The explosion of biomedical science has created a need for streamlined research operations at academic health centers. Like many others across the nation, Detroit’s Wayne State University (WSU) has established an academic research organization to improve its infrastructure and expedite clinical development.

University Research Network Inc. (URNI) is a private, nonprofit corporation that was incorporated in January 2002. Owned by The Fund for Medical Research and Education (a nonprofit corporation affiliated with the WSU School of Medicine), University Research Network Inc. will provide accelerated clinical development services to the pharmaceutical, biotechnology and medical device industries, while promoting the safety and well-being of patients, and the academic mission of the WSU School of Medicine.

In the past, all contract clinical research was filtered through an extensive hierarchical system. The new operation is expected to dramatically shorten the lead time of contract research, reducing development time and allowing new therapies to be brought to the market faster. The academic research organization will also increase commercialization potential of WSU discoveries by conducting pre-clinical studies to support an Investigational New Drug Application (IND) submission and conduct Phase I clinical studies that would lead to a viable commercial venture, thus bridging the gap between discovery and licensing.

Doctors and faculty members are not the only people interested in high quality clinical research. University Research Network allows a single contact point for many stakeholders in the health care enterprise, including pharmaceutical companies, corporate purchasers of health care, medical professionals, inventors, managed care organizations, investors, and private researchers—all of whom have something to add to the advancement of clinical research and medical discoveries.

Nobody understands this better than URNI’s management team: President and CEO Roy Baynes, MD, PhD; Chief Operating Officer and Vice President of Clinical Operations Mayland Chang, PhD; and Chief Administrative Officer and Vice President of Business Operations, Beverly Simmons, MBA. Members of the leadership team have spent their careers conducting and facilitating multidisciplinary research–Dr. Baynes in the traditional academic health care setting, Dr. Chang in private industry, and Simmons in the health care industry.

Dr. Baynes is a professor of medicine and oncology at the WSU School of Medicine. Joining University Research Network Inc. from the Barbara Ann Karmanos Cancer Institute, Dr. Baynes brings 20 years of basic and clinical research experience in an academic setting. He was recently recruited to Amgen Inc., a large biotechnology company in California, but has established a solid infrastructure for URNI’s business operations to continue. A search for a new president will begin soon. Dr. Chang had worked as a senior scientist at Pharmacia & Upjohn Inc. for nearly a decade. Before that, she was a senior research chemist at the Dow Chemical Company for four years. Beverly Simmons brings 21 years of health care experience from the Detroit Medical Center, including external business development, financial analysis, cost management and program development.

“We are trying to fix the scientific bottleneck that occurs as scientific developments get caught in bureaucracy, stalling their usefulness to the public,” said Dr. Baynes. “The mission of this enterprise is to promote the efficiency, quality and excellence of research activities at the WSU School of Medicine and to provide quality clinical development services.”

The contract research organization will serve many functions:

- to require institutional review board (IRB) approval of research
- to provide a central organization to streamline operating procedures related to contract research
- to streamline administrative procedures related to contract research
- to allow entrepreneurs and new investigators to contract and partner with academic experts
- to establish and participate with a network of scientific investigators outside the university setting
- to have a central organization for all contract clinical research conducted at the School of Medicine
- and to attract further funding for clinical research trials.

John Crissman, MD, dean of the WSU School of Medicine, is pleased that the University Research Network will directly link funding partners with WSU faculty members. “For the first time, people from outside the university can bring their ideas to Wayne State experts and contract with the academic research organization to perform research projects. The ‘idea people’ may not have expertise in study design and research protocols, but the WSU faculty members will partner with them to provide the necessary expertise. Furthermore, WSU will continue to abide by the most stringent standards for ethics and patient safety. URNI combines fresh ideas with proven expertise,” Dr. Crissman said.

**University Research Network to Speed Clinical Trials at Wayne State**

**Inside**

2. Hormone Replacement Therapy Re-evaluated in Women’s Health Initiative

4. Biosensor Machine Acquired to Automate Research

6. Baroreceptor Reflex Studied By Two Faculty Members

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New Graduate Research Assistantships

Assistant Dean for Graduate Programs Ken Palmer reports that the School of Medicine faculty were very successful in the recent university competition for graduate research assistantships. Nine of the 17 submitted applications to the Office of the Vice President for Research were successful in gaining the assistantship positions for the 2002-2003 academic year. Several faculty were awarded two student positions. See below:

Linda Hazlett, Anatomy & Cell Biology
Bhanu Jena, Physiology/Pharmacology
James Marsh, Internal Medicine/Pharmacology
Larry Matherly, Pharmacology
Ramzi Mohammad, Karmanos Cancer Institute
Jeffrey Taub, Pediatrics
Domenico Gatti, Biochemistry & Molecular Biology

Sharing 2 Positions:

David Evans, Biochemistry & Molecular Biology
Brian Edwards, Biochemistry & Molecular Biology
Hedeel Guy, Biochemistry & Molecular Biology
Timothy Stehmler, Biochemistry & Molecular Biology

Genetics Programs Reaccredited

The American Board of Medical Genetics has awarded a five-year reaccreditation to Wayne State’s training programs in clinical cytogenetics, clinical molecular genetics and PhD medical genetics. Prior to this process, the residency program was accredited by the Residency Review Committee of the Accreditation Council for Graduate Medical Education in 2001. Five years is the maximum time period that can be awarded, and WSU now has full accreditation for all of its medical genetics training programs. The newest program is in PhD medical genetics. Such professionals are expected to take responsibili-

Notes

WSU Employees, Students Eligible for Discounted Eye Care
Wayne State University employees and students are eligible for discounted eye care services at the Krause Eye Institute, located in Hutzel Hospital. A 20 percent discount will be applied to everything from routine eye exams, to contact lenses or vision correction surgery. For more information, call (313) 993-8622.

Friends Elect New Officers
The Friends of the Wayne State University School of Medicine was established 30 years ago to stimulate, support and encourage activities helpful to the school. This spring, they elected new officers for the 2002-2003 year.

President: Cecilia Whapham
Vice President: Patty Mack and Roberta Sokol
Recording Secretary: Vesta Dajani
Financial Secretary: Thelma McCravy

Geneticist Dr. Susan Redge, MD, director of the Center for Molecular Medicine and Genetic Health, has been invited to the American Heart Association’s annual meeting in New Orleans to discuss federal funding for cardiovascular research and state-wide programs in the fields of congenital heart disease, stroke, obesity and community use of defibrillators.

Stephen Krawitz, PhD, professor in obstetrics and gynecology, the Center for Molecular Medicine & Genetics, and the Institute for Scientific Computing, has been appointed to the College of Reviewers for the Canada Research Chairs Program.

Omer Kucuk, MD, professor of internal medicine and oncology, was selected to be on the editorial board of Cancer Epidemiology Biomarkers and Prevention, a monthly journal published by the American Association for Cancer Research (AACR).

Carla Nolan, first-year neuroscience graduate student, received a scholarship from the National Sciences and Engineering Research Council of Canada. She is the second research assistant from Dr. David Rosenberg’s laboratory to receive this prestigious award.

Susan Redge, MD, fourth-year resident in psychiatry and behavioral neurosciences, was sponsored by Pfizer Inc. to represent Wayne State University at the annual meeting of the American Psychiatric Association in Philadelphia in May.

Varsha Karamchandani, MD, third-year resident in psychiatry and behavioral neurosciences, was selected to participate in the Wyeth Resident Reporter Program. With Wyeth sponsorship, Dr. Aujini attended the annual American Psychiatric Association meeting in May to learn more about diagnosis and treatments in psychiatric medicine.

Hassan Amirikia, MD, assistant professor in family medicine, is president-elect of the Michigan State Medical Society. His current positions also include president of the Detroit Medical Center’s medical staff and chief of staff at Hutzel Hospital.

Seemant Chaturvedi, MD, associate professor of neurology, gave a lecture at the American Academy of Neurology meeting on ‘Carotid Endarterectomy and Stenting for Stroke Prevention.’

Silvana Horenstein, MD, pediatrics fellow, presented her research work, ‘Diagnostic Efficacy of Transcranial Echocardiography as Pre-Cardioreversion Screening for Thrombi in Young Congenital Heart Patients with Congenital with Atrial Flutter/Fibrillation’ at the 2002 Pediatric Academic Societies’ scientific meeting held in May.

Varsha Karamchandani, MD, third-year resident in psychiatry and behavioral neurosciences, was sponsored by Pfizer Inc. to represent Wayne State University at the annual meeting of the American Psychiatric Association in Philadelphia in May.

Peter Karpawich, MD, professor of pediatric medicine and director of the Cardiac Electrophysiology Laboratory at Children’s Hospital, was reappointed to the National Committee on Congenital Cardiac Defects of the American Heart Association. In May, he was an invited chairperson and faculty at the 23rd scientific sessions of the North American Society of Pacing and Electrophysiology, where he presented research on “Site-specific Right Ventricular Implant Pacing to Optimize Paced Right Ventricular Function.”

In addition, he was an invited participant in the American Heart Association’s 2002 Congressional Lobby Day. Along with other physicians, nurses and American Heart volunteers, Dr. Karpawich met with Michigan senators and congressmen to discuss federal funding for cardiovascular research and state-wide programs in the fields of congenital heart disease, stroke, obesity and community use of defibrillators.

Pill Not Linked to Breast Cancer
Women who use oral contraceptives are at no greater risk for breast cancer, according to a New England Journal of Medicine report, co-authored by Dr. Michael Simon, associate professor of internal medicine and oncology.

This provides reassuring news to 80 percent of U.S. women who have used birth control pills and wondered about the link to cancer. Factors such as duration of use, age at first use and estrogen dose were all considered, and none of them made a difference. This study is the largest to date of African-American women, and results showed no increased risk in that subgroup either.

Next, the research group plans to publish data on breast cancer risk among women who have used both the pill and hormone replacement therapy.

