



PATHOLOGY inSIGHT

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

Dr. Woodruff retires after 31 years

Dr. Ralph "Pete" Woodruff retired over a year ago, but you can still find him here in the department of offices from time to time, attending conferences or stopping by to chat with colleagues.

When not accumulating CMEs to maintain his licensure, though, he enjoys frequent travels. With his wife Nancy, he's been to the Yucatan several times. "We're trying to make ourselves tired of the beach," he says. They also have traveled to Germany to visit their son, his wife (both doctors), and their

four children, and plan to return there as often as they can. They also enjoy spending time with their family here in the States.

Now that he's retired, Dr. Woodruff finds that he thoroughly enjoys attending conferences with colleagues – much more than he did when he was still in practice. "It's totally unstressful," he says. He's enjoyed finding opportunities to explore areas of pathology that are new to him, and not worry so much about focusing on assimilating new diagnostic techniques and



clinical information as rapidly as possible.

A graduate of the Citadel, Dr. Woodruff earned his MD in 1965 from Thomas Jefferson Uni-

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New machinery streamlines lab testing

The steady hum and click of robotic arms picking up test tubes, setting them on conveyors, and lifting them into processing machines adds to super-efficient visual effect of the tubes moving smoothly down the line. The assembly lines and conveyor belts of the department's new Beckman-Coulter integrated sample handling system

give the laboratory processing area the feel of a tiny factory.



A robot arm plucking a tube from its holder for uncapping and processing in the clinical laboratory's new integrated sample handling system.

Right now the system is running in parallel with the existing lab machinery as the final calibrations, troubleshooting, and staff training are completed, but is expected to come online this spring. The entire setup is completely hands free: technicians place the tubes in a wire rack and the machine takes over. No one touches them again from the time the robot arm plucks each tube and puts it into a holder – called a "puck" – and it is sent down the line, un-

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COMING UP IN OUR NEXT ISSUE

- *Dr. St. Clair retires after four decades*
- *Meet our newest faculty members*
- *Awards, honors, promotions in the department*

Find us online at

<http://www.wfubmc.edu/pathology/alumni/>

First Year Pathology Residents

Dr. Elena McNeill completed her MD degree at Saratov State Medical University in Saratov, Russia, in 2000. In 2003, she received her degree in Otolaryngology after completing her residency at the Russian State Medical University in Moscow. Later that year, Elena moved to the United States, learned to speak English, and took the USMLE in 2004. In 2006, Elena moved to Winston-Salem and began a Research Fellowship in Regenerative Medicine, focusing primarily on the regeneration of salivary glands for cancer patients who have experienced severe radiation treatments. After spending two years in Dr. Atala's group, Dr. McNeill discovered she had a passion for pathology.



Elena enjoys figure skating and participated in the Russian Olympic Figure Skating Training program. She also enjoys traveling, exploring North Carolina, snow skiing, and golf. Elena has a husband, Douglas, a son, Andy, age 3, and is expecting a second child.

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Dr. Kyle C. Mills attended UNC at Chapel Hill and received a BS in Biology. He received his MD degree from UNC School of Medicine and received a Sarah Kenen Medical Scholarship. He was



a volunteer with the Mental Health Association in Orange County as an adult advocate; and with Campus YMCA Hype Program as a tutor in an Americorps project for children in a low income housing project. He is proficient in Spanish and enjoys guitar playing and fly fishing.

Dr. Brooks Smith completed his undergraduate education at the University of Tennessee with a BS in Spanish and Chemistry and received his MD degree from East Tennessee State University College of Medicine in Johnson City. Before



medical school, he taught eighth grade Spanish and was a volunteer translator at Quillen College of Medicine in Tennessee. He and his wife, Melissa, grew up in Utah and

are the proud parents of three sons and one daughter; they are expecting another child soon. His hobbies include coaching his sons in athletics, teaching them to be bilingual, reading, mechanic work, and home remodeling.

