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\$6 Million Grant Establishes Center for African-American Urban Health

With \$6 million in funding from the National Institute of Environmental Health Sciences (NIEHS), Wayne State University has established the Center for African-American Urban Health, one of eight centers in the United States to study population health and health disparities.

WSU Benefits From Michigan Proteome Consortium Grant

An \$11.9 million grant awarded to the Michigan Proteome Consortium from the National Center for Research Resources will be shared by the four institutions, including Wayne State University and Russell Finley, Ph.D.

Outpatient Cryotherapy Shrinks Benign Breast Lumps

Breast cryotherapy is a safe, effective and nearly painless office-based procedure that significantly reduces benign breast lumps without damaging breast structure, according to Peter Littrup, M.D. "Patients leave the office 30 minutes after the cryotherapy is completed," he said.

The Enzymatic Production of Methanol: A Biological Mechanism to Produce Alternative Fuel

Converting methane to methanol would provide an abundant fuel source, however the process is costly and requires high temperatures and pressures. Dr. Timothy Stemmler in the Department of Biochemistry and Molecular Biology recently announced the characterization of a pure membrane bound particulate form of MMO (pMMO) in the Proceedings of the National Academy of Science. This new finding allows methanotropic bacteria to convert methane to methanol at ambient temperatures and pressure.

Angioplasty Cuts Death Rate Nearly in Half for Heart Attack Victims

The debate over the best immediate therapy for a heart attack has tipped in favor of mechanical reperfusion (angioplasty or bypass surgery) over thrombolysis (drugs to dissolve blood clots), according to a report by Mary Grzybowski, Ph.D., M.P.H., in the October 8, 2003, issue of the *Journal of the American Medical Association*.

Dr. Horwitz Develops Novel Anti-Tumor Compounds

Jerome Horwitz, Ph.D., one of Wayne State University's and Barbara Ann Karmanos Cancer Institute's most esteemed researchers, has created an exciting anti-tumor series, the SH80 series, recently licensed to Sanofi-Synthelabo, a multi-national pharmaceutical company.

Neural Damage to Brain is Modeled in Retina to Better Understand Cell Injury

With a four-year National Institutes of Health (NIH) grant, Dennis Goebel, Ph.D., is studying the involvement of NMDA receptors in two kinds of cell death that are expressed following stroke or lack of oxygen/glucose—apoptosis and necrosis.

Family Support, Resources Reduce Complications Following Spinal Cord Injuries

The people who have the best outcomes after a traumatic spinal cord injury are those with family support and resources, said Colette Duggan, Ph.D., who is examining data from a qualitative, longitudinal study of quality of life following a spinal cord injury.

Teaching the Business of Biotechnology

A new graduate course called Introduction to the Business of Biotechnology (BMS 6100) offers a broad overview of the basic elements of entrepreneurship in the biotechnology industry from the drug discovery pathway to intellectual property and patents to business plans and strategies.

Volunteers Recruited for Ovarian Cancer Study

Early detection of ovarian cancer is critical to survival and Michael Tainsky, Ph.D., who is developing a blood test to find markers of the earliest stages of the disease and recruiting African-American women to participate in a new study.

Project Medical Education Informs Policymakers

Project Medical Education (PME) provided more than two dozen state legislators and staff members with a glimpse into a "day in the life" of a medical resident and student. The two-day event was hosted by the OHEP Center for Medical Education and the WSU School of Medicine.

Doctors' Spouses Give and Receive Support Through Alliance

The Michigan State Medical Society Alliance—a volunteer group comprised of resident physicians' and medical students' spouses—lends assistance to students and alumni of the WSU School of Medicine.

Congratulations to Budding Researchers

The seventh annual Graduate Student Research Day held in September boasted proud young researchers who shared their work with students, faculty and colleagues.

Honors Convocation Praises School's Best

Congratulations to the faculty members who were recognized at the annual WSU School of Medicine Honors Convocation.

Two Medical School Professors Join Academy of Scholars

The Wayne State University Academy of Scholars is the highest recognition bestowed upon faculty by their colleagues. Congratulations to Robert Sokol, M.D., and Serge Vinogradov, Ph.D., two medical school professors who were inducted into the academy this year.

Faculty Research Excellence Awards

Congratulations to the six faculty members who won research excellence awards from the university this year.

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\$6 Million Grant Establishes Center for African-American Urban Health

The Detroit metropolitan area is the most segregated in the nation, but \$6 million in funding may help address health disparities between whites and African Americans in this community. The National Institute of Environmental Health Sciences (NIEHS) has established Wayne State University as one of eight centers in the United States to study population health and health disparities.

Led by John Flack, M.D., M.P.H., WSU's newly established Center for African-American Urban Health will seek new ways to redress health disparities by identifying preventive strategies and therapeutic approaches to chronic diseases that plague this population, namely obesity, cardiovascular disease and cancer.

