581,540

We have a new inpatient (Part A) contract with University Hospital after valuation by an independent consultant, and a contract with the state for Autopsies.

Sincerely,

Jay M. McDonald, M.D.

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**PATHOLOGY IN FOCUS
EDITORIAL COMMITTEE**

Editor-in-Chief: C. Bruce Alexander, M.D.
Nirag C. Jhala, M.D.
Scott Ballinger, Ph.D.
Walter C. Bell, M.D.
Marisa B. Marques, M.D.
Gary T. Simmons, M.D.
Marty Simmons & Margaret Dotzler

**MESSAGE FROM THE
PATHOLOGY
FACULTY ADVISORY COUNCIL**

Last year, many of our faculty participated in a survey by FAC members that successfully led to the development of two projects as highlighted in the last issue. One of the main foci of that survey was to identify areas where we can become more effective in our endeavors to pursue academic activities. To date in 2007, our faculty have been very productive, as can be seen by their peer reviewed publications highlighted in this news letter.

Another important concern of the FAC is "mentoring activities." Many institutions have successfully formalized a mentoring program. It is evident that this activity is pursued by almost all of our faculty members at some level, but the activity remains very informal. New changes in the medical school curriculum emphasizes the role of mentoring activities and simultaneously provides incentives for mentoring medical students waiting in the wings to become our junior colleagues.

The FAC would like your ideas and opinions to develop a formalized program for such mentoring activities. We would welcome any other input from the faculty or our alumni to pursue activities that could bring more interactions within and outside of our department. Please contact us at pathinfocus@uab.edu with your ideas.

Nirag C. Jhala MD, MIAC , Chair
David Chhieng, MD-Anatomic Path
William Benjamin, PhD-Lab Medicine
Stephen Moser, PhD-Lab Medicine
Gary Simmons, MD-Forensic/Neuropath
Rakesh Patel, PhD -Molecular & Cellular

Department of Pathology Web Site

<http://www.path.uab.edu>

KEEP IN TOUCH.....Newsletter

E-Mail: PATHINFOCUS@uab.edu

**DIVISION DIRECTOR
PROFILES**



**Thomas L. Clemens, Ph.D., Professor,
Molecular and Cellular Pathology**

Dr. Clemens received his B.A. in biology from Goshen College in Indiana, his M.S. in pharmacology from Pennsylvania State University College of Medicine, and his Ph.D. in biochemistry from University of London. He completed his postdoctoral training as a Research Fellow in Medicine at Massachusetts General Hospital.

Dr. Clemens's research is focused on identification of the cellular and molecular mechanisms which control osteoblast activity. In one project, he is attempting to define the mechanisms of action of insulin-like growth factor and growth hormone in bone. Mice and osteoblasts with specific alterations in the components of these pathways have been created and are being used to identify the interplay between these growth factors. In a separate project, he is investigating the hypothesis that osteoblasts and osteocytes are positioned in bone to sense and respond to fluctuations in oxygen and nutrient supply, and thereby play key roles in regulation of angiogenesis and blood flow under normal physiological conditions and in response to pathological signals. Osteoblast cell models and genetically altered mice are being used to study the role of hypoxia inducible factors during bone development and following skeletal injury.

CONGRATULATIONS

**Dr. Clemens has just been selected as
Editor-in-Chief of the *Journal of Bone
and Mineral Research***

DIVISION DIRECTOR PROFILES, CONTINUED



Gene P. Siegal, M.D., Ph.D.
Professor, Anatomic Pathology.