Kidney Cancer Study Underway
Dr. Kendra Schwartz is participating in a National Cancer Institute study to help explain an increased incidence of kidney cancer in the United States. Furthermore, this is the first major effort to examine ethnic disparities in the disease that is becoming more prevalent in African-American communities.

Wayne State will recruit about 2,000 participants by phone. People with and without kidney cancer will be asked questions about lifestyle, environmental and other possible risk factors, and other information that may provide insights into the causes of this cancer.

Hutzel Hospital Takes Shape
The new Hutzel Women’s Hospital is currently under construction and will be located on two floors of the Harper University Hospital building on John R in the Detroit Medical Center. Construction began in January and is expected to be completed by the end of the year.

The new hospital will house 123 adult beds and 72 neonatal intensive care beds, plus water birth facilities, luxury suites with computer access and private gynecology rooms.

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Dr. Lerner Appointed Associate Dean for Faculty Affairs

Stephen A. Lerner, MD, has been named associate dean for faculty affairs, at the Wayne State University School of Medicine. He will direct administrative issues including promotion and tenure, voluntary appointments and academic credentialing for faculty members in clinical and basic science departments. Dr. Lerner replaces Dr. Liborio Tranchida who established this important role and served for approximately one year before his retirement.

“As a respected physician, educator, researcher and administrator, Dr. Lerner is well-suited for this position. He understands the complex roles and demands of the medical faculty and he has great expectations for his colleagues,” said Dr. John Crissman, dean of the WSU School of Medicine. “As associate dean, he will build appropriate infrastructures and ensure continuing administrative support for Wayne State faculty members to excel.”

During his 16 years of service at WSU, Dr. Lerner has served as professor and vice chief for the Division of Infectious Disease in the Department of Internal Medicine. Through his service on numerous WSU and DMC committees, Dr. Lerner has intimate knowledge of the personnel and management procedures at the university. Most recently, he held positions on the Promotion and Tenure Committee (faculty representative since 1994), Committee for Protected Time for Research, and Research Mentor Advisory Committee—all within the Department of Internal Medicine.

“I plan to advance initiatives that support faculty productivity and satisfaction,” said Dr. Lerner. “I am in favor of research mentorship, programs that allow clinical faculty members protected research time, separate from clinical responsibilities, and fair promotion and compensation practices.”

With a particular research interest in antibiotic resistance, Dr. Lerner’s work is at the forefront of global health threats, as noted by the World Health Organization. He educates physicians and the public about the dangerous overuse and misuse of antibiotics through his active involvement in such initiatives as the Michigan Antibiotic Resistance Reduction Coalition, Alliance for the Prudent Use of Antibiotics, and the Pan American Health Organization Technical Advisory Group on Antibiotic Resistance in Latin America. Additionally, he serves on the editorial boards of several important journals including Antimicrobial Agents and Chemotherapy, Drug Resistance Updates, and the European Journal of Clinical Microbiology and Infectious Diseases.

Dr. Lerner earned a bachelor’s degree in biochemical sciences and a medical degree from Harvard University. He completed an internship and residency in medicine at Peter Bent Brigham Hospital in Boston, and later served biochemistry and infectious disease fellowships at the National Institutes of Health, Stanford University, Boston City Hospital and Massachusetts General Hospital. Dr. Lerner was a faculty member at the University of Chicago from 1972 until 1986, when he joined Wayne State University and the Detroit Medical Center.

“Dr. Lerner has more than 80 journal articles, 12 book chapters, and numerous abstracts and invited lectures.”

David Rodenbaugh Wins Professional Opportunity Award

Third-year graduate student David W. Rodenbaugh is learning, teaching and presenting research—and he’s being rewarded for it. The American Physiological Society recently honored Rodenbaugh at the society’s Experimental Biology meeting this spring with a Caroline tum S. Dean/Elkebrandt Professional Opportunity Award. At the meeting, Rodenbaugh presented two papers—one regarding his bench research, for which he received the award, and the other on teaching methods.

“I’ve been working with David in both the research and teaching laboratories for seven years and I can tell you that he is remarkable. David is combining contemporary molecular approaches with whole animal integrative physiology to understand ventricular arrhythmias,” said Dr. Stephen DiCarlo, professor of physiology and Rodenbaugh’s mentor. Dr. DiCarlo recruited his former lab technician from the Northeastern Ohio Universities College of Medicine to become a research assistant and graduate student in the physiology program at Wayne State.

While Dr. DiCarlo’s research laboratory is concerned with understanding cardiovascular regulation in conscious animal models, Rodenbaugh is learning to employ molecular techniques as a tool for explaining observed physiologic changes for various pathologies. Specifically, Rodenbaugh is examining molecular changes in the hearts of spinal cord transected rats.

Rodenbaugh says his findings in animals have great relevance for humans. “There is a large population of people with spinal cord injuries living longer today. These individuals have the same, if not greater risk for developing cardiovascular disease as able-bodied individuals. Symptoms like elevated heart rate and hypertension can go unnoticed for a long time. That is why cardiovascular disease is often called the silent killer. We are just now realizing that the molecular changes following spinal cord injury may contribute to the development of cardiovascular disease. Understanding these changes will improve the care and quality of life for individuals with spinal cord injuries,” he said.

Just as he’s learning from his own work, he’s figuring out ways to explain it to others. He is always creating computer animations of cellular processes or building visual models with PVC piping and balloons to improve our teaching methods for high school as well as graduate and medical students,” Dr. DiCarlo said. He is also interested in testing the effectiveness of these learning tools. For example, he was involved in a study on the usefulness of peer instruction. He found that students who were allowed to discuss test questions in pairs for just one minute were far more likely to answer correctly and retain that knowledge.

“Simply allowing students to talk in class dramatically improves the way they learn,” he said. “When you’re teaching advanced biomedical concepts, you have to think a little differently.” With an eye on a future faculty position, that’s what he’s trying to do.
**WSU Researchers Win Three of Four BCBSM Foundation Awards**

Wayne State University researchers won three of four Excellence in Research Awards from the Blue Cross and Blue Shield of Michigan Foundation. Awardees Mousumi Banerjee, PhD, Kendra Schwartz, MD, and Robert Welch, MD, were each awarded $10,000 to conduct clinical and health policy research. Each year, BCBSM funds two awards for physicians (MD or DO) and two awards for researchers with non-medical degrees (PhD, DrPH).

Dr. Mousumi Banerjee, associate professor in the Center for Healthcare Effectiveness Research, received the BCBSM Foundation Excellence in Clinical Research Award for her project titled “Recursive Partitioning for Prognostic Grouping of Patients with Clinically Localized Prostate Carcinoma.” This work, published in the journal Cancer in 2000, introduced a clinical decision model that helps physicians make rational treatment decisions for men with localized prostate cancer. The study identified patients who have the greatest potential to benefit from radical prostatectomy based on their age, PSA, and other clinical characteristics, versus patients who may require advanced adjuvant therapies. (See story below.)

Dr. Kendra Schwartz, associate professor of family medicine, received the BCBSM Foundation Excellence in Research Award for Physicians for her project titled “Prostate Cancer Treatment Complications Among Detroit Area Men.” This study, published in the journal Cancer in 2002, provided a population-based depiction of treatment outcomes for men with localized prostate cancer. Patients were questioned about the side effects and outcomes associated with their cancer treatment which consisted of either radical prostatectomy or external beam radiation therapy. The paper concluded that the incidence of complications and side effects associated with these treatments is greater than what has been previously reported, and physicians and patients need to use this population-based evidence in discussing the most appropriate course of treatment.

Dr. Robert Welch, assistant professor in emergency medicine, received the BCBSM Foundation Excellence in Research Award for Physicians for his project titled “Prognostic Value of a Normal or Nonspecific Initial Electrocardiogram in Acute Myocardial Infarction (AMI).” This study, published in the journal of the American Medical Association in 2001, found that AMI patients with initially normal electrocardiograms had substantial mortality rates. Dr. Welch and his colleagues concluded that some patients may be inappropriately discharged from the hospital after seemingly normal ECGs provide false confidence in a healthy prognosis. The 2002 Excellence in Research Awards recognize work that contributes to improving health and medical care in Michigan.

**Analytical Tool Helps Clinicians Decide on Cancer Treatments**

It may seem impersonal, but a physician’s treatment recommendation for cancer patients draws its foundation in statistics. What are the odds of survival? What is the likelihood of success with various treatments? How many people benefit from adjuvant therapies? With the complex confounding factors associated with cancer diagnosis, statistical tools make it easier for physicians and patients to predict outcomes and develop rational treatment plans accordingly.

Such analytical tools are becoming more valuable and reliable thanks to the work of Mousumi Banerjee, PhD, an associate professor and biostatistician in the Center for Healthcare Effectiveness Research (CHER). Dr. Banerjee was recently honored with the 2002 Blue Cross Blue Shield of Michigan Foundation Excellence in Research Award in the area of clinical research for her article “Recursive Partitioning for Prognostic Grouping of Patients with Clinically Localized Prostate Carcinoma.” Recursive partitioning is a statistical classification tool that can outperform conventional regression techniques in terms of prediction accuracy, when there are complex interactions among risk factors.

Dr. Banerjee has developed a “binary decision tree” that guides physicians in making prudent decisions about patients who’ve had radical prostatectomy. Her article, published in the journal Cancer in 2000, recognized that in order to apply adjuvant therapies rationally, there is a need to predict disease-free survival shortly after surgery. With her recursive partitioning technique, Dr. Banerjee says physicians can define which patients will have the greatest potential to benefit from advanced treatment alternatives and which patients can rest easy after surgery.

She says the goal is to extract meaningful prognostic groups that are characterized by common risk factor values, which become intuitively apparent to clinicians. The findings generated may significantly impact cancer chemoprophylaxis.