Dr. Flack will act as the principal investigator and enlist the commitment of 34 investigators from various areas of expertise. Together, they will work on targeted projects that focus on precursors and factors mediating chronic conditions in African Americans. These projects are:

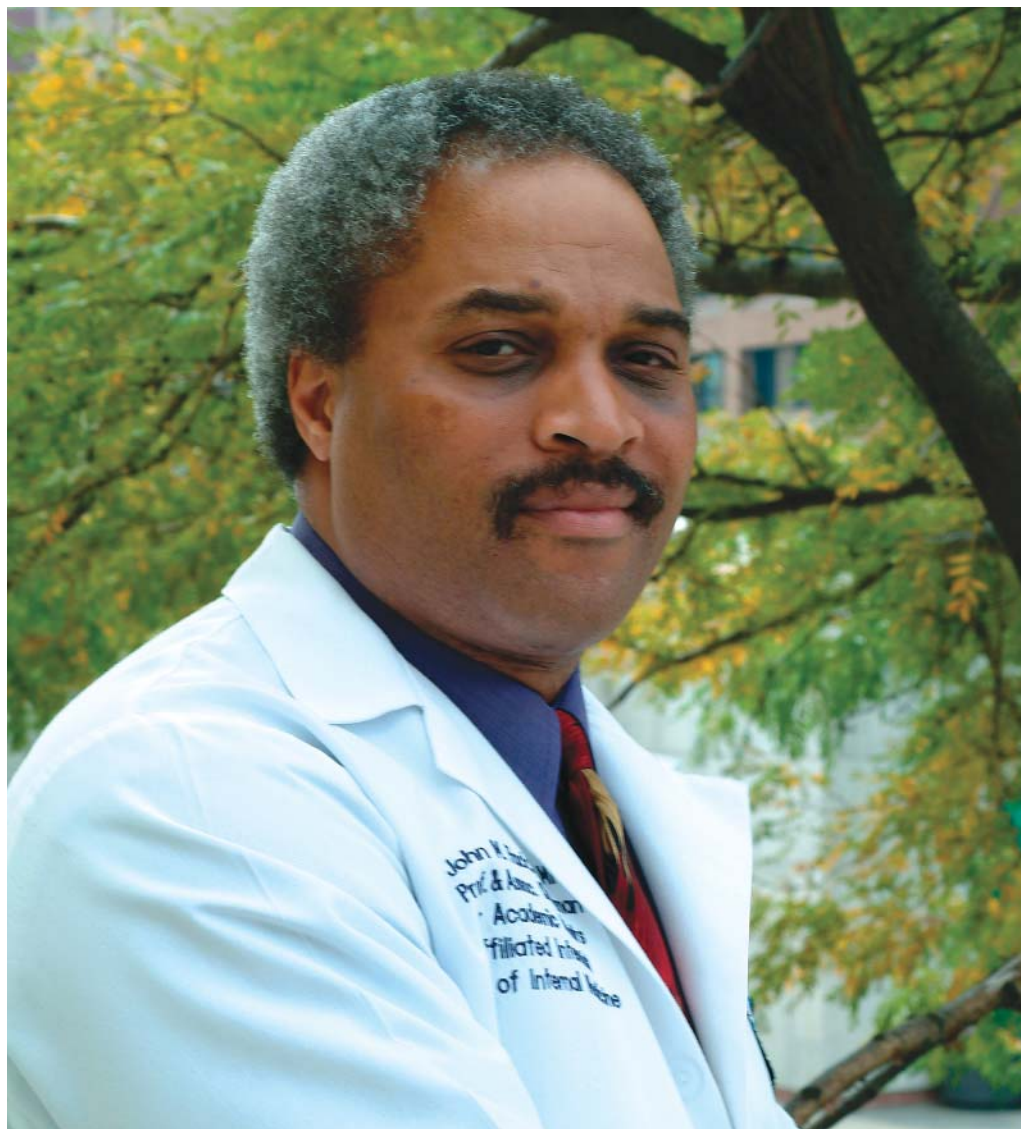
- Obesity, Nitric Oxide, Oxidative Stress and Salt Sensitivity
- Weight Loss in Breast Cancer Survivors, and

- A Dyadic Intervention for Cardiac Rehabilitation Patients

Dr. Flack, who has published extensively on African Americans' salt sensitivity and predisposition to hypertension, understands the unique health needs of the population to which he refers and belongs. As a professor of internal medicine and community medicine, he sees the immediate link between a person's individualized health concerns and those they are automatically subjected to by virtue of their geographic location, gender, age, race or ethnicity.

The NIEHS says the eight national centers will receive a total \$60.5 million over the next five years to support transdisciplinary research to examine how the social and physical environment, behavioral factors, and biologic pathways interact to determine health and disease in populations.

"African Americans comprise one of the largest minority groups in the United States, and they suffer excessively from a wide range of obesity and lifestyle-related health conditions," Dr. Flack said. "We hope to alleviate the disproportionate burden of disease through better understanding of the precursors and how their interactions cause disease." ■



Thanks to Dr. Flack, WSU has been named one of eight national centers to study precursors and factors mediating chronic conditions in African Americans.