Dr. Siegal is an experimental and diagnostic musculoskeletal pathologist whose research interest for nearly three decades has been focused in Cancer Biology. His work is currently funded by the NIH, DOD, and private philanthropic agencies and foundations. Since its inception, Dr. Siegal has served as the PI of the Histomorphometry and Molecular Analysis Core of the NIH funded UAB Core Center for Basic Skeletal Research. His most recently funded NIH R01 grant has as its objective the development of a conditionally replicating canine adenovirus model that can be used to study host-vector interactions for more effective antitumor oncolytic effects using osteosarcoma as the model. Dr. Siegal's clinical research interests have focused on studies of bone tumors and related conditions, a field in which he is a recognized world authority, having shared with M.J. Pitt, the Farrell Prize of the International Skeletal Society in 2002. For many years, he served as Chair of the Osteosarcoma Pathology Committee of the Pediatric Oncology Group. He continues as an expert reviewer to its successor organization, the Children's Oncology Group, in the area of pediatric bone tumors. Dr. Siegal is Immediate Past President of the Arthur Purdy Stout Society of Surgical Pathologists and Immediate Past-Chair of the Fellow Council of the American Society for Clinical Pathology [ASCP]. He is a Fellow of the Royal Society of Medicine in London and the American College of Pathologists as well as Phi Beta Delta Honor Society for International Scholars. His recognized expertise has resulted in service on Scientific Review Boards of the National Institutes of Health, including the National Cancer Institute, the Food & Drug Administration (both the Orthopedic & Rehabilitation Devices Panel and the Immunology Devices Panel), and the DOD. Dr. Siegal serves on 11 editorial boards and is the Senior Associate Editor of The American Journal of Pathology.



Kevin A. Roth, MD, Ph.D.
Professor, Neuropathology

Dr. Roth graduated from the University of Michigan and received his M.D. and Ph.D. degrees from Stanford University. He came to UAB after spending 17 years at Washington University in St. Louis where he trained in anatomic pathology and neuropathology before joining the faculty in 1989. Dr. Roth was promoted to full professor in the Departments of Pathology and Molecular Biology and Pharmacology at Washington University in 2001 and moved to Birmingham the following year. In addition to his duties as Director of the Division of Neuropathology, Dr. Roth is Director of the UAB Comprehensive Neuroscience Center and the Alabama Neuroscience Blueprint Core Center, an NIH funded interdisciplinary core facility that provides technical support for NIH funded neuroscientists throughout the Southeast.

Dr. Roth's research focuses on the molecular regulation of neuronal cell death and he has a particular interest in neural stem cell biology. He is an accomplished immunohistochemist and serves as Editor-in-Chief of the Journal of Histochemistry and Cytochemistry. Dr. Roth is also on the editorial board of the American Journal of Pathology and the Journal of Neuropathology and Experimental Neurology. He has served as a reviewer for granting agencies in five different countries and has been an invited speaker at several meetings in Europe and Asia. Dr. Roth was recently elected to be a member of the American Association of University Pathologists (Pluto Club).

Dr. Roth is married to Dr. Robin Lorenz and they have two wonderful children, Theo (15 years old) and Loren (13 years old). His interests outside of work revolve around his children's activities (band, math team, wrestling, ice skating and dance) and sports. He is an avid St. Louis Cardinals and Rams fan and a season ticket holder to UAB football and basketball games.



John A. Smith, M.D., Ph.D.
Professor, Laboratory Medicine

Dr. Smith joined UAB in 1993. Previously, he was a faculty member of the Departments of Molecular Biology and Pathology at the Massachusetts General Hospital, an Associate Professor at Harvard Medical School, and an Executive Director, Autoimmune Diseases Research and Molecular Immunology at Merck.

His earliest research developed solid phase, combinatorial chemistry, which is now a standard technique in organic chemistry. He and Malcolm Gefter (MIT) were the first to demonstrate the promiscuous binding capacity of class II MHC molecules. His group cloned the third member of the LDL receptor gene family (so-called gp330) and carried out extensive biochemical analysis of NH₂-terminal protein processing of eukaryotic proteins (being the first to clone the yeast genes for methionine aminopeptidase, N-acetyltransferase, and methionine-specific acetyltransferase). He has authored 168 publications and edited six books, including, *Current Protocols in Molecular Biology*, now in its 20th year of publication.