As part of a broader implication, her work introduced a unique analytical method that facilitates the analysis of complex data in a manner that is intuitively apparent to clinicians. The path toward that outcome is paved with sound decision-making skills on the part of the physician and the patient,” Dr. Banerjee said.

“Our unified goal is disease-free survival for prostate cancer patients. The path toward that outcome is paved with sound decision-making skills on the part of the physician and the patient,” Dr. Banerjee said.

This binary decision tree guides cancer treatment choices.
Technology Provides Alternatives to Traditional Classroom Lectures

The classroom is changing dramatically. For students who are afraid of voicing the wrong answer, and for professors who are unsure about the students’ understanding of the topic, instructional technology is making a difference.

In a lecture hall with 250+ students, Associate Professor Matthew Jackson, PhD, had a hard time gauging whether or not students were grasping the technical biomedical material he presented. He now enhances lectures through the use of wireless handheld devices and specially designed software that allows him to track learning in real-time.

After discussing a point, he might ask students to read a sample test question, and enter their multiple-choice answer on their personal digital device (PDD). The students anonymously enter an answer and Dr. Jackson sees the cumulative results in bar graph form on his computer screen in real-time. If the majority of the class gets the answer correct, he moves to the next subject. If a portion of the class answers incorrectly, he knows to provide further clarification and explanation with specific attention to the wrong answer choices that were selected. “It provides immediate feedback for the students and teachers,” said Dr. Jackson, who has been interested in technology-enhanced medical education for some time. He has been teaching immunology and microbiology courses to students since he arrived at WSU in 1989.

“Medical students have many different learning preferences,” Dr. Jackson said. “We decided to stop giving information in the same old way. First, we digitized 80 hours of immunology, microbiology and infectious disease lectures and distributed CD-ROMs to students on the first day of class. In addition, we provided access to the School of Medicine’s E-lab website that contains diagnostic modules, previously used tests, and supplemental resource materials. We essentially handed them the curriculum and gave them freedom to review it at their own pace, look ahead, and learn the material when and where they are most comfortable. That frees up lecture time to clarify the points that are most complex or to discuss the matters that students find most interesting.”

This effort to transform the classroom environment to a more interactive experience began with an instructional equipment grant from the Office of the Provost in 2001. Those funds allowed Dr. Jackson to team up with CampusMobility to customize their software platform and wireless hardware for interactive classroom sessions, small group problem-solving exercises, computer-based testing and real-time faculty evaluations.

A.C. Ganger, whose company specializes in integrating web applications, wireless networks and handheld devices for higher education and healthcare, said the CampusMobility initiative at WSU expands the learning community and appeals to a diverse student population. Their platform is designed to carry through the first and second year pre-clinical educational applications, over the next two clinical years to track clerkships and stay in touch with faculty, and on to the clinical environment during residencies and fellowships to connect with back-end hospital systems.

“If instructors provide each medical and graduate student with a PDD preloaded with course content and relevant biomedical software during the pre-clinical years, students could have convenient access to clinical images, molecular diagrams, review questions, lecture slides, audio, video and many other resources,” Ganger said. “Dr. Jackson is taking the lead in making this type of learning environment a reality. Meanwhile, other major universities are jumping onboard and using this evolving technology to benefit instructors, reduce costs, enhance communication among students, faculty and administrators, and reduce the learning-curve of using a handheld in the clinical environment.”

Another useful application of the PDDs is preparation for the United States Medical Licensure Exam (USMLE), which is required of all medical students. As Dr. Jackson explains, the USMLE is completely computer-based. If students spend their entire career filling in scantoon sheets, there may be a high level of anxiety when they have to take a comprehensive computerized test. What’s more, having preloaded question banks to practice from on the handheld helps students make better use of their tight schedules and they get through much more material.

Year II student Keith Santiago participated in a USMLE review session that utilized PDDs and immediate student/teacher feedback. He said the interactive element is a welcome one, because it allows students to guide the discussion without speaking up individually. Likewise, student Joe Liu was interested in the technology component of the review, especially since physicians anticipate having to use computerized Physician Desk References, patient charts, and diagnostic tests in the near future.

Anand Ganger brought the CampusMobility initiative to WSU with the help of Dr. Matt Jackson who is interested in innovative learning environments.

Keith Santiago answers review questions on a handheld device that tracks and charts students’ collective responses.

Medical students Julie Wright and Laura Thomas worked with Dr. Jackson on a presentation about technology enhanced education. They demonstrated the pocket PCs at the Association of Medical School Microbiology and Immunology Chairs Educational Strategies Workshop this spring.
Neural Networks in Brainstem Are Involved in Blood Pressure and Breathing Regulation

Dr. Jeffrey Potts was recruited to WSU two years ago to study how the brain controls blood pressure and breathing. Although we generally think of these as functions of the circulatory and respiratory systems, Dr. Potts studies the cellular events that occur in neural networks in the brainstem.

An interest in neural networks, neuronal excitability and synaptic transmission led Dr. Potts to study the cellular events involved in mediating the arterial baroreceptor reflex. The arterial baroreflex is our primary short-term controller of blood pressure and although the fundamental physiology of the baroreflex has been studied for over a century, Dr. Potts is expanding on these studies to look at the cellular events and synaptic interactions between sensory signals in the brainstem as they occur in animals.

Dr. Potts explained, “The brain has typically been studied as a black box with researchers recording what goes into it and what comes out as a consequence. Investigators who are interested in the cellular properties and synaptic interactions of brainstem neural networks have traditionally relied upon in vitro approaches. However, in vitro approaches such as tissue slices or single cells in isolation cannot explain how peripheral sensory input alters neural network activity in the brain. The brain is constantly being bombarded with sensory input from the heart, the lungs, the GI tract, the oral cavity, pain fibers—the list goes on. This sensory input first is processed in the nucleus tractus solitarii (NTS), the major sensory nucleus in the brainstem, before being synaptically relayed to other areas of the brain involved in cardiorespiratory control. We study the activity of these neural networks in response to input from multiple sensory modalities or in response to a single manipulation. The goal of my laboratory is to understand the electrical properties of these neurons and the role of excitatory and inhibitory interneurons in the NTS on sensory processing as it pertains to cardiovascular and respiratory regulation.”

With funding support from the National Institutes of Health, Dr. Potts is taking this work one step further. Utilizing an innovative preparation of the isolated brainstem, Dr. Potts uses physiological stimuli to activate sensory afferents in order to examine their effect on the excitability of neurons within brainstem neural networks. “Our results will provide new information regarding the synaptic processing of sensory inputs by NTS neurons. This knowledge may help us to better understand the central mechanisms that alter arterial baroreflex control of cardiovascular function in both health and disease,” he said.

Dr. Potts, who was recruited from the University of Texas Southwestern Medical Center, earned his doctoral degree in physiology from the University of North Texas Health Science Center. He completed his postdoctoral training in the Department of Biomedical Engineering at Johns Hopkins University School of Medicine and the Department of Physiology at the University of Texas Southwestern Medical Center. He has expertise in autonomic neurophysiology, electrophysiology, exercise science, and genetics. Recently, he was honored with the American Physiological Society’s Shih-Chun Wang Young Investigator Award, which recognizes an individual with outstanding promise in the field of physiological research.

Altered Breathing Systems May Contribute to SIDS

Sudden infant death syndrome (SIDS) is generally attributed to inadequate oxygen supply, or hypoxia. Dr. Potts is investigating a potential cause of SIDS that may be related to the expression of glutamatergic receptors in the central respiratory network.

The respiratory system is responsible for gas exchange between the atmosphere and the blood. The patterning of breathing rhythms is achieved by a neural network in the rostral brainstem called the Ventral Respiratory Group (VRG). When oxygen levels in the blood are reduced, chemosensitive receptors located in our blood vessels are activated and send electrical signals to neurons in the respiratory network to increase breathing. These signals are transmitted to VRG neurons by NMDA (N-methyl-D-aspartate) receptors, a subclass of glutamatergic receptors. In addition, these receptors are necessary to establish normal neural circuits for breathing during development.

Dr. Potts believes that SIDS infants may have alterations in glutamate receptor expression in the respiratory network that predisposes them to hypoxic events. “If an infant experiences momentary apnea (or cessation of breathing) the oxygen level in the blood falls. This information is sensed by chemosensitive receptors and is relayed to the respiratory network via NMDA receptors. These signals, in turn, trigger the brain to increase breathing to re-establish oxygen levels in the blood. Perhaps SIDS infants have a defect in NMDA receptor signaling that alters the processing of sensory feedback to the brain from chemoreceptors so that normal breathing patterns evoked by the brain during hypoxia are inappropriate,” he said. Therefore, an infant with altered NMDA receptor expression in the respiratory network may be predisposed to SIDS, despite being able to normally sense changes in oxygen in the blood.

This research will be performed in collaboration with Dr. Roderick Corriveau in the Department of Cell Biology and Anatomy at Louisiana State University Health Science Center and has earned the support of a two-year $100,000 grant from the Children’s Research Center of Michigan to investigate the role of NMDA receptors in signaling peripheral chemoreceptor input to the brain using genetically-manipulated animals that have a reduction in NMDA receptor expression in the respiratory network.
Adenosine Triggers Cardiovascular Responses

Throughout the day, your blood pressure fluctuates, your heart rate speeds up and slows down, and your arteries dilate and contract. A small area in the brain stem brings calm to the chaos. “The nucleus tractus solitarius, or NTS, is the major integrative center in the brain stem,” said Donal O’Leary, PhD, professor of physiology. “The NTS receives input from a variety of different peripheral receptors that provide information on the cardiovascular system, and then integrates that information. It also controls nerves that act to adjust the cardiovascular system.”

For example, receptors in some of the major arteries sense even small drops in blood pressure, and quickly relay their findings to the NTS. The NTS, in turn, triggers nerves that correct the problem by constricting blood vessels and heightening blood pressure, he explained. “That’s called a baroreceptor reflex.”

