



PATHOLOGY inSIGHT

Alumni Bulletin of Wake Forest University School of Medicine Department of Pathology

A new liver, and a new lease on life

Professor Emeritus Michael Adams, DVM, of Comparative Medicine, was not planning to retire just yet. His research was going well, with funding solidly in place for a few more years, and he was pretty sure that even after the first liver

able to return to work afterwards. Regaining lost funding for his research was one obstacle, of course, but the immunosuppressant drugs required to prevent rejection of the new liver made it impossible to return to working around primates. Performing surgery was out of the question, and he's a lot more susceptible to things that don't affect most people. And while he knows that appropriate precautions are in place, he said it's hard not to worry about it.



Miss Addison Barber, right, with her grandpa "Ba."

transplant he'd be able to continue working. But there was no way he could know that his new liver wouldn't hold up; there was a big plaque in its hepatic artery, which thrombosed and led to ischemia, infection, and another transplant less than a year after the first.

"The second one wore me down," he said, and it was clear that he would not be

He does miss going out to the farm, though, and his colleagues there. However he also notes that his perspective on things has changed pretty drastically, and he has a lot of ambivalence. After all, he was not that far from retirement anyway, and a new factor in the equation is the opportunity to spend time with his granddaughter, Addison, who is now two.

Dr. Adams was diagnosed with primary sclerosing cholangitis (PSC) about 15 years ago. PSC, which is sometimes called Walter Payton's Disease, is a rare

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COMING UP IN OUR NEXT ISSUE:

- ▶ *Spotlight on Postdocs!*
- ▶ *Research Highlights*
- ▶ *What would you like to read about? Let us know!*
pthalumni@wfbmc.edu

Tumor and tissue banking

You might not think that collecting tissue samples for research purposes would be all that difficult or controversial, but it certainly can be both, according to Mark Willingham, MD, a pathologist and head of the department's section on Tumor Biology. Dr. Willingham is also part of the Comprehensive Cancer Center's (CCC) Tumor Tissue Core Facility, which collects, organizes, and stores a large number and variety of tissue samples until they are needed for a specific research study.

But it hasn't always been so clearly organized; when it comes to collecting tissue for research, there's a bit of an image problem. You start talking about tissue collection and you very quickly move into the realm of bad movies: crazy scientists, grave robbers, organ thieves, and dubious research aims.

In addition, there are ethical considerations and legal liability issues, as well as increasing concerns about ownership of the tissue once it's been removed. The patient consent form and tissue collection protocol have been approved in advance by the Institutional Review Board (IRB), and they are reviewed yearly, ensur-

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Welcome new Pathology Residents...

Dr. Andrew Johnsen received his MD degree at the Medical College of Georgia School of Medicine in Augusta. He completed a BS in Molecular Biology at Georgia Institute of Technology in Atlanta in May, 2006.

While attending MCG, he worked as a tutor for first year students in histology and also as a teacher's assistant in gross anatomy for occupational and physical therapy students.

In 2008, Andrew volunteered as the secretary/treasurer of the Pathology Interest Group, where his duties were to organize and plan interest group meetings. He also volunteered for Medical Students Auxiliary, Salvation Army Home-



Dr. Johnsen

less Clinic, Ronald McDonald House, and the Children's Medical Center. Andrew and his wife Jessica enjoy fishing, kayaking, gardening, traveling, playing the guitar, and spending time with Murdoc, their basset hound/lab, a.k.a. "Doc."

Dr. Stephen Lenfest received his MD degree in May 2010 from the University of Florida in Gainesville. He also earned a BA in Anthropology and History from the same institution in 2004, was consistently a member of the

President's Honor Roll, and was selected for membership in the Golden Key National Honor Society. Stephen has been a member of the Medical Student Section of AMA and SMA and is also a member and officer of the Pathology Student Interest Group.

From 2005-2006, Stephen worked as a laboratory technician where he performed toxicology tests on racing dogs and horses at the University of Florida Racing Lab in Gainesville. He also volunteered at the Florida District 8 Medical Examiner's Office.