Dr. Anthony Snow earned a BS in Chemistry at Marquette University in Milwaukee, WI, where he was awarded an Ignatius Scholarship and received the Merck Award for chemistry as well



as an honors diploma. He began medical school at Creighton University in Omaha, NE, in 2001 and did a summer project on molecular diagnostic techniques involving Lynch Syndrome. Between his second and third year, he did three additional years of basic science research. He enjoys spending time with his two children, his wife Amanda, and his dog Jezebel (an adorable black pug). He also enjoys music, both listening and playing, home projects such as woodworking and welding, and an occasional game of pool.

2008-2009 Pathology Fellows

Cytopathology: Dr. Allen Perkins will be easily recognized as he completed the AP/CP residency program in our department in June of 2007, serving as Chief Resident during his final year. Since leaving



in 2007, Allen has been the Oncologic Surgical Pathology Fellow at Fox Chase Cancer Center in Philadelphia. He enjoys college athletics and playing golf, and with his wife, Katie, enjoys cooking and wine collecting.

Dermatopathology: Dr. Nicole Balmer received a BA from the Birmingham-Southern College and her MD degree from the University of Alabama School of Medicine. Dr. Balmer completed



residency at the University of Colorado Health Sciences Center in Denver. She was House Staff Association President during her last year of residency. Following residency, she completed a surgical fellowship at the University of Alabama School of Medicine. During

1996-1997, Dr. Balmer worked with hospice patients in Mother Theresa's organization in Calcutta, India, and during 1997-1998, worked in an orphanage in Zimbabwe. She has two children and her interests include home remodeling, painting, drawing, running, and reading.

Forensic Pathology: Dr. Christopher Tape received a BA from the University of Colorado with a degree in Molecular, Cellular and Developmental Biology, followed by Medical School at



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New Molecular Pathology Students



Xin Bi received her Bachelor of Medical Sciences (Clinical Medicine) in 2008 from Wuhan University in the People's Republic of China.



Mingxia Liu received her Bachelor of Medical Sciences (Basic Medical Sciences) in 2008 from Peking University in the PRC.



Caleb Lord earned a BS in Premedical Chemistry at Bob Jones University in Greenville, SC, in 2006.



Stephanie Marshall earned a BS degree in Food Science and a BA in Chemistry at North Carolina University in Raleigh, NC, in 2008.

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the University of New Mexico. In 2008 he completed an anatomical and clinical pathology residency at the University of Vermont-Fletcher Allen Health Care. Dr. Tape – or "Topher" – enjoys kayaking, mountain biking, ice hockey, and snowboarding.

Hematopathology: Dr. Changlee Pang received her MD degree from Kyunghee University School of Medicine in Seoul, South Korea. She received an Intern of the Year award when she finished a transitional year in Korea. She moved to the States the next year and became involved in research in tumor biology here at WFUBMC for a short period before

PHD PROGRAM GETS NEW NAME

In November 2008, the Graduate Faculty of Wake Forest University approved a name change for the department's PhD program; "Molecular and Cellular Pathobiology" is now known as "Molecular Pathology."

The new name more clearly conforms to those of similar programs elsewhere in the country, and was adopted to increase the program's visibility and make it more accessible to prospective students who are comparing programs.

The interdisciplinary program was originally called "Comparative and Experimental Pathology," and was supported and administered by the Departments of Pathology and Comparative Medicine since 1969, long before the two departments formally merged. It is currently administered by the department's Section on Lipid Sciences under the leadership of **Dr. John Parks**.

The program matriculates four or five students each year, and several students in the program are concurrently completing three-year research fellowships in Comparative Medicine (see below). Most students take five to six years to complete the degree.

Recent Molecular Pathology graduate **Latanya Scott, PhD**, was part of the research team whose findings indicated that past oral contraceptive use may lower the risk of ovarian and uterine cancers later in life.

Current Comparative Medicine faculty members **Jennifer Cann, DVM PhD**, and **Charles Wood, DVM PhD**, are also graduates of the Molecular Pathology program, as is **Ryan Temel, PhD**, of the Section on Lipid Sciences.