With physiology department collaborators Tadeusz Scislo, MD, PhD, and Jeffrey Potts, PhD, O’Leary now hopes to learn exactly how the NTS works. Their research recently received a four-year, $1.2 million grant from the National Institutes of Health.

The researchers are focusing on one of the neuromodulators that transmits information from the receptors to the NTS. That neuromodulator is adenosine - the same adenosine as in ATP, the cellular energy source. “Adenosine levels can accumulate in the NTS during periods of energy imbalance, ischemia (obstruction of the blood flow) or hemorrhagic shock (response to severe blood loss). We think that adenosine may be participating in the cardiovascular adjustments that accompany these situations,” Dr. O’Leary said.

He became interested in adenosine’s role in NTS oversight of the cardiovascular system about seven years ago through a collaboration with another professor in the department: the late Robin Barraco. Now, Drs. O’Leary, Scislo and Potts are continuing the work by measuring blood flow to individual vascular beds, as well as activity levels of the sympathetic nerves that control blood vessels. “Overall, we’ve had some very interesting results,” Dr. O’Leary said. “We found highly regionally specific responses when we activated these adenosine receptors in the NTS. In other words, we got very different responses depending on what part of the body we were looking at. We also found that the regional sympathetic nerve activity responses are very different.”

They now believe that adenosine may act to release other neurotransmitters, such as vasopressin and nitric oxide. In the circulation, vasopressin is a hormone that elevates blood pressure, while nitric oxide dilates blood vessels, whereas both also likely act as neurotransmitters/neuromodulators in the brain. “Our hypothesis is that adenosine participates in cardiovascular responses to hemorrhagic shock,” Dr. O’Leary said. If their suspicion proves correct, their basic research could lead to clinical applications. He commented, “Perhaps it might give us another intervention to treat hemorrhagic shock.”

This new grant from the National Institutes of Health complements Dr. O’Leary’s additional four-year, $1.4 million NIH grant investigating arterial blood pressure control during exercise in heart failure. Both projects are focused on understanding how the brain controls the cardiovascular system in times of stress.

Dr. Brocato Named Assistant Dean, Executive Director of OHEP Consortium

Dean John Crissman has announced the appointment of Joseph Brocato, PhD, as assistant dean for community education. Dr. Brocato has also been named executive director of OHEP, a consortium of medical education organizations in southeast Michigan.

Dr. Brocato joins WSU from Horizon Health System, where he was administrative director of medical education for Riverside Osteopathic Hospital in Trenton, Mich. He also served as adjunct assistant professor of the Department of Family and Community Medicine at Western Michigan University. Previously, Dr. Brocato was responsible for faculty and curriculum development and evaluation for the Medical College of Ohio. His service also includes years of instructional appointments at both Western Michigan University and Michigan State University, where he served as faculty within the Office of Medical Education Research & Development and as faculty development specialist of the statewide Consortium for Graduate Medical Education and Training.

Dr. Brocato earned his doctorate in education from Michigan State University. He holds both master of public administration and bachelor of business administration degrees from Western Michigan University.

In his dual roles as executive director of OHEP and WSU assistant dean, Dr. Brocato will oversee standards for medical education and evaluation for area hospitals. “Dr. Brocato’s experience in developing medical curricula, as well as in faculty training and development, will ensure that our students have excellent and valuable clerkship experiences at community hospitals with whom we affiliate,” noted Dean Crissman.
Cool Temperatures Aid Healing for Brain Injuries

The high temperature associated with fever can impede the brain’s function, and the effects can be dangerous, even fatal, in patients who have experienced traumatic brain injury, hemorrhage or stroke. Unfortunately, fever often accompanies these conditions.

“The brain doesn’t work very well in a very hot environment. There are data from stroke trials, in particular, actually showing that brains clinically do worse after strokes when they are in a febrile patient,” said William Coplin, MD, associate professor of neurology and neurosurgery.

While the relationship between high temperature and impeded recovery has been recognized for almost two decades, clinicians are still unsure of the best way to treat the problem. Coplin has been working with Juan Ricardo Carhuapoma, MD, assistant professor of neurology, to help determine the most effective standard of care.

“When fever comes from brain injury, it’s been well-known, recognized and documented that this kind of fever is almost always refractory to standard treatments. That means you can give Tylenol, ibuprofen or any other medication in intracranial pressure, but the concept that intracranial pressure is the most important indicator for this type of treatment is actually being challenged nowadays,” Dr. Carhuapoma said.

Knowing that fever hurts the brain, Drs. Coplin and Carhuapoma are looking for the best ways to initiate hypothermia for maximum healing.

In answer, research groups across the country are testing different methods of reducing temperature. He and Dr. Coplin are studying a device that uses ice water to cool a patient’s body through a series of skin-applied patches. Their results have been positive. “Actually, I think we can say we’ve been very successful in achieving normal temperature in these patients within the first hour or two from the treatment,” Dr. Carhuapoma said. They also hope to learn more about the details of hypothermia (temperature-reduction) treatment, particularly how low a temperature is optimal and how long the cooler temperature should be maintained.

“For many years, we have determined the endpoint for hypothermia treatment by measuring intracranial pressure, but the concept that intracranial pressure is the most important indicator for this type of treatment is actually being challenged nowadays,” Dr. Carhuapoma said. While studying the hypothermia device, he and Dr. Coplin considered oxygen concentration in the brain as an indicator of sufficient perfusion. Although their results are preliminary, he said, “We got some very interesting data that may be used to design a larger, better-designed prospective study of not just fever control but also of therapeutic hypothermia in these patients."

Other challenges exist. Dr. Coplin explained that cool temperatures can hinder the blood-clotting system, resulting in additional bleeding. “In addition, if you drop the temperature too much, you can affect all electrically active cells, including the heart. Once you get down to 32 degrees Celsius – normal body temperature is 37 degrees – the medicines that we sometimes use to control blood pressure or help the heart function optimally don’t function very well,” he said. “We can end up getting into trouble and have no way to save ourselves.”

Research like theirs is critical in improving the outcome for brain injuries, Carhuapoma remarked.

Cool Temperatures Aid Healing for Brain Injuries

2nd Annual Update in Internal Medicine
The Inn at Bay Harbor
Bay Harbor, Mich.
August 9-11, 2002

2nd Annual Karmanos Cancer Institute Breast Cancer Symposium
The Ritz Carlton Hotel
Dearborn, Mich.
September 14, 2002

Psychopharmacology Update
The Novi Hilton
Novi, Mich.
October 19, 2002

4th Annual Motor City Diabetes Symposium
The Ford Motor Company Conference & Event Center
Dearborn, Mich.
October 25, 2002

Neurology for the Non-Neurologist
The Townsend Hotel
Birmingham, Mich.
October 26, 2002

3rd Annual Norman Krieger, MD, Lecture in Geriatric Medicine
The Novi Hilton
Novi, Mich.
November 6, 2002

Lung Cancer Symposium: A Multi Disciplinary Approach
The Ford Motor Company Conference & Event Center
Dearborn, Mich.
November 13, 2003

For more information, please contact Wayne State University’s Division of Continuing Medical Education at (313) 577-1180.
NIH Equipment Grant Provides BIACORE Biosensor to Analyze Biomolecular Interactions

Even if your research doesn’t involve protein binding, you can’t help but be awed by the power of the high-throughput BIACORE 3000 biosensor machine.

“What this machine does in 24 hours, would be hard to do by hand in a month,” said Stanley Terlecky, PhD, assistant professor of pharmacology. “If you wanted to perform some drug screening tests, you could plug in 96 protein compounds, walk away for the weekend, and come back with loads of information: how A interacted with B, whether B interacted with C, how fast the association and dissociation was, what the affinities were—and it’s all automated. It’s amazing.”

Dr. Terlecky successfully led the charge to secure $270,000 from the National Institutes of Health to purchase a BIACORE 3000 Biosensor through the National Center for Research Resources Shared Instrumentation Grant program. The instrument, designed to detect, monitor and quantify biomolecular interactions, will be a great asset to multiple research programs, departments and investigators across the WSU campus. It is expected to be fully operational and available to faculty members in August 2002.

Biacore technology utilizes surface plasmon resonance detection by means of a biosensor chip. One compound is attached to the chip and a solution with another compound is passed over the surface. The interaction and response between the two elements is recorded as a function of time. These real-time measurements provide information related to specificity (which components interact under what conditions), concentration (how much biologically active interaction is in the sample), affinity (how tight the complex is) and kinetics (how fast the components bind and release).

“It’s sensor chip-driven, with users from across campus bringing their own sample-coated surfaces and reagents to the machine for analysis,” Dr. Terlecky said. Several faculty members helped Dr. Terlecky bring the Biacore equipment to WSU and they will be designated as primary users of the technology to advance their research programs. The Biacore primary users include: Instrument Co-Director Dr. Debra Skafar (physiology/Barbara Ann Karmanos Cancer Institute), Dr. Bonnie Sloane (pharmacology), Dr. Samuel Brooks (biochemistry/Barbara Ann Karmanos Cancer Institute), Dr. Raymond Novak (Institute for Environmental Health Sciences), and Dr. Rafael Fridman (pathology).

“We view this instrumentation as a critical item in the continued success of WSU research advancement,” said Daniel Walz, PhD, assistant dean for research at the School of Medicine. “With this new resource, many faculty members are primed to take advantage of new opportunities for discovery, particularly in the areas of proteomics, neuro-transmission, cell death, growth factor interactions, and cell specific communication.”

For usage information on the BIACORE biosensor, please call (313) 577-0625.

Biosensor Technology Impacts Dr. Terlecky’s Work

Peroxisomes are small cellular organelles that house some 60 enzymes involved in a wide array of metabolic reactions. The lack of peroxisomes in one’s system or defects in their assembly can lead to a number of fatal disorders including Zellweger syndrome, neonatal adrenoleukodystrophy, infantile Refsum’s disease, and rhizomelic chondrodysplasia punctata.