Stephen and his wife Callie are dedicated Florida Gators, and enjoy outdoor activities, especially snowboarding, hiking, and camping.

Dr. Olga Raetskaya-Solntseva earned her MD at the University of South Carolina School of Medicine, where she was awarded a full tuition scholarship. She was also awarded the South Carolina Honors College Scholarship where she earned her BS in biology and graduated Summa cum Laude.

She was the founder and Co-chair of the Pathology Interest Group, received numerous awards, and is a member of the AOA, AMA, SCMA as well as the Phi Beta Kappa and Phi Theta Kappa Honor Society.

Olga worked as a translator for medical teams and the US Embassy in Russia during conferences at the Ministry of Defense

before emigrating to the United States in 2001. Olga and her husband have a baby boy and a miniature poodle who, like them, is a "Russian immigrant." Olga enjoys Botany, geography, hiking, languages, travel, and running.

Dr. Ken Tian earned his MD here at Wake Forest University School of Medicine in 2010. He completed his undergraduate education at Virginia Tech, earning both a BA in Economics and BS in Biology. Ken completed a summer fellowship at Fralin Biotechnology Center in 2004 and is an alumnus of Phi Delta Theta.

Ken was the recipient of numerous scholarships and has volunteered for community health fairs, and works for animal adoption and rescue groups. His interests include basic molecular research in oncology.

Dr. Wei Wang received his PhD in cancer biology from Wake Forest University School of Medicine in 2007, and his MD from Shandong Medical University in China in 1998. He has been a research fellow with Dr. Frank Torti for the past three years and has many publications.

Wei and his wife have two children and he enjoys playing soccer and basketball in his spare time.

Dr. Patrick Ware earned his MD at the University of South Carolina School of Medicine in 2008 and his BA in Psychology at

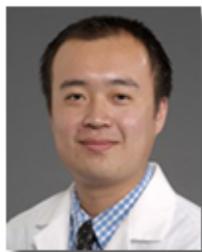
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Dr. Lenfest



Dr. Raetskaya-Solntseva



Dr. Tian



Dr. Wang



Dr. Ware

...and Fellows

Dr. Marina Sandoval is the 2010-11 dermatopathology fellow. She earned her MD degree at Jundiai Medical University in Brazil and subsequently completed an AP program rotary fellowship at the Institut J. Paoli I. Calmettes in Marseille, France. She completed her anatomic pa-



Dr. Sandoval

thology from the University of Sao Paolo, Brazil.

thology residency at the Faculdade de Medicina da Santa Casa in Brazil, and she later earned her PhD in Pa-

Prior to coming to the US in 2003, Dr. Sandoval was employed as a staff pathologist at the Hospital of the University of Sao Paolo Medical Center in Sao Paolo, Brazil. Following her ECFMG certification, Dr. Sandoval completed a pathology residency at Cedars-Sinai Medical Center in Los Angeles, CA, and most recently she did a one-year fellowship in surgical pathology at USC, Los Angeles. With strong interests and prior involvement in teaching and research, Dr. Sandoval hopes to pursue a career in academics.

Marina and her husband, Henri-



Dr. Robbins



Dr. McCarthy



Dr. Weber

que, have two daughters, Sofia who is 10 and Isabella who is 8. The family enjoys the company of their two Bassett Hounds (Emilia and Amelia) and in her spare time Dr. Sandoval enjoys running and ceramics.

Dr. Katie Robbins, this year's Hematopathology Fellow; **Dr. Lezah McCarthy**, our Forensic Fellow; and **Dr. Michelle Weber**, this year's Cytopathology Fellow all completed their residencies here in the department last year. Welcome back!

(Residents, continued from page 2)

Wake Forest University in 2003. He completed an Internal Medicine Internship during 2008-2009 here at WFUBMC, and for the past year, has been a research fellow with Dr. Mark Willingham.

Patrick is a member of AOA and was the recipient of numerous honors and awards during medical school.