He earned a B.S. in Chemistry from Purdue, a M.Sc. and a Ph.D. from the U. of Melbourne, an M.D. from the U. of Missouri-School of Medicine, an M.M.M. (medical management) from Tulane, and a D.Sc. (*honoris causa*) from Purdue University. He is a distinguished alumnus awardee from Purdue and the U. of Missouri-School of Medicine. He is a Fellow of the AAAS.

During his tenure at UAB he has served as: Chair of the Faculty Council (promotion & tenure committee), Chair of the UAB Faculty Senate, and an Assistant Chief of Staff. He is currently responsible for the pathology service at UAB Highlands Hospital.

He was a member of Board of Trustees of the FASEB, and he is the past VP of Science Policy. He an Associate Editor of *Proteins: Structure, Function & Bioinformatics*. He is a member of the Executive Board of the Greater Alabama Council of the Boy Scouts of America.

He and his wife (a retired psychiatric social worker) enjoy traveling (primarily overseas), vacationing at their home in Maine, cultural activities, and sailing.

FROM THE CHIEF RESIDENTS



Carrie Knight, M.D.

Anatomic Pathology



Meredith Lakey M.D.

Clinical Pathology

OUTGOING RECEPTION

On May 16th, a reception honoring the outgoing pathology residents and fellows was held at the Vestavia Hills Country Club. The program was attended by current residents, fellows, and faculty. Outgoing residents and fellows were recognized and received certificates for completion of their respective programs.

Several trainees received special awards: The Roger Denio Baker Prize in Anatomical Pathology was presented to **Holly Burford** for her outstanding performance as an anatomic pathology resident.



Dr. Siegal presents Holly Burford with her award

Tonya Eichelberger received the Kracke Award for the best presentation in Anatomic Pathology for her seminar presentation "Intraepithelial Lymphocytes in Architecturally Normal Celiac Disease."



Tonya Eichelberger and Dr. Walter Bell

Kathrina Alexander received the award for outstanding Laboratory Medicine Seminar for her presentation "TRALI Prevention: The X's and Why's." This award was re-named the "Jay M. McDonald Award for Excellence in Laboratory Medicine Presentation," in honor of Dr. McDonald's dedication to teaching residents skills of critical literature analysis.



Dr. Lorenz presents Kathrina Alexander with the McDonald award.

At the reception, two faculty members chosen by the residents also received awards for excellence in teaching:

Dr. Shu Huang received the Award for Excellence in Teaching in Laboratory Medicine. This award was renamed this year in honor of Dr. Huang, who has been recognized many times for his outstanding teaching efforts. The award will now be known as the "Shu T. Huang Award for Excellence in Laboratory Medicine Education."



Yara Park presents Dr. Huang with his award

Dr. Omar Hameed received the Leonard H. Robinson Award for Excellence in Resident Education in Anatomic Pathology.



Preeti Sharma presents Dr. Hameed with the Robinson award.



Dr. Marques says good-bye to the two outgoing Chief Residents.

Residents and Fellows at National Meetings

In June, **Jeremy Henderson** presented "Plasmacytic-type posttransplant lymphoproliferative disorder presenting in bone marrow" at the Pan Pacific Lymphoma Conference (faculty sponsor: Vishnu Reddy).

Projects accepted for presentation at the 2007 American Society for Clinical Pathology meeting to be held in October in New Orleans include:

Holly Burford – Effect of storage on p63 immunohistochemistry: A time-course study (faculty sponsor: Omar Hameed).

Amanda Crowe – Causes of maternal mortality: an autopsy case series from 1991-2007 (faculty sponsor: Stephanie Reilly).

Carrie Knight – Frequency and distribution of polyps in the stomach: a clinicopathologic analysis of 300 consecutive cases in a large referral center (faculty sponsor: Nirag Jhala).

Meiklejohn McKenzie – Perinatal herpes simplex virus: a fifteen year autopsy review (faculty sponsor: Dr. Ona Faye-Petersen).

James Post – Aneurysms and dissections: a rare anatomic finding at autopsy in young adults (faculty sponsor: Dr. Stephanie Reilly).