An expert in peroxisome biogenesis, Dr. Stanley Terlecky focuses his research on 23 specific proteins, called peroxins. He looks at how these 23 proteins interact with one another, how they form complexes, and how they interact—individually and collectively—with other cellular components.

He began this work as a post-doctoral fellow at the University of California, San Diego, where, among other approaches, he used Biacore biosensors to study binding interactions.

“The actual machine fits on a desktop, but the ease it provides to my work is immeasurable,” Dr. Terlecky said. “Having this automated technology at Wayne State will add dramatically to my research capabilities, and to others’ as well.”

Dr. Terlecky did undergraduate work at New York University and earned a doctoral degree in cellular and molecular physiology from the Tufts University School of Medicine. He has been an assistant professor of pharmacology at WSU since 1998.
Estrogen Therapy Halted Nationally for Women’s Health Initiative Participants

The National Heart, Lung, and Blood Institute of the National Institutes of Health halted a major clinical trial of the risks and benefits of combined estrogen and progestin in healthy menopausal women due to an increased risk of breast cancer and lack of overall benefit. The Women’s Health Initiative (WHI), which has a study site at Wayne State University/Hutzel Hospital, found an increased risk of coronary heart disease, stroke and pulmonary embolism in study participants who were taking the prescribed hormone therapy.

The study, which was scheduled to run until 2005, was stopped after an average follow-up of 5.2 years. Dr. Susan Hendrix, professor of obstetrics and gynecology and principal investigator of the WHI in Detroit, was among an international team of women’s health experts that initially cautioned against the use of hormone replacement therapy in an NIH International Position Paper on “Women’s Health and Menopause: A Comprehensive Approach.”

This report, a comprehensive evidence-based analysis of the use of hormone therapy in menopause, questioned its use for the prevention of coronary heart disease, depression and treatment of urinary incontinence—all cited in the past as prime reasons to initiate therapy.

On July 17, the Journal of the American Medical Association published a subsequent article, “Risks and Benefits of Estrogen Plus Progesterin in Healthy Postmenopausal Women: Principal Results From the Women’s Health Initiative Randomized Controlled Trial.” This prompted more than 16,000 women on the WHI trial to be taken off the protocol due to adverse effects of the therapy.

Specific findings for the hormone therapy group compared to placebo included a 41 percent increase in strokes; 29 percent increase in heart attacks; doubling of rates of venous thromboembolism (blood clots); 22 percent increase in total cardiovascular disease; and 26 percent increase in breast cancer. On the other hand, women on hormone therapy also had a 37 percent reduction in cases of colorectal cancer, one-third reduction in hip fractures and 24 percent reduction in total fractures.

Still, the study concluded that the harm was greater than the potential benefit.

“Past perceptions about appropriate indications for the use of HRT were based almost entirely on clinical experience and observational data. These perceptions are being questioned as new knowledge emerges from clinical trials,” said Dr. Hendrix.

Dr. Hendrix says research is teaching us to be cautious before assuming that current practices are best. For example, although HRT remains the gold standard for the treatment of vasomotor and vaginal symptoms, and the prevention of bone loss, it may not be as beneficial for other menopausal conditions.

The original position paper, a partnership between the NIH, National Heart, Lung and Blood Institute, and Giovanni Lorenzini Medical Science Foundation, presented a major shift in HRT recommendations, and cautions: “The long-term benefits and risks of HRT continue to be assessed.”

Doctors’ care may be influenced by threat of lawsuits, WSU study shows

Wayne State University School of Medicine study has shown that American physicians were more likely than their Canadian counterparts to administer a drug to stroke patients that has been proven ineffective and potentially dangerous.

Dr. Seemant Chaturvedi, associate professor of neurology, surveyed 290 U.S. neurologists and 283 Canadian neurologists about how they would react to patients in five different scenarios as well as their attitudes about the legal implications of their actions. U.S. neurologists were significantly more likely than Canadian neurologists to administer intravenous heparin, a blood thinner that has been proven ineffective and potentially dangerous in about 2 percent of cases where bleeding in the brain develops as a result of heparin use.

“Heparin may be helpful in 1 percent of cases and harmful in 1 percent of cases, and there’s nothing to support that it’s any better than aspirin,” Dr. Chaturvedi said. “But there are medico-legal factors: Doctors are worried they will get sued if they don’t use it.”

Thirty-three percent of American doctors vs. 11 percent of Canadian doctors cited medico-legal factors as a potential influence on the decision-making involved in administering IV heparin.

Dr. Chaturvedi serves on a committee of the American Academy of Neurology that is working to develop guidelines on the use of heparin.

Toxic Threats Put Developing Brains In Harm’s Way

Regulatory agencies have established “safe thresholds” for toxic substances such as lead, mercury, pesticides and PCBs. The problem with these thresholds is that any level of exposure may be harmful when combined with factors of duration, genetic susceptibility, combined chemicals, or even age. Because these thresholds were established for adult exposures and have not been adequately tested in fetal brain development, scientists are beginning to question the safety of seemingly harmless ambient exposures.

Dr. Enrique Ostrea, professor of pediatrics, is studying “Fetal Exposure to Environmental Toxins and Infant Outcome” with more than $2.5 million from the National Institutes of Health/National Institute of Child Health and Human Development (NICHHD). In a related grant, the U.S. Environmental Protection Agency (EPA) has awarded Dr. Ostrea $800,000 to develop meconium analysis as a tool to detect fetal exposure to environmental toxins.

“Environmental health is a hot area of science right now, but most studies are looking at exposures after birth. We are learning about the effects of these potentially toxic exposures before birth, during critical periods of brain development,” Dr. Ostrea said. “It may be harmless for adults to have low exposures to certain substances, but how does that translate to a more vulnerable fetus? Even slight disturbances in neuronal proliferation and growth or hormone levels could alter child development and contribute to the rising rates of developmental disabilities and neurodevelopmental diseases that have been occurring in the past decade.”

With the NICHD grant, Dr. Ostrea has formed a partnership with colleagues at the University of the Philippines National Institutes of Health and Philippine General Hospital, where a 1999 pilot study indicated unusually high toxin exposures. Researchers will interview and test 1,000 pregnant women from an agricultural community in the Philippines to detect lead, mercury, cadmium and pesticides through blood and hair samples. When the women deliver their babies, researchers will then analyze the meconium—babies’ first stool samples—as well as the infants’ blood and hair to test for fetal exposures to the same substances.

Meconium testing, which was originally developed and patented by Dr. Ostrea to detect illicit drug exposures such as cocaine and opiates, is now considered a standard toxicologic test for newborns. “A fetus is fully reliant on its mother for all nutrients and filtering of toxic substances, with passive acceptance. Those first stool samples show virtually everything he has ever been exposed to. Meconium can tell a great deal about the infant’s in utero environmental exposures,” Dr. Ostrea said.

Although Dr. Ostrea has been studying fetal and newborn health for many years, he was impressed by a May 2000 report from the Greater Boston Physicians for Social Responsibility. The report, called In Harm’s Way: Toxic Threats to Child Development, explores the connection between environmental chemicals and child development and asserts more stringent public health policies.

Dr. Ostrea notes that prenatal exposures, even at low levels, may cause permanent deficiencies in brain development. But he looks on the bright side. “It’s highly preventable,” he says. “We just need to understand what we’re dealing with.”

Mecconium testing was developed and patented by Dr. Ostrea as a way to detect various in utero exposures. He has expanded this work to learn about fetal exposure to environmental toxins.
Four years ago, first-year students were welcomed into the Wayne State University School of Medicine as faculty members and admission committee congratulated them on outstanding academic achievements, high-ranking test scores and competitive grade point averages.

On June 6, 2002, that same group was welcomed into the medical profession as they celebrated their commencement ceremonies at the Detroit Opera House. In addition to superior objective standards, their colleagues acknowledged the personal attributes that were nurtured and tested through medical training and patient care: compassion and empathy; appreciation for the powerful connection between the human body and the human spirit; and an unwavering commitment to a life of service.

The importance of service was echoed by faculty members Carter Bishop, Jane Thomas, and John Waller, each of whom received a 2002 Distinguished Service Award. Carter Bishop, MD, was recognized for more than 30 years on Wayne State's faculty. As professor of medicine and chief of hematology/oncology, he influenced the lives of patients, medical students and fellow physicians. He has held a variety of leadership positions, most notably, serving as chief of medicine at Detroit Receiving Hospital from 1975 to 1982. A well-respected and admired teacher, Dr. Bishop has been described by his students as “Patient; diligent; competent; and beloved.”

In his address, Dr. Bishop reminded students about the importance of service, especially to patients. “We are here for the patient. They are not here for us,” he said.

Assistant Dean for Student Affairs Dr. Jane Thomas shared the various meanings that service has had in her career. She reflected on the benefits and personal rewards she gained from assisting medical students in issues related to counseling, records and registration, financial aid and other student services. A lifelong educator, Dr. Thomas joined WSU in 1968 as an academic advisor in the College of Nursing. She became a counselor at the School of Medicine in 1974 and a faculty member in the Department of Family Medicine in 1977. In 1991, she was named director of the school’s counseling services and was appointed assistant dean in 1992.

John Waller, Jr., DrPH, the third Distinguished Service Award recipient, has been promoting the health of metropolitan Detroit for more than 20 years. He came to Detroit in 1978 as the city’s public health director and joined the WSU faculty in 1984. Since then, he played a critical role in forming the partnership that created Detroit Receiving Hospital and University Health Center. He has served as associate professor and chair of community medicine, director of the WSU/Detroit Medical Center (DMC) Community Health Institutes, director of the WSU Center for Prevention and Control of Inter-personal Violence and senior vice president of urban and community health at the DMC.

Dr. Waller’s citation read as follows: “Throughout his career at Wayne State University, Dr. John Waller’s patient has been metropolitan Detroit. He has seen his patient in failing health, and has helped her on the long road to recovery.”

