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

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Dr. Shihabi to retire

Zakariya Shihabi, PhD, has announced his intention to retire this summer, though he will remain director of clinical chemistry until someone new takes over. Dr. Shihabi likes to remain flexible about making plans, and that's how he views his retirement.

"I think retirement means something different than plans," he said. He has traveled quite a bit already, and he likes to just hop in the car and "hit the road" when he goes somewhere – adding that if you're not in a hurry to get somewhere else, you can take the time to really enjoy where you are.

Dr. Shihabi came to the Bowman Gray School of Medicine in 1972, after completing studies in Egypt, Texas, South Dakota, and Buffalo, NY. He had been working in Chapel Hill for a few months when he was offered the job here, and thinks that coming here was probably one of the best decisions he ever made. He's proud to have been a part of the institution as it has grown in both size and reputation.

Dr. Zakariya Shihabi

The size of the hospital – and volume of laboratory tests conducted here – is one of the things that Dr. Shihabi believes makes it such a good teaching hospital and a good place to practice clinical chemistry. The ability and opportunity to conduct research with investigators from other groups has been especially

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INSIDE THIS ISSUE:

Residency program goes online

The New Innovations Residency Management Suite pulls everything together into one virtual place. Instead of using one system for resident schedules, another for recording hours on duty, another for evaluations, and yet another to log conference attendance, it's all right there in one place. One login name; and only one password to remember.

Constance Stanton, MD, is the director of the Residency Training Program. She and new program coordinator assistant Alice Atwell have begun deploying this system throughout the department's training program. So far the transition is progressing smoothly and most users are finding it easy to navigate and understand.

A consistent, user-friendly interface is one of the strengths of the new residency program management system.

"New Innovations offers user friendliness and functionality to fit the needs of the program," said Ms. Atwell. "Faculty and residents will be very pleased with what New Innovations has to offer."

"We're especially lucky to have Alice Atwell here to help us," added Dr. Stanton. "She's working really hard to make this transition a success."

Faculty members can use the system to assign course material; residents can confirm that they've received and reviewed it. The system will remind people to fill out evaluations on time and it allows more complete

(Continued on page 2)

COMING UP IN OUR NEXT ISSUE:

- *Glass slides to go digital?*
- *Meet the new graduate residents and faculty*
- *Say farewell to departing residents and graduating students*
- *Read more about Dr. Mike Adams of Comparative Medicine*

Dr. Kim Geisinger named Educator of the Year by the Papanicolaou Society of Cytopathology

Kim R. Geisinger, MD, received the Educator of the Year Award from the Papanicolaou Society of Cytopathology at its 2010 Companion Meeting held during the United States and Canadian Academy of Pathology (USCAP) meeting in March. The annual award is presented in recognition of meritorious service and contributions to cytopathology education.

Dr. Geisinger has been a part of the Papanicolaou Society since its inception in the early 1990s and he shares its goals to better integrate cytopathology training with surgical/histopathology training. He has traveled internationally to promote cytopathology education and has given hundreds of lectures from Perth to Budapest. He is the author of five books on cytology and is currently working with the Papanicolaou Society to edit and publish a series of 15-20 new books.

Dr. Kim Geisinger

Dr. Mike Adams

Dr. Mike Adams retiring

Michael R. Adams, DVM, retired earlier this year for health reasons; he will return as Professor Emeritus. Dr. Adams has been part of Comparative Medicine section since the 1970s. His expertise and research experience, along with his collegial spirit, have made him a much-valued contributor to a large number of publications, grants, and projects over the past 34 years.

As the PI of our NCRR-supported T32 grant (currently in its 50th consecutive year), Dr. Adams has played a vital role in training new professionals in laboratory animal medicine, primate clinical medicine, and comparative medicine.

As a diplomate of the American College of Laboratory Animal Medicine, Dr. Adams has long been committed to maintaining the professional standards of the field and promoting mentorships for students and young investigators.

There will be a profile of Dr. Adams in the Fall 2010 issue of Pathology inSight.

(New Innovations continued from page 1)

anonymity for evaluators.