Patrick's volunteer activities include teaching middle schoolers and delivering Meals on Wheels; he was a camp counselor for children with diabetes, provided community health fair screenings, and worked in the clinical laboratory at a hospital in Haiti for a month while he was in medical school. His hobbies and interests include class IV-V whitewater kayaking, guitar and piano composition, hiking, camping, and photography.

Tissue and Tumor Bank

(Continued from page 1)

ing that the specimens are in compliance with regulations when they are eventually used.

Acquiring usable tissue samples in the first place, however, can be pretty complicated. The most obvious and practical problems – things like how to keep track of what you have and where it is, and how to store it all in the most usable form – are relatively easy and unambiguous: you need a good, secure database; a big freezer; and backups for your backup power supply.

Issues such as informed patient consent, ownership of the tissue itself (not to mention the study results), and how to get the samples from point A – the patient – to point B – the freezer – and maintain them in a usable state have to be resolved well in ad-

vance of planning a study or beginning a procedure.

Tissue that is frozen immediately in liquid nitrogen and then stored at -80°F is generally considered the most useful for research, as opposed to that which has been put in formaldehyde or prepared with paraffin. At Wake Forest Baptist, the presence of a pathology lab and technician in the operating rooms make it much easier for appropriate tissue to be immediately frozen and stored. Procedures at some institutions offer no such way to easily intercept tissue in a "fresh" state, says Dr. Willingham.

Regulations stipulate that the samples must be taken from patients who are already having tissue removed for a diagnostic or therapeutic procedure; they consent to have any tissue not needed

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THE VIEW FROM THE CHAIR

Are you an organ donor? I am.

As Dr. Mike Adams' story on page one illustrates, organ transplantation saves lives.



Dr. Garvin

As of October 11, 2010, there are 108,952 people on waiting lists for donor organs. In the first half of this year, 14,140 transplants were performed using tissue and/or organs from 7,136 individual donors. Obviously, the demand is much greater than the current supply, and many patients die while

waiting for a life-saving donation.

A patient's place on the list is determined in part by their medical status and in part by how long they have been waiting. Once a donor organ is found, other factors such as geographical proximity and more detailed medical matching come into play, and in some cases the available organ will have to go to the next person on the list.

In addition to the liver, of course, organs such as the heart, kidneys, pancreas, lungs, and intestines can be transplanted, as well as tissues including the

cornea, skin, heart valves, bones, blood vessels, and various connective tissues. Blood, bone marrow, umbilical cord blood, and peripheral blood stem cells are also in demand.

Most solid organ and tissue donations can

only happen once the donor has died; however, in many cases, living individuals can safely donate a kidney, a lobe of their liver, and even a lung – or part of a lung, pancreas, or intestines.

More information about organ donation and transplantation is available online:

- OrganDonor.gov
- Organ Procurement and Transplantation Network: optn.transplant.hrsa.gov
- United Network for Organ Sharing: unos.org

Organ/Tissue Donor Card

I wish to donate my organs and tissues. I wish to give:

any needed organs and tissues only the following organs and tissues:

Donor Signature _____ Date _____

Witness _____

Witness _____

It's very easy to become a donor. The most important thing is to discuss your wishes with family members (and those under 18 need parental permission to donate). You must also register with the Donor Registry in your state and with the Department of Motor Vehicles (in many states this is only one step) so that your driver license indicates your donor status. You can also carry a card like the one shown.

Most major US religions and denominations support organ and tissue donation as an act of neighborly love and charity. Don't worry that you are too old; the condition and suitability of your organs is the primary concern. The only absolute exclusions are HIV+ status, currently active cancer, and systemic infections.

*-A. Julian Garvin, MD PhD,
is the Robert W. Prichard
Chair of Pathology*

Pathology inSight is a publication of the Wake Forest University Baptist Medical Center Department of Pathology and it is distributed to the alumni of its residency and fellowship training, postdoctoral, and graduate education programs.

Please send address changes, updates, or other comments to us at the address on the back page, or e-mail pathalumni@wfubmc.edu.

Past issues of **Pathology inSight** are available online at www.wfubmc.edu/pathology/alumni.