The 248 members of the Class of 2002 have already started their residency training programs this summer. More than half the class will remain in the area to serve southeast Michigan patients, while others have matched to prestigious programs including Johns Hopkins, University of Massachusetts, Cleveland Clinic and the University of Chicago.
In Memory of Dr. Dong Shin

“IF ANYONE EVER FILLED the bill of an angel of mercy, it is Dr. Shin,” said one of Dr. Shin's grateful patients. This is a common thought held by many who have experienced the care and compassion that Dr. Shin used with all of his patients throughout his career.

Dr. Shin was born in Korea, became a citizen of the United States, and attended the University of California, Berkeley, where he received his bachelor of arts degree. He earned his doctorate from Tufts University and a medical degree from the University of Pittsburgh School of Medicine. He completed residency in ophthalmology at Case Western Reserve University Hospitals and a fellowship in glaucoma at Washington University School of Medicine and Barnes Hospital, St. Louis Missouri.

Dr. Shin began his exceptional career at Wayne State University and the Kresge Eye Institute (KEI) with a threefold interest: as a physician, an educator and a researcher. In his role as physician, Dr. Shin was KEI's director of glaucoma services. He treated thousands of patients and conducted numerous clinical studies, always with kindness and selflessness.

Admired by students, medical education has always been an important aspect in Dr. Shin’s work. Over the years he trained WSU medical students, KEI residents and more than 20 glaucoma fellows. He was an advisor to third- and fourth-year medical students, a preceptor for the ophthalmology research elective, coordinator and participant in the Annual Ophthalmology Career Development program and sponsor of the Medical Student Summer Research program.

Recognized internationally for his expertise and research in glaucoma, Dr. Shin has made many contributions towards the advancement of the understanding of this disease. He pioneered the releasable suture closure technique, which is used to minimize post-operative complications by keeping pressure in the eye in a normal range following glaucoma surgery or the glaucoma triple procedure. This procedure is now widely used by other surgeons. His research also has shown that adjunctive use of Mitomycin-C during surgery significantly improves the success of combined glaucoma and cataract surgery. And he was instrumental in making KEI a national study center for the Ocular Hypertension Treatment study.

Never forgetting his roots, Dr. Shin often returned to South Korea as a visiting professor, where he gave many lectures and presentations at various medical centers in the region. In turn, many Korean doctors came to study under his tutelage at KEI to enhance their training in the field of ophthalmology and glaucoma research.

Throughout his career he has been the recipient of many honors and awards. He received the Spirit of Detroit Award from the Detroit City Council, a special tribute from Michigan Senator Jackie Vaughn III, and a certificate of appreciation from Michigan Governor John Engler. Dr. Shin was elected Member & Chair, Glaucoma Section Program Committee Association for Research in Vision and Ophthalmology (ARVO), 1966-1999, and received the Senior Achievement Award for the American Academy of Ophthalmology, 2000. He is listed in Who’s Who in American Medicine and Health Sciences as well as in Best Doctors in America, Midwest Region.
Wayne State University School of Medicine honored four exceptional individuals on May 18 at the third annual Pathfinders in Medicine Awards. This black-tie event, held at the Rattlesnake Club, and hosted by Fox 2 news anchor, Huel Perkins, celebrated the honorees’ achievements and recognized each for his or her important role in the health care of this community. The Pathfinders in Medicine Award recognizes those with outstanding vision and leadership in the advancement of medicine, scientific research, the availability of quality health care, and the improvement of the city’s health status.

“This year’s Pathfinders in Medicine Awards were outstanding,” explained committee chair, Dr. Taylor Lewis. “We had our best attended awards yet and benefited from having many more people involved. With the increased attendance, I think we have definitely increased awareness of this event.”

This year, the honorees were four unique individuals who have, for many years, been active in the Detroit area and have displayed great dedication and commitment to metropolitan Detroit.

Waldo L. Cain, MD, received the Pathfinders Award in recognition of his many years as a respected surgeon in Detroit and for his groundbreaking efforts to end segregation in medicine. Early in his career, Dr. Cain organized a group of physicians who fought against racial segregation in hospitals. Their efforts focused specifically on situations in which African-American patients were the victims of discrimination.

Long-time supporter of Children’s Hospital of Michigan and instrumental in the formation of the Children’s Research Center of Michigan, Cynthia N. Ford is an avid philanthropist who has worked hard to aid funding for medical research. In recent times, Mrs. Ford has focused on diabetes research and is a committee member of the Morris J. Hood Comprehensive Diabetes Center.

Robert N. Frank, MD, was recognized as a Pathfinder in Medicine for his service as a renowned ophthalmologist and for his breakthrough research dealing with diabetes and ailments concerning vision. Dr. Frank’s basic and clinical research has helped physicians to better understand diabetic retinopathy and other debilitating diseases of the retina. His findings have allowed great strides to be made in the study of retinal diseases.

John B. Waller, Jr., DrPH, an educator and former director of the Detroit Department of Public Health, received the Pathfinders Award for his 40 years as a medical professional, including pioneering work in community health for urban areas. Dr. Waller is the director of the Wayne State University/Detroit Medical Center Community Health Institute.

The School of Medicine celebrated its largest Pathfinders in Medicine Award ceremony to date as more than 250 guests attended this year’s event. Proceeds were designated to funds at the School of Medicine, including: The Charles F. Whitten, MD, Post Baccalaureate Fund, The Black Medical Association of Wayne State University Endowed Grant Fund, and the Morris J. Hood, Jr., Comprehensive Diabetes Center.

-and special thanks to all Pathfinders committee members.

Special thanks to all Pathfinders committee members.

Dr. Taylor A. Lewis
Ms. Rosiardi Fagin
Dr. Rosalind Griffin
Mr. Dean J. Crouk
Mr. Cleveland Hurst
Mr. Robert R. Johnson
Dr. Sandra Jones-Lackey
Dr. Lawrence S. Lackey, Jr.
Mr. Sam Logan
Ms. Alysia Martina
Dr. Michelle Matthews
Dr. Richard Robinson
Ms. Jacqueline Vial
Dr. Tara Washington
Mrs. Amelia Wilhelm
Gary Cummings
Dr. Patricia Maryland

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Augustine Kole-James, MD
Wayne State University Medical Alumni Association

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African American Parent Magazine
The Michigan Front Page

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Augustine Kole-James, MD
Wayne State University Medical Alumni Association

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African American Parent Magazine
The Michigan Front Page

Upcoming Alumni Events
9th Annual Freedom Festival Fireworks Spectacular and Pool Party Are a Smashing Success

Sparks flew at the 9th Annual Freedom Festival Fireworks Spectacular and Pool Party held June 27 on the west terrace of the Hotel Pontchartrain. Nearly 300 alumni, staff, and friends of the School of Medicine attended the fantastic family-oriented event.

Bobo the Clown entertains the crowd before the fireworks begin.

Second-year medical student Mike Magiera (seated left) and WSU undergraduate student Ian Maguire (right) serve as lifeguards at the pool party.

We’re on the web

Visit the Medical Alumni Association Web Site located at:
http://www.med.wayne.edu/Alumni/

You can access the alumni web site via the above address or through a link from the school’s homepage located at:
http://www.med.wayne.edu/
1951 John Kelly, MD, gave the John Rock Memorial Lecture March 7, 2002, at the Hospital of the University of Pennsylvania in Philadelphia, Pa. The topic was "Medical Colleges in East Africa."

1955 John Grigg, MD, was appointed to the Board of Visitors for the College of Nursing of Michigan State University.

1964 Kenneth Gittin, MD, is certified by the American Board of Orthopedic Surgery and is on staff at William Beaumont Hospital in Royal Oak, Mich.

1971 Thomas Ditkoff, MD, is on staff at William Beaumont Hospital in Royal Oak and is certified by the American Board of Orthopedic Surgery. Dr. Ditkoff is one of a few orthopedic surgeons in Michigan to use a technique called the Ilizarov external fixator to treat complex fractures, complex deformities and leg-length problems.

Michael Sandier, MD, has been elected vice-chair of the board of directors of the Michigan State Medical Society and president of the Wayne State University School of Medicine Alumni Association.

1972 Douglas Jackson, MD, recently retired after 20 years at Midland Hospital, traveled to Surabayaam Indonesian and served as visiting professor at Airlangga University Orthopaedic Residency program. He is now taking violin and 5-string banjo lessons while traveling and helping former partners with longer surgery cases.

Michael Sucher, MD, was recently appointed acting medical director for the Bureau of Emergency Medical Services for the State of Arizona. He also continues to practice addiction medicine in Scottsdale, Ariz.

1974 Harry Herkowitz, MD, is chairman of the orthopedic surgery department. He is director of spine surgery, co-director of the spinal surgery fellowship program and co-director of the Center of Spinal Disease and Spinal Surgery at Beaumont Hospital.

1978 Jerry Matlen, MD, is on staff at William Beaumont Hospital in Royal Oak, Mich., and is certified by the American Board of Orthopedic Surgery.

1982 James Regan, MD, is in private practice (internal medicine) in Denver, Colo. His oldest child, Paige, is entering high school. Sons, Stephen (4) and Brett (1), keep him very busy. He served as president of the Denver Medical Society 2000-2001.

Jeffrey Schaffer, MD, is an obstetrician-gynecologist at Bluffton Regional Medical Center in Bluffton, Ind. Currently, he is the medical staff president and chief of the obstetrics and pediatrics committee. His most important role is being the father of Amy (7 years old), Thomas (5 years old), and Abigail (2-year-old twins).

1985 Jeffrey Shapiro, MD, is certified by the American Board of Orthopedics and specializes in knee and shoulder disorders and sports medicine. He is on staff at William Beaumont Hospital in Royal Oak and Troy, Mich.

1986 Lilian Lai, MD, started her own practice in primary care/ internal medicine two years ago. She just moved into a new building.