Zhaohai Yang – Sudden death in young individuals without significant medical history (faculty sponsor: Dr. Stephanie Reilly).

ASCP Resident Council - **Elizabeth Hanson**
CAP Residents Forum - **Amanda Crowe** and

Meiklejohn McKenzie

UAB House Staff Council - **Mark Steciuk**

Incoming Residents July 2007

Shuting Bai	Emily Reisenbichler
Ginny Dailey	Darrell Sanders
Liz Hanson	Dara Wakefield
Marian Kraemer	Xiaojun Wu
Jose Lima	

Incoming Fellows 2007

Allyson Baker (Molecular Genetics fellow)
Nicole Balmer (Surgical Pathology fellow)
Holly Burford (Surgical Pathology fellow)
Tad Cherry (Transfusion Medicine fellow)
Tonya Eichelberger (Hematopath fellow)
Ranleigh Fleshman (Surgical Path fellow)
Nick Hilliard (Dermatopathology fellow)
Brenda Katz (Hematopathology fellow)
Carrie Knight (GI Pathology fellow)
Stephen Mason (Dermatopathology fellow)
Bruce Wainer (Neuropathology fellow)
Zhijie Yan (Cytopathology fellow).

PATHOLOGY GRADUATE PROGRAM

Scott W. Ballinger, PhD,
Program Director

Congratulations to newly elected student officers:

Brian Dranka, Presiding Officer

Tom Bodenshtein, Vice Presiding Officer

The Molecular and Cellular Pathology Graduate Program had a very successful recruiting year receiving 41 applications. We have six new graduate students matriculating into the program in September 2007.

Jessica Brenneman

Ohio Wesleyan University

Mi Jung Chang

UAB and Yon-Sei University
College of Medicine, Korea

Qinglan Liu

Fudan University, China

Erin Mills-McCoy

Mississippi State University
(HHMI Recipient)

Angelina Orozco

University of Wisconsin-
Madison (HHMI Recipient)

Jason Warram

University of Alabama at Birmingham

Upcoming Events

Welcome Reception

Tuesday, September 04, 2007

PITTMAN CAMS, 3:30 PM -5:30 PM

This event is to welcome all the first year incoming students and second year transfers

Pathology Graduate Student Research Day

Friday, October 19, 2007

HUC GREAT HALL, 10:00 PM - 4:30 PM

This day is modeled after a national scientific meeting with a combination of poster and oral presentations presented by students within the Molecular and Cellular Pathology Graduate Program.

The Molecular and Cellular Pathology Graduate Program Picnic and Award Ceremony was held June 02, 2007 at Homewood Park.

Awards:

Scott Isbell received the "Most Outstanding MCP Graduate Student" award

Scott Isbell and **Brian Dranka** were recognized for their contributions as presiding officers for 2006-2007.

Mick Edmonds received the Service Award



Dr. Scott Ballinger was honored by the students as the "Most Outstanding Faculty"



After the picnic,



graduate students, faculty, staff, and family joined together for a game of kickball.



ACHIEVEMENTS

Dear Dr. McDonald,

I want to update you on my progress here at L.S.U. Health Science Center. My intern year is almost over! I have been selected as "Intern of the Year" for the entire medical center, and also for the Department of Medicine.

Thank you for a great educational experience at UAB.

Sincerely,

William L. Bennett M.D., Ph.D.

Congratulations to Ph.D. student **Saman Khaled** who was selected for the NASA Space Radiation Summer School at the U.S. Department of Energy's Brookhaven National Laboratory

FACULTY ACHIEVEMENTS

C. Bruce Alexander, M.D.

President-Elect of Association of Clinical Laboratory Physicians and Scientists

Gene P. Siegal, M.D., Ph.D.

Elected Chair of the Intersociety Pathology Council

Ken B. Waites, M.D.

Selected to serve on the 2007 Ellen Gregg Ingalls UAB National Alumni Society Award for Lifetime Achievement in Teaching Committee, representing the Joint Health Sciences.