Learn more about the program online at <http://www.wfubmc.edu/lipidsci/graduate/>

beginning her first year of AP/CP residency training at East Tennessee State University in 2004. She was elected chief resident by faculty members for 2006-07 as a third year resident. She presented her research work from ETSU in cytopathology at an international academic meeting in Paris, France in 2006. Her experiences also include a medical mission trip to Micronesia. Her hobbies include hiking, kayaking, traveling, gardening, and spending time with her family.

Surgical Pathology: Dr. Lisa Kim-Shapiro is another familiar



face in the department. She previously completed a research fellowship in Tumor Biology with Dr. Mark Willingham, and prior to that was chief resident while completing her residency here. She and her husband, Dr. Daniel Kim-Shapiro have three children.

The View from the Department Chair

November 3, 1988 was a landmark date in my academic career as I received a letter from the MUSC



Dean at the time, thanking me for agreeing to serve as the "Acting Chairman of the Department of Pathology and Laboratory Medicine."

My newly appointed position as Vice-Chair had suddenly disappeared. It was a critical time in the history of that department as the newly appointed Chair had suddenly died within six months of his appointment, and approximately 30 technical staff had lost their jobs because of hospital budget cuts. Every imaginable emotion was displayed by the department faculty and staff. I was suddenly in charge of a department with a budget that exceeded that of a small university, when at the time my wife did not trust me with the family check book. I survived by utilizing the talents of those around me: a business manager who had been on the job for a number of years, a newly appointed director of laboratory medicine who had just joined the faculty, an experienced course director, and a research director with whom I had closely worked. It was an odd situation to be in charge of faculty who had taught me in medical school and I was now calling them by their first names.

I don't remember doing anything drastic during those first months but treating faculty and residents as I would have liked to be treated. Both groups seemed to calm down fairly rapidly especially after a Christmas party with alcoholic drinks. I was the local boy who had gone off to the big city medical center and had returned to the department I had

grown up in. The administration seemed to be content with the department and so the new Acting Dean with approval of the Board of Trustees offered me the position permanently in August 1989. They met the meager demands I had made for some teaching space and a piece of research equipment. Within several weeks of accepting the position, hurricane Hugo hit Charleston directly Sept 26, 1989.

Department Chairs always have a conflict when there is a natural disaster. Is your first concern the welfare of your family or your department? As a new Chair my first concern was with the department and I decided to go into work and bring my sleeping bag and ride out the storm. There was one problem: I could not convince my wife to evacuate with the children. We lived on a tidal creek such that water normally came into our backyard at high tide. So with the anticipated surge of several feet rising water would be a real problem. As a native of Florida my wife had been through several hurricanes and was content to stay in our house. So the conflict arose - do I remain at work and save the department or go home and save my family? I decided that it is easier to find a new job than a new wife so I went home. So to cut a longer story short, we all survived with daughter no. 1 repeatedly reminding us that she told us to evacuate, daughter no. 2 crying the whole time and son no. 1 sleeping through the whole thing. The surge came within a foot of flooding our house as it did our neighbors. Following the storm, I sent my wife and children to Florida to stay with her mother while I tried to keep my department together.

The intervening years seemed to go by quickly as I had to deal with the faculty I had inherited. I had problems with research fraud on

several occasions, adultery, and combinations of the two. Once after a meeting on research fraud, the University attorney said to me that "there is a lot of sex and money going around and we aren't getting any of it." Faculty members I had inherited were gradually replaced with my own recruits. Not all were successful as one faculty member filed a complaint that he was sexually harassed by a female lab supervisor. He left for another position without following through on his assertion.