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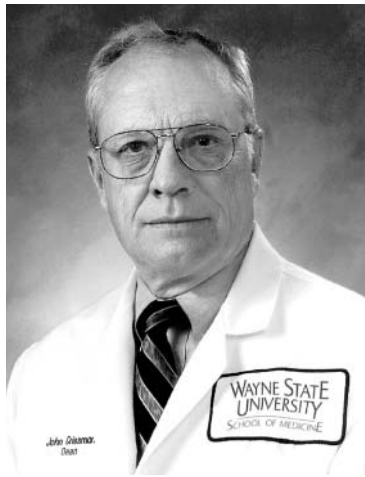
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Letter from the Dean

As 2004 begins, we are facing dramatic changes within our own health care delivery system that are both exciting and challenging. The imminent establishment of a Detroit Wayne County Health Authority is a landmark action which will bring dramatic change to the funding and access of health care to our community. As the major providers of care to the un- and underinsured members of our community who will be most impacted, the 600 School of Medicine faculty physicians expect to play a large role in the ultimate success of this important new initiative.

In addition, new leadership is taking the helm at our clinical partner, the Detroit Medical Center. Mike Duggan, former Wayne County prosecutor, has been named CEO of the DMC and we are looking forward to working together to create a more efficient and effective health care delivery system. I think his outside management perspective will bring some refreshing changes and allow his administration to focus on the business of health care while he trusts in the medical staff to deliver that care in the best way.

One major initiative for the School of Medicine this coming year is to bolster research programs in key areas such as population studies, cancer and perinatology. We are working closely to obtain adequate support and financing to ensure the success and viability of these research enterprises. Our ultimate goal is to raise not only our National Science Foundation research ranking from No. 22, which is quite a respectable spot, but also to grow our National Institutes of Health support and allow our scientists to work on the biotechnologies that are critically important to the health of our world.



On an end note, I'd like to acknowledge how lucky we are to be part of an academic medical system whose focus is on quality care and the constant rebirth of scientific discovery. The Association of American Medical Colleges recently issued a comprehensive report that concluded the quality of care is unquestionably better in teaching hospitals versus non-teaching hospitals. Our researchers, teachers, students and residents are the foundation of those teaching hospitals in Detroit and deserve many accolades for their inherent commitment to continuous improvement.

Although underfunded public health is a problem that remains a strong challenge, I am confident that we are making strong choices in serving the people of metro Detroit.

Sincerely,

John Crissman, M.D.
Dean, Wayne State University
School of Medicine

WSU Benefits from Michigan Proteome Consortium Grant

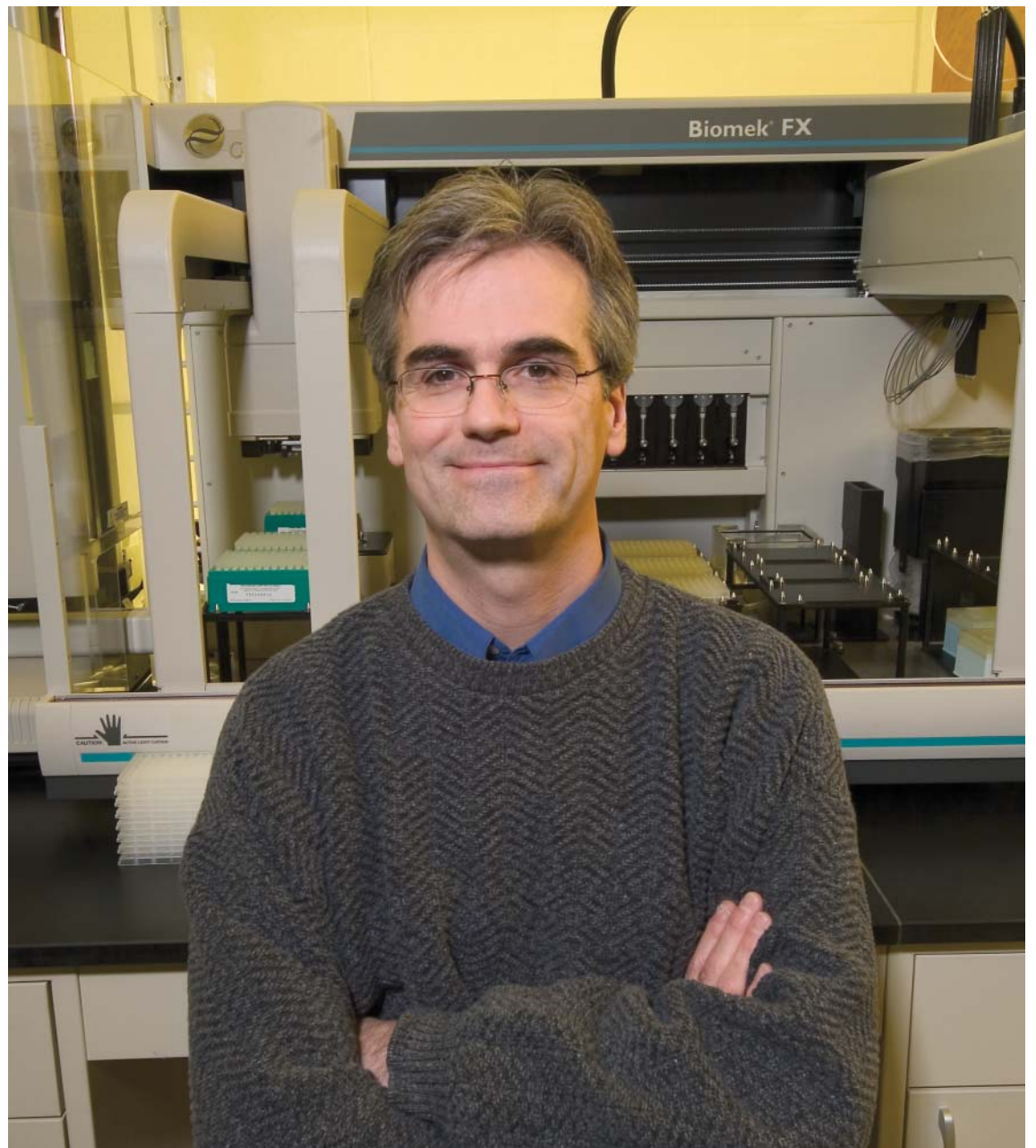
The \$11.9 million grant awarded to the Michigan Proteome Consortium from the National Center for Research Resources was good news for the Wayne State University node of the consortium and its director, Russell Finley, Ph.D. Although the consortium's main facilities are at the University of Michigan, the group was created as a partnership among U-M, WSU, Michigan State University and the