FACULTY NEWS

Welcome to new faculty



Graham Parks, MD, left, and Cyrus Manavi, MD, right, joined the department this summer as Surgical Pathology Fellows and Instructors of Pathology. Both completed their residencies here last year.

Grant Award Announced

John Parks, PhD, of Lipid Sciences received notice from the National Institutes of Health (NIH) that The Center for Botanical Lipids and Inflammatory Disease Prevention Grant at Wake Forest University Baptist Medical Center has been awarded a \$7.5 million, five-year competitive award. Project 1, led by Dr. Parks, is entitled "Atheroprotective Mechanisms of Borage and Echium Oils."

Floyd "Ski" Chilton III, PhD, is the director of the center. The project studies how botanical dietary supplements prevent or impact diseases that have an inflammatory component such as cardiovascular disease, asthma and diabetes.

In memoriam

David Buss, MD, passed away this summer. He retired recently from the department. He is survived by his wife Karen Buss. Memorial gifts in his name can be made to the Comprehensive Cancer Center.

Jerri L. McLemore, MD, joined the Autopsy Service July 1, 2010. She is certified by the American Board of Pathology in Forensic Pathology and Anatomic and Clinical Pathology.

After graduating from the University of Kansas with a BA in Human Biology, Dr. McLemore earned her MD at the Kansas University School of Medicine. She completed the AP/CP residency training program at the University of New Mexico Health Sciences Center in Albuquerque, where she was an instructor in surgical pathology and cytopathology before beginning her fellowship in forensic pathology. Prior to joining us, she served as Associate State Medical Examiner in Iowa from 2003-2010.



Dr. McLemore

CONFERENCE SCHEDULED

The annual Western North Carolina Death Investigation Seminar is making a comeback and is scheduled for March 26, 2011.

The seminar will cover topics ranging from recognition of basic categories of injury to an update on Sudden Infant Death Syndrome.

Dr. Deborah Radisch, the newly appointed chief state medical examiner for North Carolina, will also introduce herself.

For more information, please contact Dr. Jerri McLemore at 336-716-3821, or write to her c/o

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MOLECULAR PATHOLOGY PROGRAM

Welcome new students



Ricquita Pollard



Helen Cuffe



Fitriya Dewi, DVM



Melissa Goddard

Gwynneth Thomas is not pictured



Daniel Ferguson



Paul Listrani, DVM

Recent graduate



Ashley Wilhelm, PhD

Congratulations to **Dr. Ashley Wilhelm**, who graduated from the Molecular Pathology program this year. Her dissertation was entitled, "The Role of Apolipoprotein A-I in the Modulation of Cholesterol Homeostasis and Immunity." She accepted a postdoctoral fellowship at Vanderbilt University in Nashville, TN.

Learn more about the PhD in Molecular Pathology online at www.wfubmc.edu/Molecular-Pathology

Honors and awards



Philip MacArthur

Philip MacArthur won a 2-year AHA Mid-Atlantic Predoctoral Grant for his project "Mechanism of Neutral Lipid Translocation Across the Endoplasmic Reticulum Membrane."

Kelly Ethun, DVM, received a Travel Stipend Award to the Endocrine Society's 92nd Annual Meeting June 19-22 in San Diego for her poster presentation "Effects of Combination Therapy with Bazedoxifene and Conjugated Equine Estrogens on the Endometrial and Vaginal Epithelium of Surgically Postmenopausal Monkeys."



Kelly Ethun, DVM

At the Kern Aspen Lipid Conference August 21-24 in Aspen, CO, **Shunxing Rong** received an Early Career Investigator Award of Excellence for his poster presentation "Macrophages 12/15 Lipoxygenase Expression Increases Plasma Lipid Level and Exacerbates the Development of Atherosclerosis."



Lin Jia

Early Investigator Travel Stipend Awards went to **Lin Jia** for her poster presentation "Dietary Cholesterol Restores Diet-induced Weight Gain in Mice Lacking the Intestinal Cholesterol Transporter Niemann-Pick C1-Like 1 (NPC1L1)," and to **Caleb Lord** for his poster presentation "Knockdown of CGI-58 in Mice Alters the Systemic Response to Endotoxin and is Associated with Increased Adipose Macrophage Infiltration."