1987 Leonard Kililloksi, MD, was elected chief of surgery at Elkhart General Hospital.

1988 Suneska Thavaraja, MD, is currently a hospitalist at University of Connecticut Health Center with plans for a nephrology fellowship at Hopkins Bayview to start July 2003. He participated in the poster presentation at the American Society of Hypertension meeting in May 2002.

1991 Paul Shapiro, MD, is certified by the American Board of Orthopedic Surgery and limits his practice to problems of the hand and upper extremity. He is a member of the American Medical Association and the American Academy of Orthopedic Surgeons. He is on staff at William Beaumont Hospital in Troy, Mich.

1992 Paul Chuba, MD, has been named director of radiation oncology for the Webber Cancer Center at St. John Macomb Hospital.

Cindy Hung, MD, says, “Thanks to everyone for coming to our 10th reunion. The attendees included some repeaters from our last reunion as well as some newbies. It was nice to catch up with everyone, and Mike Hayati and Ron Paler win for traveling the greatest distance (from Los Angeles). I still work for Mount Clemens General doing family practice and urgent care and continue to globe trot. I recently returned from a safari to Zimbabwe, Swaziland, and South Africa. I also continue to study dance, yoga, and pilates, and especially enjoy when I can get away to New York City to take classes. Lydia Rozof can hardly wait to help me organize our 15th reunion since she was unable to attend our 10th due to her taking a cruise with her husband. We’d love to hear updates from fellow classmates who were also unable to attend.” You can send them into the school, fax them to (313) 577-1330, or email cindyhung@pol.net.

Wayne State University School of Medicine
Upcoming Alumni Events and Meetings

Wednesday,
September 4, 2002
Alumni Board of Governors Meeting
Noon
1328 Scott Hall

September, 2002
Alumni-Department of Otolaryngology
Traverse City, Mich.

September 11-13, 2002
Alumni-Department of Neurosurgery Reception
Detroit, Mich.

September, 2002
Alumni-Department of Internal Medicine Reception
Traverse City, Mich.

October 2, 2002
Alumni Board of Governors Meeting
5:00 p.m.
Excalibur Banquet Center
28875 Franklin Road
Southfield, Mich.

November 6, 2002
Alumni reception during the Michigan State Medical Society Annual Meeting
6:00 p.m.
Somerset Inn
Troy, Mich.

December 4, 2002
Alumni Board of Governors Meeting
Noon
1328 Scott Hall

Would you like advance notice of alumni events?

If you would like to receive advance notice of upcoming alumni events, please send an email note containing your name, graduating class, and email address to:

Lori Robitaille
Manager, Alumni Affairs
WSU, School of Medicine
EMAIL: lhaddad@med.wayne.edu

Please type “Events Notification” as the subject of your note.

Thank you!
Distinguished Alum’s Efforts Honored

Jeanne M. Lusher was honored Tuesday, April 9, at the Detroit Athletic Club for her role in establishing the Marion L. Barnhart and Jeanne M. Lusher Endowed Hemostasis Research Chair. Her generous contributions helped make this chair a reality and add yet another honor to this physician’s already well-respected career.

Dr. Lusher came to the School of Medicine in 1964 and joined the faculty of Children’s Hospital after completing her medical training at several institutions, including George Washington University Hospital and Tulane University. Her career has been defined by outstanding research that has advanced the medical community’s understanding of blood disorders, compassionate care for her patients, dedicated teaching, and an impressive number of awards and honors. She has produced nine books, 56 book chapters, 156 original publications, and given countless presentations.

Throughout her career, Dr. Lusher has known the importance of research and has devoted much of her time to aid in its funding. Her efforts in support of the Hemostasis Chair illustrate her philosophy. “By increasing the amount of funds in the endowment, we have increased its effectiveness.” The doctor went on to explain, “Especially in these difficult financial times, money for research is even more important.”

The event celebrating Dr. Lusher brought faculty, family, and friends together to celebrate the naming of the chair. “I was thrilled to see so many people there and it was great to see so many involved,” she said.

“We can all be extremely proud of the School of Medicine. With support, we can watch it grow and succeed and become even better.”

Ready for Office

Michigan gubernatorial candidate and Republican State Senator John J. H. Schwarz has lead very successful careers in both medicine and politics. Two fields that, on the surface, don’t seem to have much in common. The senator feels, however, that his work as a doctor has provided him with a unique insight into politics and his own life.

Senator Schwarz graduated from Battle Creek Central High School in 1955 and went on to the University of Michigan where he graduated with an A.B. in history before attending the School of Medicine. The school’s name was well known to him and its reputation was held in high regard. According to Senator Schwarz, “Clinical experience is necessary to enter the field of medicine immediately.”

After his service in the military, he completed his residency training in otolaryngology at Harvard in 1973, and later became a fellow of the American College of Surgeons.

Senator Schwarz then returned to Michigan and became actively involved in politics. He served as the Battle Creek City Commissioner from 1979-1987 and during his tenure at that post, became mayor of Battle Creek and served from 1985-1987.

Currently, he is serving as the senate’s president pro tempore. He is also a member of the Senate Appropriations Committee where he chairs the Subcommittee on Higher Education and the Subcommittee on General Government. In addition, he is a member of the Senate Health Policy Committee and the Joint Capital Outlay Committee.

Senator Schwarz reflects on his career in medicine and how it prepared him for a career in politics. “Medicine has been a great teacher of perspective. It has allowed me to maintain this perspective on all of life’s occurrences and keep it all together.”

Senator Schwarz represents the 24th District of Michigan and is serving his fourth term in the Michigan Senate. He currently practices medicine and surgery in Battle Creek and is active on the staff of the Battle Creek Health System.

Open Your Home to Students

The Wayne State University Bed and Breakfast program was established to provide assistance to students traveling for residency interviews. Alumni who participate in this program will provide housing and breakfast to students interviewing in their town. This program offers the host alumnus an opportunity to interact with current students and lend a helping hand. It also enables alumni to learn about programs and current events at the school.

Year IV students are gearing up for residency interviews and many of them will be traveling out of state. If you are able to open your home to a student and, perhaps, provide some words of wisdom, please let us know. You can call the Medical Alumni Affairs Office at (877) WSU-MEDI to indicate your interest.

Thank you in advance for assisting the next generation of WSU physicians.

Distinguished Professors Yi-Chi Kong, Jeanne Lusher and C.P. Lee.

Jeanne Lusher and Lawrence Fleischmann.

Dr. Schwarz is currently running for governor of Michigan.

Open Your Home to Students
The Lawrence M. Weiner Awards

Alexa Canady, MD

Alexa Canady, MD, received her bachelor’s degree and medical degree from the University of Michigan. She went on to complete a surgical internship at Yale-New Haven Hospital and a neurosurgery residency at University of Minnesota Hospitals. Dr. Canady is board certified in neurological surgery and holds the distinction of becoming the first female African-American neurosurgeon in the United States.

In January 2001, Dr. Canady was appointed to the Peter Schotanus Endowed Professorship of Pediatric Neurosurgery. Her research involves the study of ways to more successfully treat hydrocephalus, a brain malformation that occurs in one in every 500 children. She has published more than 50 research papers and presented at numerous scientific meetings during her career.

Dr. Canady recently left Wayne State University School of Medicine, where she was associate professor in the Department of Neurological Surgery. In addition, she served as chief of neurosurgery at Children’s Hospital of Michigan.

Child Magazine recently chose Dr. Canady as one of the nation’s 30 best physicians for children. She is credited with establishing one of the most highly rated pediatric neurosurgery departments in the U.S. She has received numerous awards including the School of Medicine Distinguished Service Award in 1994, Outstanding Clinical Faculty Award from the School of Medicine class of 1989, and Teacher of the Year at Children’s Hospital of Michigan in 1984. She was selected by an Hour Magazine survey as one of Metropolitan Detroit’s best doctors, was inducted into the Michigan Women’s Hall of Fame, and received the Lifetime Achievement Award from the Epilepsy Foundation of Michigan.

Dr. Canady has given of her time to many interns, residents and medical students. She has demonstrated a strong and consistent commitment to teaching and educating future generations of physicians and neurosurgeons. By example, she is a role model and demonstrates that it is possible to accomplish one’s dreams.

SANDFORD COHEN, MD

Sanford N. Cohen, MD, graduated from Johns Hopkins University with both A.B. and MD degrees. He served as an intern and resident at the Johns Hopkins Hospital between 1960 and 1963, and then as a captain in the U.S. Army at the Walter Reed Army Institute of Research in Washington, D.C., and the SEATO Medical Research Laboratory in Bangkok, Thailand. He continued his training as a National Institutes of Health special fellow in developmental pharmacology at NYU Medical Center after discharge from the service, and stayed on at that institution as a faculty member. He was named associate chair of pediatrics in 1948.

Dr. Cohen’s roles at Wayne State have been many and varied. He served for seven years as chair of pediatrics and pediatrician-in-chief at Children’s Hospital of Michigan, for five years as associate dean of the School of Medicine, five years as provost and senior vice-president for academic affairs, then as professor and, since 1998, professor emeritus of pediatrics. He also served as the director of the Child Research Center of Michigan and the Reyes Syndrome Study Center, and participated on boards and/or advisory committees for numerous programs at the university. He was a member of the board of trustees of Detroit Receiving Hospital for five years. He continues to serve as associate director of the NIEHS-funded Center of Molecular and Cellular Toxicology with Clinical Application. He established, secured funding for and was the first director of the Wayne State University Developmental Disabilities Institute. Contributions to the School of Medicine during his tenure at Wayne State University are numerous. Some highlights include: his leadership in the development of the original dean’s guidelines for a practice plan; organization and conduct of the Cost of Medical Education Study for the university at the request of the state legislature; establishment of non-tenure tracks for faculty in the school; reorganization of the student council; development and presentation to the Wayne State University president and Board of Governors of the recommendation to create the Department of Emergency Medicine; reorganization of the residency program in pediatrics; movement of the Child Research Center of Michigan into a merger with the Department of Pediatrics and Children’s Hospital of Michigan; development of primary care pediatrics and pediatric teaching as core efforts of the department and supporting P.I. on a number of grants to fund such activity; establishment of the longest operating office of the one of the best-known programs in pediatric pharmacology in North America in 1974, and, as provost, participated in the development of programs to further equity for minority and female faculty and staff at Wayne State University’s School of Medicine.