Van Andel Research Institute through the Michigan Life Sciences Corridor in 2001. The five-year grant will be shared by the four institutions.

The group's overall objective is to identify proteins and understand what they do in living organisms. Dr. Finley is the WSU project director and associate professor in the Center for Molecular Medicine and Genetics whose work focuses on technologies to identify and characterize protein networks. In one

project, funded by the National Human Genome Research Institute, his group is constructing interaction maps for the 14,000 proteins from the fruit fly, *Drosophila*. These network maps will provide information about specific pathways and functions of individual proteins.

The Proteome Consortium Web site is: www.proteomeconsortium.org. Dr. Finley's Web site is: www.proteome.wayne.edu. ■



Dr. Finley characterizes proteins to understand how they function in living organisms.



Cryotherapy is a great alternative to surgery for removing fibrous benign breast lumps, according to Dr. Littrup and nurse practitioner Laurie Freeman-Gibb.

Outpatient Cryotherapy Shrinks Benign Breast Lumps

Breast cryotherapy is a safe, effective and nearly painless office-based procedure that significantly reduces benign breast lumps without damaging breast structure, according to Peter Littrup, M.D., who presented his findings at the 89th Scientific Assembly and Annual Meeting of the Radiological Society of North America (RSNA) in December.

“Patients leave the office 30 minutes after the cryotherapy is completed,” said lead author Dr. Littrup, professor of radiology, urology and radiation oncology at Wayne State University and director of the image-guided therapy program at the Barbara Ann Karmanos Cancer Institute.

Cryotherapy for breast fibroadenomas, or fibrous benign lumps, is an ultrasound-guided procedure that uses exceptionally cold temperatures to freeze and kill abnormal tissue. Interventional radiologists numb the breast tissue around the mass and insert a cryoprobe, which is similar to a large

needle, into the middle of the lesion. An ice ball forms at the tip of the probe and continues to grow until the ultrasound confirms that the entire lump has been engulfed, killing the tissue.

According to Dr. Littrup, there are three major advantages of cryotherapy for breast fibroadenomas. The first benefit is visualization. Ice is easily visualized with both ultrasound and CT, making the procedure safe and effective. Second, cryotherapy is virtually painless when the area around the tumor is numbed with a local anesthetic. The third benefit is the cosmetic outcome. “Cryotherapy preserves the breast’s supporting architecture, or collagen, and does not leave significant surgical scars,” Dr. Littrup said. Based on the promising results of this study, radiologists at Karmanos have begun using cryotherapy to treat many other organ sites, primarily using CT guidance.

The researchers treated 42 fibroadenomas in 27 patients with ultrasound-guided cryotherapy to

evaluate outcomes and patient acceptance of cryotherapy for breast fibroadenomas originally planned for surgical removal. On average, the fibroadenomas were reduced in size by 73 percent. No significant complications were noted, and patients were pleased with the cosmetic results.

Affecting 10 percent of American women, most in their late teens and early 20s, fibroadenomas are often considered a leave-alone lesion. However, approximately 1 million are removed annually because of size, continued growth or for cosmetic reasons. African-American women have twice the incidence of fibroadenomas as Caucasian women.

The ability to conserve breast tissue is also highly desirable in the treatment of breast cancer, and Dr. Littrup has begun treating breast cancers under protocol.

Dr. Littrup’s co-authors are Laurie Freeman-Gibb, R.N., Michael White, M.D., Kathy Carolin, M.D., Ted Harb, M.D., and Amit Vyas, M.D. ■

The Enzymatic Production of Methanol: A Biological Mechanism to Produce Alternative Fuel

Scientists concerned with global warming have long explored using methanol as an alternative fuel source. Methane, which is found in landfills, wetlands and natural gas, is currently not efficiently used as a fuel source because it has a low energy density and it is hazardous and expensive to transport. Converting methane to methanol would provide an abundance of what is a more tractable fuel source. This process is currently accomplished in industry, however it is both costly to complete and requires high temperatures and pressures.