During this time it was necessary that I also serve as the Program Director of the Residency Training Program as I was unable to find anyone to accept the responsibility. I had become familiar with the rules governing residency training from my initial dramatic encounter with the ACGME site visitor. We were inspected within a month after I assumed the position of Acting Chair. The problem was that the previous Chair had filled out the Program Information Form (PIF) describing in detail our five year residency program. The only problem was the form should have described a four year program. The site visitor asked me to go in another room and change the PIF to reflect a four year program instead of five. I am sure that he felt sorry for me and the circumstances under which I became Chair as he accepted our hastily changed program. During this time it was becoming to be more difficult to recruit residents as there was a rumor that jobs were not available upon completion of training. This lasted for a few years and into the time I was first at Wake Forest.

The decision to move to another medical school came from a series of events that led me to believe that

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Research News and Highlights

Comparative Medicine: Mechanism suggested for apparent hormone effects on reproductive cancers

A seven-year study of the effects of postmenopausal dietary soy consumption in cynomolgus monkeys may bring researchers closer to understanding why and how oral contraceptive use dramatically lowers the risk of ovarian and uterine cancers later in life. Researcher **Lantanya Scott, PhD**, noted that postmenopausal monkeys who had been given oral contraceptives earlier in life excreted a reduced amount of estrogen. Prior hormone exposure is known to be a factor in cancer risk, and this finding suggests a

possible mechanism for that effect. The study appears in the October, 2008, issues of *Cancer Epidemiology, Biomarkers, and Prevention*. The research team also included **Mark Cline, DVM PhD, Charles Wood, DVM PhD, Thomas Register, PhD, and Nancy Kock, DVM PhD**, all of the Section on Comparative Medicine.

Lipid Sciences Grant Renewed

The Lipid Sciences Research Program was awarded a four-year, \$9.3 million renewal of its funding from the National Heart Lung, and Blood Institute of the NIH. This research program is the longest continuously funded program project here at

Wake Forest. Led by **Lawrence L. Rudel, PhD**, the team includes **Gregory S. Shelness, PhD; John S. Parks, PhD; and Mary G. Sorci-Thomas, PhD**; all of the Section on Lipid Sciences; and **Kylie Kavanagh, DVM**, of the Section on Comparative Medicine.

Tumor Biology Grant Awarded

Kazushi Inoue, MD PhD, of the Section on Tumor Biology, was recently awarded a \$180,000 grant from the Susan G. Komen Foundation for his ongoing work on the tumor suppressing activity of the protein DMP1 and its role in the prevention of cyclin D1-induced breast cancer.

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more opportunities were available to me to build a strong research department at Wake Forest as well as financial opportunities to expand the service areas of the department. Having served as Chair for a number of years, I knew Dr. Bob Prichard well and was surprised by his sudden death in 1995. One of my mentors, Dr. Bill Gardner, had reviewed the pathology department at Wake following Dr. Prichard's death and spoke highly of the opportunities there. When asked by the search committee, I responded and was initially interviewed. However, the search committee eliminated me as a candidate and sent me a letter to that effect. Unfortunately I threw the letter away. Evidently the committee made a selection but when the candidate was negotiating with the Dean it was discovered he did not have Boards in pathology and thus the committee had to begin again from scratch. On a second attempt I was selected as the candidate and when I received the offer letter, I carried a copy to the Dean

at MUSC and asked if he could match the offer. He responded that he could not so I accepted the job in February of 1997 to begin July 1. In the intervening months, the Wake Dean, Jim Thompson, contacted me and asked if I would also serve as the Chair for another department, Comparative Medicine. He did not offer additional salary to go with the increased responsibility, a trend which continues to this day.

The attraction of Wake Forest was the opportunity to build on the successful research base in two departments (Pathology and Comparative Medicine), and to start a research section in Tumor Biology. This would compliment the Comprehensive Cancer Center which was already in existence. The faculty had been "left in the dark" with regard to departmental finances, and were surprised when the financial arrangement Dr. Prichard had with the hospital died with him. The service opportunities were also numerous as reflected in the fact that the department had never had a business manager.