Program administrators can easily put together reports about everything from evaluation scores to ACGME standards compliance. The case log module of the system allows residents to log the procedures they perform; their supervisors can review the logs and assign pass/fail status, streamlining the credentialing process.

And yes, there is an app for this! Palm Pilots and smartphones can be synchronized easily to the New Innovations system server so that users can access the system wherever they are.

New Autopsy Service faculty

Jerri L. McLemore, MD, will join the Autopsy Service July 1, 2010. Dr. McLemore 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. She has been Associate State Medical Examiner in Iowa since 2003.

2010 Faculty Promotions

Kazushi Inoue, MD PhD, Tumor Biology, was promoted to Associate Professor.

Melaney Gee, DVM, Comparative Medicine, was promoted to Assistant Professor.

Richard Young, DVM, Comparative Medicine, was promoted to Assistant Professor.

Carol Shively, PhD, Comparative Medicine, was granted tenure.

Omar Sangüeza, MD, Dermatopathology, was granted tenure.

(Dr. Shihabi, continued from page 1)

important to Dr. Shihabi – it was research conducted with colleagues in cardiology, nephrology, and family practice, for example, that led to development of a test to identify diabetic patients who were in renal failure. In addition, he notes that the chemistry lab here was one of the first to use chromatography-based tests. "We used to have so many referrals from outside just because of these tests."

Not that his time here has been without challenges. When he first arrived in Winston-Salem, they had just finished building Reynolds Tower. Not many people here in town even knew where to find the Bowman Gray School of Medicine, and the campus was much smaller – as was its reputation in the scientific community. He recalls a conference in Germany at which he started his talk with a "Joe the Camel" slide. Everyone had heard of that. All that has changed, of course. The institution is now an integral part of the community, and the scientific and clinical reputation of the Wake Forest University Baptist Medical Center is well established.

Dr. Shihabi is happy to have had the challenges and opportunities of working here; he hopes that his colleagues – and his eventual successor – will feel the same.

POSITION AVAILABLE: 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 3 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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THE VIEW FROM THE CHAIR

Change or Die: The keys to working in health care

Dr. Jerry Garvin

The catchy title *Change or Die* comes from a book my daughter Courtney gave me. It's by Alan Deutschman, and she sent it to me several years ago after the author joined her Atlanta design firm, **unboundary.**

In the book, Deutschman describes an interesting phenomenon: when people are confronted with a situation in which they have to change their way of living or else they will die, how many of them will choose to change?

The statistical answer is that only one person in nine will make the changes.

There are, Deutschman says, three critical keys to adapting to change: relate, repeat, and reframe. He calls them the three Rs. I will not try to repeat his approach but I do recommend the book for the examples he presents and the "R" keys to adaptation.

When I look back over my career in pathology, I am amazed by how I learned to change – I had to change whether I was ready for it or not. Yet when I talk to the faculty about change I am sometimes reminded of the joke "How many faculty does it take to change a light bulb?" the answer is "What, change?"

One of the most dramatic changes in my career was leaving the chair position at MUSC to assume the same position here at WFUBMC. My dean at MUSC was a psychiatrist who said to me that the career change would be like "repotting a plant." That analogy was a good one as some the accomplishments I had tended were no longer able to grow, and new opportunities for growth emerged.

Never before can I remember the degree of change that we face now. As we begin to consider the consequences of the the new health care reform bill recently signed by the President and Congress, here at WFUBMC a new corporate administration is trying to merge the cultures of the hospital and medical school into one entity.

And here in our own department, we'll face the possibility of two major changes in the next few months – rapid tissue processing and voice recognition transcription.

We have become familiar with the positives and negatives of rapid tissue processing using the Xpress system compared to the classic methods. Those variables, coupled with increasing stringency from the fire marshal for volatile fluids – not to mention the cost of operating two systems – make a decision on whether to adopt the new system for all specimens increasingly necessary.

In addition, medical transcription is disappearing from the medical center; our colleagues in radiology have already adopted computer-based voice recognition as a substitute for transcription. Surgical pathology transcriptions, however, appear to remain a holdover in most academic medical centers.