Methanotropic bacteria convert methane to methanol at ambient temperatures and pressure using methane monooxygenase (MMO) enzyme systems. While people have been studying the soluble form of MMO for years, Dr. Timothy Stemmler in the Department of Biochemistry and Molecular Biology recently announced the characterization of a pure membrane bound particulate form of MMO (pMMO) in the

Proceedings of the National Academy of Science. Dr. Stemmler and his colleague Dr. Amy Rosenzweig, Department of Chemistry at Northwestern University, have characterized the multinuclear copper active site center in the enzyme pMMO. Their results have direct implications into the enzyme’s reaction mechanism. This research was recently highlighted in a Stanford University online science magazine (www-ssrl.slac.stanford.edu/research/highlights_archive/pmmo.html).

“It is interesting that pMMO is able to complete catalysis at room temperature and atmospheric pressure. Our data provide the first real characterization of the pure proteins’ active site and we are therefore beginning to understand how the enzyme functions. If we can elucidate the protein’s reaction mechanism, we may be able to exploit the biochemistry that methanotrops complete into a much wider scale, producing a much cleaner burning and soon to be more abundant fuel than the fossil fuels,” says Dr. Stemmler. ■



Dr. Stemmler may have found a way to convert methane to methanol, providing an abundant alternative fuel source.

Angioplasty Cuts Death Rate Nearly in Half for Heart Attack Victims

The debate over the best immediate therapy for a heart attack has tipped in favor of mechanical reperfusion (angioplasty or bypass surgery) over thrombolysis (drugs to dissolve blood clots), according to a report in the October 8, 2003, issue of the *Journal of the American Medical Association*.

Myocardial infarction patients who received immediate mechanical reperfusion had a 48.5 percent reduction of in-hospital mortality rates, said lead author, Mary Grzybowski, Ph.D., M.P.H., assistant professor of emergency medicine. Expediting blood flow through the vessels as quickly and efficiently as possible is critically important to the survival of heart-attack victims.

Although immediate mechanical reperfusion (IMR) or primary angioplasty is generally considered a more dominant treatment strategy with better clinical outcomes and lower costs relative to thrombolysis,

community hospitals don't always have an experienced cardiac catheterization laboratory available. Medications are often used as a less desirable, but quickly available alternate therapy. Evidence from Dr. Grzybowski's report reinforces her preferred recommendation to transfer patients to a tertiary care hospital with more extensive facilities, as long as it is within 60 to 90 minutes, rather than keep them under surveillance with medication alone.

"The magnitude of benefit associated with angioplasty was even better than we expected," Dr. Grzybowski said. "The questions that need to be answered are how to triage these patients in the field prior to emergency department arrival and the degree to which patients will benefit if transported directly to a hospital capable of angioplasty and bypass surgery."

This study, titled "*The Mortality Benefit of Immediate Revascularization of Acute ST-Segment Elevation*

Myocardial Infarction (STEMI) in Patients with Contraindications to Thrombolytic Therapy: A Propensity Analysis," investigated 19,917 patients from the National Registry of Myocardial Infarction, a countrywide database that began in 1990. "This study is unique because it analyzes STEMI patients with contraindications to thrombolytic therapy who are eligible for reperfusion and because it quantifies the benefit of IMR treatment in such patients," Dr. Grzybowski said. "Future studies are needed to identify optimal methods of providing rapid access to IMR-capable hospitals."

Dr. Grzybowski is a research epidemiologist in the Department of Emergency Medicine. Co-authors included Elizabeth Clements, Pharm.D.; Lori Parsons; Robert Welch, M.D.; Anne Tintinalli, M.D.; Michael Ross, M.D.; and Robert Zalenski, M.D. ■

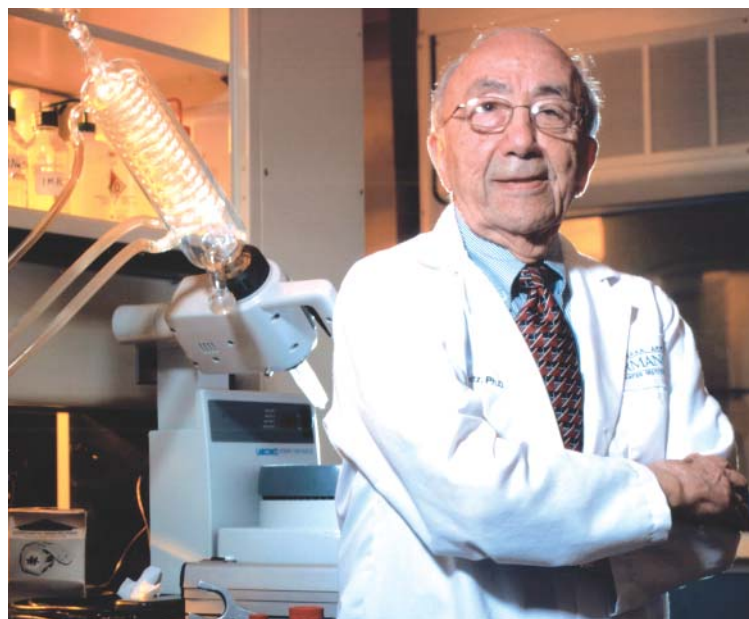


Myocardial infarction patients who received immediate mechanical reperfusion had a 48.5 percent reduction of in-hospital mortality rates, according to a study by epidemiologist Dr. Mary Grzybowski.