Since those early days, the Wake faculty has made significant progress meeting the challenges of increased service loads, increased residents teaching responsibilities, and exceeding expectations in research funding and productivity. Many of the initial faculty have retired and been replaced by younger, specialized trained and energetic faculty. Those opportunities to build a stronger department are now coming to fruition. I look forward to continuing to build the department under the leadership of a new CEO for the medical center, Dr. John McConnell. I also believe that the next 20 years as Department Chair here will be the most exciting time yet.

-A. Julian Garvin, MD PhD



Faculty Briefs & Promotions



Welcome to **Matthew J. Jorgensen, PhD**, Assistant Professor of Pathology, who recently joined the Section on Comparative Medicine. A graduate of the University of California, Riverside, he completed a fellowship at the New England Regional Primate Research Center at Harvard Medical School and comes to us from UCLA.

Welcome to **Shadi Qasem, MD**, Assistant Professor of Pathology.



Dr. Qasem completed his medical degree and internship in Jordan; his AP/CP residency and a fellowship in Surgical Pathology at the University of Iowa Hospitals and Clinics; and a Sort Tissue Fellowship at Emory University in Atlanta.

Farewell to **Ellen Riemer, MD JD**, of Forensic Pathology, who recently left to accept a position at the Medical University of South Carolina in Charleston.



Promoted to Professor: **Nancy Kock, DVM PhD**, of Comparative Medicine



Promoted to Associate Professor: **Simon Bergman, MD**, of Anatomic Pathology

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versity and completed residency training at Vanderbilt University and the University of Pennsylvania. After a two-year stint in the Army, he went to Emory University before joining our department in 1979. He contemplated joining a private practice, but is happy to have chosen academic medicine. "Working with the residents has given me particular satisfaction," he says. He's enjoyed watching the new people come in over the years and acquire the diagnostic and professional skills and judgment that they need.

Residents have valued their time with him as well; in 2008 Dr. Woodruff was honored by the Department of Pathology House Staff with a Faculty Teaching Award in recognition of his outstanding dedication to teaching and inspiration as a role model.

All in all, Dr. Woodruff says he has enjoyed the transition into retirement, and in particular notes that Ms. Kathy Clark in the benefits office was extremely helpful with some of the details of the process.



Promoted to Assistant Professor: (above, left to right) **Susan Appt, DVM**, and **Kylie Kavanagh, DVM**, of Comparative Medicine; and (at right) **Ryan Temel, PhD**, of Lipid Sciences



Pathology inSight is a publication of the Wake Forest University Baptist Medical Center Department of Pathology and distributed to the alumni of its training and graduate education programs. Please send address or other updates to us at the address on the back page, or to pathalumni@wfubmc.edu

Training Opportunities in Pathology Dept.

Comparative Medicine and Clinical Veterinary Programs: Since 1964, the department has offered a Master's Degree in Comparative Medicine, and an NIH Training Grant has existed here since 1959 to support post-DVM training fellowships in Comparative Medicine. Clinical Residencies in Veterinary Pathology, Laboratory Animal Medicine, and Nonhuman Primates are also available. **Dr. Nancy Kock** is the contact person for these programs.

Research Training Programs and Opportunities: The Integrative Lipid Sciences, Inflammation, and Chronic Diseases Program offers research training for pre-doctoral students in the growing discipline of lipid sciences. **Dr. John Parks** has further information.

Pathology Residencies and Fellowships: The Pathology Residency Training Program, under the leadership of **Constance Stanton, MD**, is a four-year House Officer program

in Anatomic (AP) and Clinical Pathology (CP). In addition, the department offers one fellowship each year in Cytopathology, Dermatopathology, Forensic Pathology, Hematopathology, and Surgical Pathology. More information, and fellowship applications, are available online at http://www.wfubmc.edu/pathology/house_officer.

Medical Technology: The Program in Medical Technology is one of the oldest professional schools of NCBH and the Bowman Gray School of Medicine of Wake Forest University. It's an accredited two-year program that offers professional training in clinical laboratory science; in addition, the program trains second-year pathology residents in laboratory techniques and procedures.

More information about the program is available online at <http://www1.wfubmc.edu/pathology/medtech/>.