ROBERT LISAK, MD

Robert P. Lisak, MD, graduated cum laude with highest honors and a bachelor’s degree in 1961 and his medical degree from the College of Physicians and Surgeons of Columbia University in 1965. Dr. Lisak interned at Montefiore Hospital from 1965-66 and then spent two years as a research associate at the National Institute of Mental Health in Bethesda, Md. He completed a year as a medical resident at Albert Einstein College of Medicine/Bronx Municipal Hospital Center before doing his neurology residency at the University of Pennsylvania and, during his final year of residency, was a fellow in allergy and immunology in the Department of Medicine at that institution.

Dr. Lisak was appointed assistant professor of neurology at the University of Pennsylvania School of Medicine in 1972, and promoted to associate professor in 1976 and to professor in 1980. He was appointed vice-chair of neurology in 1985. During his time at the University of Pennsylvania, he received one of the first teacher investigator awards from the National Institute for Neurological Diseases and Stroke, the Lindback Award for teaching medical students, as well as an award for teaching from the neurology residents.

Dr. Lisak was awarded a Fulbright Fellowship in the United Kingdom from 1978-79. He was also a member of the Immunology Graduate Group and an associate member of the Institute of Neurological Sciences at the university. One of his papers from this period, which appeared in Cellular Immunology in 1983, was recently cited as a classic paper in autoimmunity by the journal Nature. Another paper published in Nature in 1978 has been cited over 900 times as of four years ago. The book, “Myasthenia Gravis,” by Lisak and Barchi, is widely viewed as a classic monograph on that disease. Dooaty’s Ratting Service judged the book as one of the best biomedical books of 1994-96. Dr. Lisak also served as president of the Philadelphia Neurological Society. In 1987, Dr. Lisak was appointed professor and chair of neurology

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Distinguished Alumni Awards

The WSU Medical Alumni Association initiated the Distinguished Alumni Award to be presented annually to alumni who have made outstanding contributions to humanitarian causes, whose contribution to the health field in the broader sense are outstanding, or for service to the School of Medicine.

PAUL ANDERSON, MD, ’79
Paul A. Anderson, MD, is an orthopaedic surgeon with a subspecialty interest in the cervical spine. A summa cum laude graduate of the Wayne State University School of Medicine, he completed his orthopaedic residency at WSU and a spine fellowship with Dr. Henry Bohman at Case Western Reserve University.

Booth-certified and a fellow of the American Academy of Orthopaedic Surgeons, he is currently a clinical associate professor with the University of Washington. He held appointments at the University of Washington as associate professor of orthopaedic surgery and associate professor of neurology, practicing at Harborview Medical Center prior to joining Orthopedics International in Seattle in 1994.

Dr. Anderson has a special interest in spinal cord injury prevention with a focus on reducing seat belt injuries and athletic injuries, particularly in football players. He has been active in “Think First,” a national organization to reduce closed head injuries in children and adolescents.

He is dedicated to research, having established a Biomechanics Laboratory at Harborview Medical Center (University of Washington, Seattle). He has received a number of grants and has earmarked his contributions to the Wayne State University School of Medicine to fund the summer research projects of medical students. He is currently involved in the development of an artificial cervical disc.

This year, he is serving as president of the Cervical Spine Research Society. He also serves as associate editor of the Journal of the American Academy of Orthopaedic Surgery and as consultant reviewer for many orthopaedic publications including Spine and the Journal of Bone and Joint Surgery.

Dr. Anderson recently celebrated his 25th wedding anniversary. He also has a daughter pursuing a master’s degree in speech pathology at Boston University and a son pursuing a degree in electrical engineering at MIT.

MURRAY JANOWER, MD, ’58
Murray Janower, MD, graduated from the Wayne State University School of Medicine in 1958 after attending Central High School and the University of Detroit. He interned at Philadelphia General Hospital and was a resident in radiology at the Massachusetts General Hospital from 1959 to 1964. His residency was interrupted by two years in the Public Health Service, where he served as the first director of the radiology research laboratory of the Bureau of Radiological Health.

Dr. Janower spent several years on the staff at the Massachusetts General Hospital before becoming chief of radiology at St. Vincent Hospital, Worcester, Mass., where he remained for almost 30 years. During this time, the department trained more than 75 residents, and was the ninth hospital in the country to become totally filmless.

He holds academic appointments as professor of radiology at the University of Massachusetts Medical School, clinical associate at the Massachusetts General Hospital, and lecturer in radiology at the Harvard Medical School.

Dr. Janower’s clinical expertise is in general radiology, particularly chest and gastrointestinal radiology. He was a founding member of both the Fleischner Society and the Society of Gastrointestinal Radiology.

One of his major interests has been in the administration and management of radiology departments, and he is recognized nationally and internationally as one of the founders in this area. He has lectured around the world and is the author of nearly 100 articles and three textbooks.

His interest in socioeconomics and education resulted in leadership positions as president of the American College of Radiology, Association of Program Directors in Radiology, New England Roentgen Ray Society, and the Massachusetts Radiological Society.

He resides in Boston, Mass.; Mashpee, Mass.; and Pompano Beach, Fla., when he is not visiting his progeny.

JAY MCDONALD, MD, ’69
Jay M. McDonald, MD, is professor and chair of the Department of Pathology at The University of Alabama at Birmingham (UAB) Medical Center, School of Medicine and Dentistry, and pathologist-in-chief at The University of Alabama Hospital. He is director of a National Institutes of Health (NIH)–funded Center for Metabolic Bone Disease (one of five in the United States) and senior scientist at the Comprehensive Cancer Center, Center for AIDS Research, Center for Aging, Gene Therapy Center, Center for Health Promotion, and Cell Adhesion Matrix Research Center. He is currently principal investigator on five NIH and/or VA grants. Dr. McDonald is board certified in anatomic and clinical pathology.

Dr. McDonald received his bachelor’s degree from Tufts University in Medford, Mass., and his medical degree, with distinction, from Wayne State University, where he also completed his pathology residency and was chief resident from 1973 to 1974. He did an internship in internal medicine at the University of Oregon and was a NIH postdoctoral research fellowship at Washington University in St. Louis.

His academic career has spanned 26 years and includes directorship of the division of laboratory medicine in the departments of pathology and medicine at Washington University School of Medicine in St. Louis for 10 years prior to his recruitment to UAB.

Dr. McDonald has received several honors and awards; he has served as president of the Academy of Clinical Laboratory Physicians and Scientists; has served on external review committees for departments of pathology at numerous major institutions; recently served on the Institute of Medicine Committee on Creating a Vision for Space Medicine During Travel Beyond Earth Orbit; has served on NIH and VA study sections; and is currently on the editorial boards of three scientific journals.

Throughout his career, he has made major contributions to basic science and education in pathology. He has been a leader in reforming national standards for clinical pathology training. Most recently, he was a major contributing author to a consensus report on standards for laboratory testing for diabetes mellitus and director of a nationally funded research program in telemedicine with an emphasis on telepathology.

Dr. McDonald’s outstanding research activities include understanding and characterizing basic mechanisms of bone resorption, cellular pathogenesis of AIDS, and cancer pathogenesis. Prior to this, he made major contributions to understanding the molecular basis for insulin signaling and insulin resistance in diabetes. He has authored or co-authored more than 160 articles or book chapters and 137 abstracts.
PhD Alum Was Pioneer in School’s Pathology Department

Dr. Paula Grammas has been leading the way ever since she enrolled in the School of Medicine. Her unique experiences at Wayne prepared her for a successful career in pathology and provided her with an opportunity to be the first person to graduate from WSU with a PhD in her field.

At a time when the school was still solidifying its degree program for pathology, Dr. Grammas was already participating in important research for the department.

“We were studying the biology of blood vessels in the brain,” Dr. Grammas explained. “At the time, most people in medicine believed that the brain blood vessels operated differently than the blood vessels found in the rest of the body. But, it was unclear as to why this was so.” The research done by Dr. Grammas and others was third to isolate these vessels in the rest of the body.

But, it was unclear as to why this was second to. Dr. Grammas explained. “At the time, most people in medicine believed that the brain blood vessels operated differently than the blood vessels found in the rest of the body. But, it was unclear as to why this was so.” The research done by Dr. Grammas and others was then adapted to human studies in which it was discovered that it was possible to isolate these vessels in the brain and study their characteristics. This breakthrough has led to her work showing altered blood vessels in the brains of Alzheimer’s sufferers.

Dr. Grammas arrived at the School of Medicine in 1979. “They really didn’t have a PhD program in pathology at that time,” she said. “It didn’t exist. As I worked toward my degree, there were a lot of things in motion. Everything was changing so rapidly.”

Dr. Grammas credits her experience in the PhD program at Wayne with teaching her some valuable lessons. “I was able to develop a technique for adapting. Being the first person to do something offered me a lot of opportunities to think on my feet and respond to change. It’s this ability to adapt that has been useful in my subsequent career.”

After graduating in 1983, Dr. Grammas remained at Wayne State for several years as a faculty member in pathology before taking a job with the University of Oklahoma where she is professor of pathology, director of the Oklahoma Center for Neuroscience, and the Presbyterian Health Foundation Chair in Neuroscience.
Send us your news

Let your classmates know what you've been doing.

Do you know an alum whose accomplishments should be highlighted in Alum Notes? If so, please provide us with their contact information.

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My news for class notes:

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