Dr. Horwitz Develops Novel Anti-Tumor Compounds

Jerome Horwitz, Ph.D., one of Wayne State University's and Barbara Ann Karmanos Cancer Institute's most esteemed researchers, has created an exciting anti-tumor series, the SH80 series, recently licensed to Sanofi-Synthelabo, a multi-national pharmaceutical company.

Dr. Horwitz, nationally recognized as the creator of AZT and two other leading therapeutics for AIDS and HIV, began searching for improved derivatives of XK469, 2-[4-(7-chloro-2-quinoxalinyloxy) phenoxy]propionic acid, originally synthesized at DuPont in 1991. Since then, he and a team of researchers, including Drs. Stuart Hazeldine and Lisa Polin have synthesized and tested an additional 125 distinct analogs of XK469. One of these, SH80, was found to be significantly more active when tested in mice.



Dr. Horwitz, the creator of AZT, is testing his newly developed anti-tumor therapeutics.

All of the analogs synthesized were evaluated *in vitro* to determine cytotoxicity against leukemias and

tumors. Selected *in vitro* active analogs were then tested in mice against various tumors. Tumors

tested included pancreatic adenocarcinoma-03, colon tumor 26, and mammary adenocarcinoma-17/Adr.

After extensive testing and comparison of the analogs to XK469, SH80 was deemed superior against all three tumor types tested. Horwitz commented that even though the SH80 series shows promise, there is a tremendous rate of failure in drug discoveries.

"We are cautiously optimistic on the potential effects of this compound," said Dr. Horwitz. Further testing is necessary, with drug trials potentially starting in approximately 24 months. "We will continue to look at SH80 to gain an understanding of the mechanism and how it works." If the compound proves to be safe and effective, a new anti-tumor drug may be on the market in six years or so.

"At 84, Dr. Horwitz is one of the oldest recipients ever of a five-year

grant from the National Institutes of Health/National Cancer Institute," commented Fred Reinhart, WSU's assistant vice president for Research and Technology Commercialization. Working under this five-year grant titled "Optimization of XK469 Against Transplanted Solid Tumors," awarded in early 2000, Dr. Horwitz and his research team discovered the SH80 series. He still comes to work everyday and finds his current work challenging. He contemplates a *possible* retirement at the end of his five-year grant in 2005.

Sanofi-Synthelabo is a major global research-based pharmaceutical group ranking 7th in Europe in terms of annual sales and among the world's top 20 pharmaceutical companies. Its core therapeutic areas are cardiovascular disease and thrombosis, diseases of the central nervous system, cancer and internal medicine. ■

Neural Damage to Brain Is Modeled in Retina to Better Understand Cell Injury

A peculiar finding in his first major research grant led Dennis Goebel, Ph.D., down an entirely new and entirely exciting pathway. A morphologist who became an expert on the structures and synaptic systems in the retina has suddenly turned toxicologist. How did he move from retinal structures to neural poisoning, damage and fatality? An unexpected turn in his original hypothesis took him there. Now he has a four-year National Institutes of Health (NIH) grant to show for his hard work and good fortune.

After earning his master's degree in chemistry from Wayne State in 1988, Dr. Goebel envisioned himself working in industry, most likely pharmaceuticals. But a major economic downturn convinced him to earn his doctorate (in just three years) and led him into a research/teaching position at Wayne State, instead of in a corporate lab.

His first nationally funded research grant was to define the role of the glycine transporter in regulating NMDA-receptor neurotransmission. Instead, he found that NMDA receptors mediate cell death through distinct pathways. In his new line of work, Dr. Goebel studies the involvement of NMDA receptors in two kinds of cell death that are expressed following stroke or lack of oxygen/glucose. One of most studied pathways is apoptosis, which is a highly controlled programmed response. The second mode is necrosis, which is thought to be nonspecific, far more unpredictable, and more destructive.

"We have already challenged and changed the notion that necrosis is a nonspecific process," he said. Studies from his laboratory have shown that cells that die as a result

of necrosis are selectively targeted, mainly through NMDA-receptor overstimulation. Work over the past 3 years has led Dr. Goebel to develop an *in vivo* retina model whereby he can effectively isolate NMDA-receptor induced apoptosis from necrosis, as well as have the ability to study necrosis independently from apoptosis.

This model has led to a newly funded NIH R01 grant which has begun to uncover the underlying mechanisms that differentiate between these two modes of cell death. Data recently obtained from this study clearly shows that although NMDA-receptor activation is necessary to trigger both apoptosis and necrosis, beyond this point, the two modes proceed independently of the other.

Understanding that apoptosis and necrosis have two pathways that both diverge and occur independently of one another will help Dr. Goebel and his team look for neuroprotective drugs that could treat visual disorders resulting from glaucoma or ischemia in the retina in hopes of developing therapeutic treatments for these patients and potentially to be applied to patients recently afflicted by stroke in the brain. Since he uses the retina as a near-perfect model of the brain with all the same neurotransmitters and receptors, tests applied to the simpler retinal tissue might also be applied to brain tissue.