Will we change, or not?

-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.

If you would like to receive Pathology inSight electronically, please send us an e-mail to let us know.

Bad Bugs: A look at antibiotic resistant organisms in health care settings and beyond

By Elizabeth Palavecino, MD

Since antibiotics were introduced into clinical practice half a century ago, the organisms they fight have steadily and routinely developed resistance to them. Overuse and inappropriate use of antibiotics in both humans and in farm animals over the last few decades have accelerated this process, and many strains of these pathogens have become resistant to more than one of the antimicrobial drugs used to fight them.

These multi-drug resistant organisms (MDROs) cause the majority of US acquired hospital infections and are now being found in the community outside health care settings. The most common of these organisms are Methicillin Resistant *Staphylococcus aureus* (MRSA) and its community-acquired counterpart CA-MRSA; Vancomycin Resistant Enterococci (VRE); and Cephalosporin- and Carbapenem-resistant *Klebsiella pneumoniae* (ESBL and KPC producing).

Compared to the antimicrobial susceptible strains of the same bacteria, these resistant organisms cause infections that are associated with both worsened clinical outcomes and higher cost of care. In addition, Medicare and other insurers are beginning to regard hospital-acquired infections as preventable, and will therefore not reimburse providers for caring for the patients who develop them.

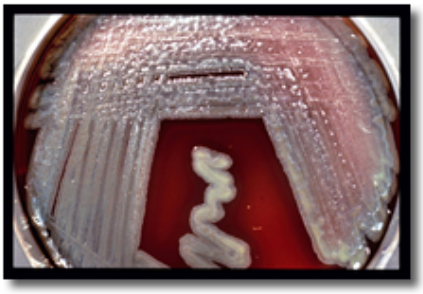
PREVENTING SPREAD OF MDROS IN HEALTH CARE INSTITUTIONS

Most antimicrobial resistant bacteria are opportunistic pathogens, often colonizing the skin and mucosal surfaces of humans without producing signs or symptoms of infection. However, when presented with a breakdown in the physical or immunological defenses of the host, colonizing bacteria are capable of producing infection and even death.

Transmission of antimicrobial resistant pathogens between patients, including those who are either infected or asymptomatically colonized with these bacteria, contributes to the increase in antimicrobial resistance observed in healthcare facilities.

Rapid and accurate screening tests for MDROs can quickly identify patients who are candidates for isolation precautions. The infection control laboratory at WFUBMC has implemented new molecular technology for detection of MRSA from nasal swabs; these methods are highly sensitive and specific and decrease delays in implementing isolation precautions for MDRO- colonized patients and have the potential to decrease the risk for nosocomial transmission.

Preventing emergence and spread of MDROs within a hospital is a very difficult task and requires a multidisciplinary approach with the support of administration, infection control, and clinical microbiology. Assessment and subsequent improvement of performance standards for the prevention of healthcare-associated infections have become increasingly important due to mandatory reporting of hospital acquired infections in some states.



Here at WFUBMC, preventing the spread of MDROs is a high priority, and our efforts are making a difference. The microbiology laboratory has worked with other professionals throughout the hospital to:

- improve surveillance and reporting for the presence of MDROs everywhere in the institution;
- encourage the prudent use of antibiotics; and
- adopt more sensitive methods for detecting MSROs in the clinical laboratory.

Currently, routine surveillance programs to decrease hospital-associated infections in our institution include universal screening for MRSA, targeted screening of VRE, and accurate detection and reporting of resistant Gram-negative organisms. Because these organisms are constantly changing, the methods for identifying them – as well the interpretation of susceptibility testing – must also be continually updated in accordance with the Clinical and Laboratory Standards Institute guideline documents. These surveillance programs also ensure institutional compliance with regulatory mandates from federal, state, and local health agencies.