Pathology Faculty Published Manuscripts January – July 2007

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3. Li A, Christensen HM, Stewart L, **Roth KA**, Chiesa R, Harris DA: Neonatal lethality in transgenic mice expressing prion protein with a deletion of residues 105-125. *EMBO J.* 2007; 26:548-558. PubMed ID: 17245437
4. Siniscalco D, Fuccio C, Gieordano C, Ferraraccio F, Palazzo E, Luongo L, Rossi F, **Roth KA**, Maione S, de Novellis V: Role of reactive oxygen species and spinal cord apoptotic genes in the development of neuropathic pain. *Pharmacological Res.* 2007; 55:158-166. PubMed ID: 17207636
5. Li A, Barmada SJ, **Roth KA**, Harris DA: N-Terminally deleted forms of the prion protein activate both Bax-dependent and Bax-independent neurotoxic pathways. *J. Neurosci.* 2007; 27:852-859. PubMed ID: 17251426
6. Li X, Rosborough KM, Friedman AB, Zhu W, **Roth KA**: Regulation of mouse brain glycogen synthase kinase-3 by atypical antipsychotics. *Int. J. Neuropsychopharmacol.* 2007; 10:7-19. PubMed ID: 16672106
7. **Shacka J**, Lu J, Xie Z, Uchiyama Y, **Roth K, Zhang J**: Kainic acid induces early and transient autophagic stress in mouse hippocampus. *Neurosci. Lett.* 2007, 414:57-60. PubMed ID: 17223264
8. Walls KC, Klocke BJ, Saftig P, Shibata M, Uchiyama M, Uchiyama Y, **Roth KA**, and **Shacka JJ**: Altered regulation of phosphatidylinositol 3-kinase signaling in cathepsin D-deficient brain. *Autophagy* 2007, 3:222-229. PubMed ID: 17297299
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10. Geng Y, Akhtar RS, **Shacka JJ**, Klocke BJ, Zhang J, Chen X, **Roth KA**: p53 transcription-dependent and - independent regulation of cerebellar neural precursor cell apoptosis. *J Neuropathol Exp Neurol* 2007, 66:66-74. PubMed ID: 17204938
11. **Shacka JJ and Roth KA**: Cathepsin D deficiency and NCL/Batten Disease: There's more to death than apoptosis. *Autophagy* 2007, *Autophagy* 2007. Sept 25, 3(5)* PubMed ID: 17495518
12. Eom T-Y, **Roth KA**, Joep RS: Neural precursor cells are protected from apoptosis induced by trophic factor withdrawal or genotoxic stress by inhibitors of glycogen synthase kinase-3. *J. Biol. Chem.* 2007, 282 (31) 222856-222864. PubMed ID: 17548347
13. **Shacka JJ, Roth KA, Zhang J**: The autophagy-lysosomal degradation pathway: role in neurodegenerative disease and therapy. *Frontiers in Bioscience* 2007, E-published before print (Sept)
14. Peerschke EI, Agrawal Y, **Alexander CB**, Bovill E, Laposata M. Proposed research training guidelines for residents in laboratory medicine. *Clin Lab Med.* 2007; 27:241-53.
15. **Alexander CB**. Assessing resident competency in laboratory medicine. *Clin Lab Med.* 2007;27:269-81.
16. Fulzele K, Digirolamo DJ, Liu Z, Xu J, **Messina JL, Clemens TL**. Disruption of the IGF-1 receptor in osteoblasts enhances insulin signaling and action. *J Biol Chem* 2007 Jun 6; [Epub ahead of print] PMID: 17553792
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Factor-1 promotes angiogenesis via a heme oxygenase-1 dependent mechanism. *Journal of Experimental Medicine* 2007; 204:605-618.

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33. **Weaver C.T.**, K. M. Murphy: T-cell subsets: the more the merrier. *Curr Biol* 2007; 17:R61-R63.
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