Since he became a research associate at the School of Medicine in 1991, he has: worked with Dr. Michael Bannon (psychiatry) exploring the role of the dopamine transporter in Parkinson's disease, then worked with his Ph.D. mentor Dr. Roberta Pourcho (anatomy and cell biology) to characterize the synaptic organization of the retina, developed his own independent



Dr. Goebel has scored a large NIH grant to study the involvement of NMDA receptors in two kinds of cell death that are expressed following stroke or lack of oxygen/glucose.

research program that combines his morphological and biochemical expertise, become an active player in the NIH Vision Core Center Grant, and has earned a reputation as an accomplished neuroanatomist/neurochemist specializing in receptor interactions in the mammalian retina.

"When the science takes an unexpected turn and faces me in a new direction, I can at least rely on some instant gratification from teaching," Dr. Goebel said. A gross anatomy instructor for 11 years, Dr. Goebel was recently promoted to associate professor and he says he loves teaching. "I truly enjoy the

interaction with the new medical students and I find that I am able to remain sharp and focused because of it."

Not bad for a guy who didn't have things go quite his way. ■

Family Support, Resources Reduce Complications Following Spinal Cord Injuries

The people who have the best outcomes after a traumatic spinal cord injury are those with family support and resources, said Colette Duggan, Ph.D., adjunct assistant professor of physical medicine and rehabilitation. This may come as no surprise, but on the flip side of that statement sits a vulnerable population that needs better access to quality health care.

Dr. Duggan and her colleague Tara Jeji, M.D., are examining data from a qualitative, longitudinal study of quality of life following a spinal cord injury (SCI). The major study was funded by the National Institute on Disability and Rehabilitation Research, but a subsequent grant from the Blue Cross Blue Shield of Michigan Foundation allowed the researchers an opportunity to focus in greater detail on secondary medical complications. Their data is pulled from multiple personal interviews of 43 people admitted to the Rehabilitation Institute of Michigan following SCI. Up to three interviews were completed during the inpatient hospital stay and four more were done at 6, 12, 20 and 30 months post-injury, to explore patients' observations of their own health care experiences.

Although the data analysis is not yet complete, a few major themes have surfaced. "There was a staggering number of medical complications and rehospitalizations during the 30-month follow-up period. This was most notable in the subgroup of six persons who were discharged to a community nursing home. They incurred an average of almost nine medical complications and were readmitted to the hospital five times on average, but some had as many as 12 hospital visits due to infection, pneumonia, bed sores and other problems," Dr. Duggan said. "And in general, they felt forgotten, left out of the system,

and helpless."

Those people with private medical insurance and family caregivers generally had less severe complications because problems were recognized and treated quickly and properly. But Dr. Duggan notes that a large majority of the SCI patients at the Rehab Institute are male, single, of minority status, with unstable employment records and either no insurance or inadequate public assistance (Medicaid).

"If these young men have no spouses or family members to take care of them, and if they have no insurance coverage, they end up in nursing care facilities that are really designed for geriatric patients with dementia. These men typically are under 50 years old, with no cognitive impairments, but they have partial or total paralysis and they haven't yet learned to cope with their disabilities. The nursing home is really not the most suitable place for them, but they have no choice," Dr. Duggan said.

Spinal cord injuries are very complex and require significant follow-up and therapy. Dr. Duggan suggests that managed care's emphasis on shorter lengths of stay forces patients to leave the hospital before they have adjusted to their injury, been educated about prevention concerns, or before benefits and services needed for their ongoing care are in place.

"It is important to consider the personal experiences of SCI consumers in the design and delivery of health care services," she said. "It is expected that policy makers, insurers, providers, researchers, clinicians and consumer groups will be able to utilize these findings in ways that will ultimately provide high quality care tailored to the needs of the urban poor, improve quality of life, and, at the same time, contain health care costs." ■



Dr. Duggan says people with spinal cord injuries are often forced to leave the hospital before services needed for their ongoing care are in place.

Teaching the Business of Biotechnology

Generally, graduate students in biomedical programs focus on science while students in the business school develop their skills in business administration and entrepreneurship. These two worlds are rapidly converging as the emerging biotechnology industry fuels the translation and commercialization of biomedical research. Joan Dunbar, Ph.D., director of biotechnology development at the School of Medicine, has now united business and science in a new course called Introduction to the Business of Biotechnology. The graduate course (BMS 6100) is initially offered in winter 2004 with an invitation to postdoctoral fellows and faculty to sit in on the presentations.

“We are providing a broad overview of the basic elements of entrepreneurship in the biotech-

nology industry,” said Dr. Dunbar. Each session will present a different issue in biotechnology, from the drug discovery pathway to intellectual property and patents to business plans and strategies. The course is funded by a grant from the Michigan Economic Development Corporation (Entrepreneurship Education Program) and sponsorship from the WSU School of Medicine and the WSU Technology Transfer Office.

“There are multiple goals for this course,” noted Dr. Dunbar “Those goals include preparing students for research careers outside of academia, educating scientists in the process of commercialization and the potential role of faculty in those activities and to nurture a new breed of entrepreneurs.”

For a complete list of topics, speakers and schedules, please email Dr. Dunbar at: jcdunbar@med.wayne.edu. ■



Dr. Dunbar is integrating graduate medical sciences with business perspectives through a new educational series on the business of biotechnology. Biomedical researchers are the target audience, but others are welcome to participate.