In addition to these infection control measures at WFUBMC, the microbiology laboratory's collaborations with the Committee for Antimicrobial Usage and Stewardship Effort, directed by Dr. Christopher Ohl of Infectious Diseases, have resulted in increased staff adherence to appropriate use of antimicrobial agents within our institution. More recently, a multidisciplinary effort for rapid

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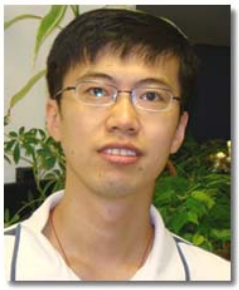
Molecular Pathology student awards

Tam Nguyen

Philip MacArthur



Shunxing Rong

Tam Nguyen and **Philip MacArthur** were winners at the Tenth Annual Graduate Student and Postdoc Research Day and Spring Hot Topics Community Forum held March 23, 2010 at Bridger Field House, Wake Forest University, Winston-Salem, NC. This research forum brings together students and faculty from programs and departments across all schools and colleges of Wake Forest University. In recent years, close to 100 student posters have been presented.

Tam and Philip won First Runner-Up (Integrated Science). Tam's poster presentation was entitled *"Acyl-CoA Cholesterol:Acyl Transferase 2 (ACAT2) Promotes Intestinal Cholesterol Absorption As Measured by Thoracic Lymph Duct Cannulation."* Philip's poster was entitled: *"Alternative splicing attenuates transgenic expression directed by the ApoE promoter-enhancer based expression vector, pLIV11."*

Shunxing Rong won a travel scholarship to attend the 2010 Keystone Symposia on Molecular and Cellular Biology held at Fairmont Banff Springs, Banff, Alberta February 12-17, 2010. His presentation and abstract were both entitled: *"High Polyunsaturated Fatty Acid (PUFA) Diet Unmasks Role of 12/15 Lipoxygenase in Lipid Metabolism."*

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

(Bad Bugs, continued from page 5)

electronic isolation notification including MDROs, led by Dr. Werner Bischoff of Infectious Diseases, has allowed us to substantially decrease the time between detection of MDROs in a clinical or surveillance specimen and isolation of the colonized and infected patients.

Dr. Elizabeth Palavecino is the Director of the Microbiology Laboratory Service.

Further reading about multidrug resistant pathogens:

Rice LB. The clinical consequences of antimicrobial resistance. Curr Opin Microbiol. 2009 (5):476-81.

Palavecino E. Community-acquired methicillin-resistant Staphylococcus aureus infections. Clin Lab Med 2004; 24:403-418.

Weber SG, Huang SS, et al. Legislative mandates for use of active surveillance cultures to screen for methicillin resistant Staphylococcus aureus and vancomycin resistant enterococci: position statement from the joint SHEA and APIC Task Force. Am J Infect Control. 2007 (2):73-85.

McGowan JE Jr. Resistance in nonfermenting gram-negative bacteria: multidrug resistance to the maximum. Am J Med. 2006; 119(6 Suppl 1):S29-36.

Reaching out to the next generation of scientists

by Allyson J. Bennett, PhD and Peter J. Pierre, PhD

About 80 enthusiastic 4th graders from General Green Elementary School toured the Wake Forest University Primate Center (WFUPC) in March, giving them a behind-the-scenes view of scientists at work, and the value of animals in well-regulated and humanely-conducted biomedical research. The inquisitive kids enjoyed the tour and the chance to see where the animals live and meet some of the people who work with them.

This is the second year of our formal efforts to familiarize the local community with our activities here at the WFUPC and to increase awareness of the value of animals in well-regulated and humanely-conducted biomedical research. Over 900 students, educators, and others have been involved in our outreach activities so far, and responses from participants have been overwhelmingly positive.

An infant rhesus monkey pauses while exploring at the WFUPC

Our first-ever "Friedberg Campus Family Day" last spring drew more than 150 visitors, who got to learn about the WFUPC facilities and discuss primate research projects with a team faculty and staff volunteers. Children took part in primate-themed activities, including games and crafts as well as coloring books featuring different monkeys and their natural history.