Summer Research Opportunities

There are several summer research opportunities for undergraduate science majors in Lipid Sciences and Tumor Biology labs this year: The goal is to introduce students to laboratory work, and to help them gain confidence in future endeavors in basic science research.

The Summer Research Opportunities Program is sponsored by the Graduate School of Arts and Sciences and the faculty of the School of Medicine at Wake Forest University. More information online at <http://graduate.wfu.edu/summerprograms/SROPoverview.html>.

Find out more about our training programs online at

<http://www.wfubmc.edu/pathology/training/>

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capped, and processed and placed on another rack at the end of the line. When full, each rack of 3,000 tubes is placed into storage. The samples remain available for five days in case any are needed for additional analysis or confirmation; the machine can quickly identify a particular tube, pull it out of storage, and put it back in line for processing in the event that new lab tests are ordered for that patient.

The new system is expected to have faster turnaround times, explains Clinical Lab Director **Dr. Marcus Simpson**, but a chief advantage is its

ability to balance each load of tests more efficiently. "The pace is more even," he said. Load balancing via the array's two centrifuges ensures



Trays of test tubes at the end of the line awaiting storage.

that there are no bottlenecks, and a variety of specimen types can go down a single line as soon as they arrive in Central Processing. Because everything is completely standardized, a wide range of tests are performed in the same area – immunoassays, cardiac markers, and most of the chemistry, hematology, and coagulation studies.

Some workstations and instruments were already automated, according to Assistant Lab Manager **Edelina Oliphant**. Bar codes on the tubes, for example, are old hat, but the factory-like precision of the new assembly line makes training and use much simpler and more consistent.



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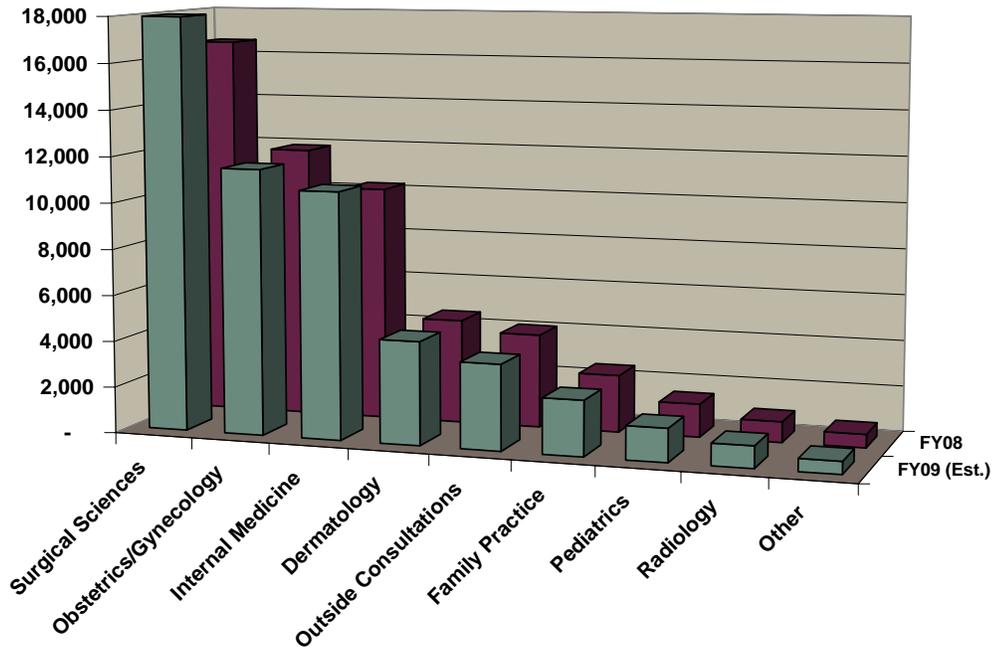
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Pathology Referral Sources: All Specimen Types



The Pathology Department continues to process more specimens each year. Projections for FY 2009 indicate that total specimens processed are up by two percent overall.