Shunxing Rong



Caleb Lord

(Tissue Bank—continued from page 3)

for diagnostic purposes – tissue that would otherwise be discarded, in other words – preserved for use in an existing, ongoing, or future study of their particular ailment.

The tissue samples are assigned a code number and stripped of identifying information in accordance with strict regulations; some information, such as the eventual diagnosis, the type of tissue, the site from which the sample is taken, the date it was removed, and the age, gender, and ethnicity of the patient, will be made available if it is of use to the researcher.

“I kind of serve as a firewall between the pathologist and the investigator,” said Dr. Willingham. As the person who links the final diagnostic findings to each specimen, he is one of a very few individuals with access to both sets of information.

Of course, the primary responsibility of pathology is diagnosis, not keeping track of research samples, nor determining whether a particular investigator's study protocol meets IRB or other regulatory standards. The creation of the procedure for tissue banking governing the open-ended collection of specimens really takes a huge burden from the pathology department, and gives the IRB responsibility to identify projects that will use the banked tissue.

“Otherwise,” says Dr. Willingham, “we'd really be in a pickle.”

Surgeon Edward Levine, MD, of the CCC is the director of the Tumor Tissue Core, and hematologist/oncologist Gregory Kucera, MD, is the associate director. According to Tissue Procurement Officer Libby McWilliams, the bank collects about 2,000 samples a year and currently holds nearly 9,000 specimens. Investigators can search the online database for samples that meet their study criteria and submit a request to use them for any IRB approved study protocol.

(Adams—continued from page 1)

and chronic inflammatory disease that eventually causes cirrhosis, liver failure, and is also associated with liver cancer. Payton, a former Chicago Bears running back, died of the disease in 1999.

Transplantation is the only long-term treatment available for the most serious cases, and unlike some other organs or bone marrow, donor livers need only be matched based on blood type. Still, the relative shortage of donor organs can limit the availability of the treatment. Dr. Adams was on the waiting list for more than a year before his first transplant, and three or four months prior to the second.

The success rate of organ transplantation in general is increasing rapidly, though it still seems to many people sort of a “gee-whiz”

thing. The first human liver transplant happened in 1963 – shortly before Dr. Adams graduated from high school. Now the procedure is fairly common, if not exactly routine. But there is still a chronic shortage of donor organs. “It's an awareness thing,” says Dr. Adams. “It never comes up for most people.”

In addition to the birth of his granddaughter and the loving support of his wife, Janice Adams, Comparative Medicine's business administrator, Dr. Adams gratefully acknowledges the role of the Transplant Center team at Carolinas Medical Center in Charlotte. “They saved my life, basically, more than once,” he says. He's also thankful for the many friends and colleagues who kept in touch while he was ill. “It really did make a huge difference.”

POSITION AVAILABLE: DIRECTOR OF CLINICAL CHEMISTRY

This is an outstanding opportunity for a qualified, well trained, and extremely motivated clinical chemist (MD or PhD) to join our dynamic clinical service and training program.

Contact us for more complete description including specific qualifications and requirements. Faculty rank will be based upon qualifications and experience; salary is based on academic rank and years in service. Applications will be accepted until the position is filled.

To apply, send a signed letter of interest, CV, and three references to: Marcus B. Simpson, MD, Director of Clinical Laboratories, c/o Vickie C. Smith, Administrative Assistant, Department of Pathology, WFU Health Sciences, Medical Center Boulevard, Winston-Salem, NC 27157-1072.

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SCHOOL of MEDICINE

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You can make a lasting and profound impact on groundbreaking research, state-of-the-art medical education and outstanding patient care. Consider including Wake Forest University Health Sciences/Department of Pathology in your will, or naming us beneficiary of a retirement plan or insurance policy, or establishing a charitable annuity or trust that will pay you an income for life. For more information, please contact John Gillon, Senior Director of Gift Planning, Wake Forest University Health Sciences, 800-899-7128 or jgillon@wfubmc.edu.



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