The primate center's second major outreach program, "Innovative Evaluation and Promotion of Evidence-Based Enrichment," allows undergraduate students to participate in research aimed at developing strategies for improvements in laboratory animal welfare. Undergraduates from Wake Forest University, Salem College, High Point University, and UNCG participated in enrichment activities this school year. A manuscript co-authored by one of these students is currently in press at the Journal of the American Association for Laboratory Animal Science.

Dozens of WFU faculty, staff, and students have participated as well, broadening the pool of individuals with training and experience in speaking with the public about the benefits of animal research.

New program materials developed by WFUPC Program Assistant Chris Corcoran include videos that give students a front-row seat for research activities that visitors can't usually see, including close-up views of cognitive and motor testing with monkeys.

We believe that community outreach and education are crucial to public engagement with – and support of – biomedical research aimed at producing discoveries to improve human health. In addition to the campus-based activities, we have also conducted 11 off campus presentations and workshops.

Such efforts also provide students with information about careers in the biomedical sciences; we plan to continue increasing opportunities for interaction between primate scientists and the community, particularly its youth.

Dr. Allyson Bennett (Departments of Physiology & Pharmacology and Pediatrics), is Assistant Director for Community Outreach and Education; Dr. Peter Pierre (Department of Physiology & Pharmacology), is Assistant Director for Visiting Scientist Program at WFUPC.

Dr. Bennett is also the organizer of the North Carolina Chapter of **Speaking of Research**, a campus-oriented national group that seeks to provide accurate information and resources about the importance of animal research in medical science.

Find out more about Speaking of Research online at **www.speakingofresearch.com**, or look for them on Facebook.

Learn more about the WFU Primate Center online at **www.wfubmc.edu/WFUPC.**

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To make an online gift to Pathology, go to **www.wfubmc.edu/Giving-to-WFUBMC.htm.** In the designation field, please note "Pathology Discretionary Fund."

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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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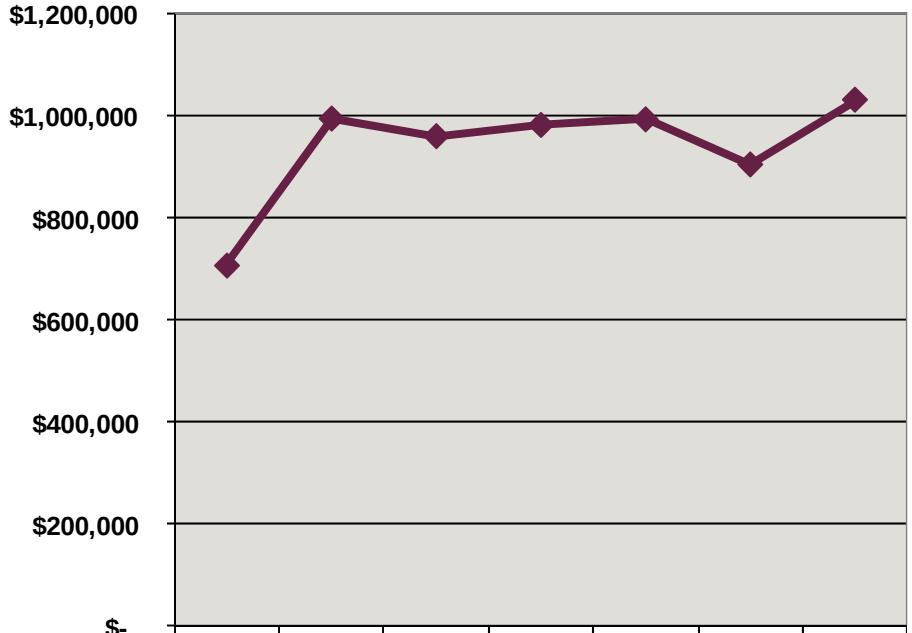
DEPARTMENT OF PATHOLOGY INVESTMENT IN BASIC AND CLINICAL RESEARCH FY 2003-2010



	2003-04 Actual	2004-05 Actual	2005-06 Actual	2006-07 Actual	2007-08 Actual	2008-09 Actual	2009-10 Forecast
R&D investment	$704,282	$992,492	$958,009	$979,836	$990,914	$902,553	$1,029,497