Volunteers Recruited for Ovarian Cancer Study

Early detection of ovarian cancer is critical to surviving the disease and Michael Tainsky, Ph.D., professor of oncology at WSU and the Karmanos Cancer Institute, is developing a blood test to find markers of the earliest stages of the disease.

In an effort to recruit African-American women to participate in a new study, Dr. Tainsky engaged the help of Stacey Lee, Miss Michigan USA 2004, an African-American woman who visited the Karmanos Cancer Institute to encourage others to donate a single tube of blood for the study.

Nancy Levin, research coordinator for the study, said because the early symptoms of ovarian cancer are frequently vague and can mimic other common medical problems, ovarian cancer is often not detected until the cancer has spread beyond the ovary. This study by Dr. Tainsky is helping develop a new blood test that is more accurate and specific than

the currently used CA-125 blood test, which often misses cases and is better suited to detection of disease recurrence and/or monitoring the effectiveness of treatment.

The test is based on the fact that when people get sick, the body produces antibodies in response to the presence of the tumor. In cancer, these proteins called tumor markers circulate in the blood. This test is designed to utilize tumor markers to detect cancer in its earliest stages so patients can be diagnosed early and accurately and they can be treated before the disease spreads beyond the ovary.

For more information, see: www.karmanos.org/news/needed.html. ■

Miss Michigan USA, Stacey Lee, and Dr. Michael Tainsky helped recruit African-American women to donate blood to study an early marker for ovarian cancer.



Project Medical Education Informs Policymakers

State representative Sandy Caul (R), worked as a registered nurse for almost 30 years in both hospital and long-term care settings. She said that background is one of the reasons she decided to become a lawmaker.

"Even though I walked that talk for many a year, I still thought it would be a good time to get updated as to some of the current practices and procedures that are happening," she said.

Caul was one of over two dozen state legislators and staff members who attended Project Medical Education (PME) in October. Designed to provide state policymakers with an accurate knowledge base that will empower them to make insightful decisions that affect state medical schools, their affiliated teaching hospitals and the people they serve, PME gave state legislators a "day in the life" of a medical resident and student. The two-day event was hosted by the OHEP Center for Medical Education and the School of Medicine.

Legislators got a first-hand look at things like a medical resident's clinical "morning report," clinic patient schedule and making rounds. They saw a typical student's curriculum schedule, for example, or a debt load statement. In addition, legislators had a chance to personally interact with medical students and residents, to ask them questions and to hear about their concerns and challenges.

"The more education and knowledge we can get as representatives, the more wisdom we will have to make the right decisions that are really a benefit to people in the state," said Caul. "Because without their health, there's nothing else that really counts."

Rep. Gary Newell (R) doesn't have a health care background, which is ok in the budgeting process, he said, "but it's still good to understand what it is that you are financing. And we do put a considerable amount of money – about \$170 million – into graduate medical programs. We're here to see what we're doing with that money."

Newell chairs the community health subcommittee of the house appropriations committee.

"There are certain problems that present themselves all across the state as far as health care is concerned," he said. "The more I can learn about how these things are done, the better I can serve the people that I'm serving."

The event consisted of dinner and PME-themed presentations at the Detroit Marriott Renaissance Center, followed the next day with visits to the School of Medicine and participating OHEP hospitals. Those included Henry Ford Hospital, North Oakland Medical Center, Oakwood, Providence, St. John, St. Joseph Mercy Oakland, William Beaumont, as well as eight hospitals from the Detroit Medical Center (DMC).

"The goal was not to advocate the specifics of future decisions but to set the context in which good legislative decisions can be made," said Joe Bracato, executive director of OHEP. "We wanted to provide an on-site learning experience in order to illustrate the critical value of supporting the educational environment within our health care system. And we're very happy with the response and turn out we received."

Also attending was Rep. Michael Switalski (D), who was planning a Friday night visit to Detroit Receiving Hospital's emergency room, the busiest emergency room in the state with some 85,000 visits per year.

"I think I'll see a lot of action there, and it'll probably change me forever," he said. "I want to see what they're dealing with in terms of volume and the high intensity of trauma situations. We have big problems in the state budget-wise, and I'm going to have to understand the problems here in the medical sector to really understand the effects of the decisions we make in Lansing."

PME was comprised of several central themes: in-state physician training and retention; resident provision of medical care; and funding issues for graduate medical education. ■



Dr. Herman Gray tells policy makers about the people served through WSU's graduate medical education program.



Medical students and residents informed legislators about typical patient schedules, curriculum loads and loan debts.



More than 20 state legislators and staff members attended Project Medical Education to learn more about medical schools and teaching hospitals.

Doctors' Spouses Give and Receive Support Through Alliance

Physicians, in general, have pretty stressful careers. Their spouses, by association, feel the weight of that stress in their homes and family life, too. Student loans, long hours, the cost of malpractice insurance, and marginal reimbursement policies are issues that affect medical families, not just medical doctors.

Finding common bonds with others is important to the American Medical Association Alliance—a volunteer group comprised of resident physicians' and medical stu-

dents' spouses. The Michigan State Medical Society has its own Alliance group and they lend assistance to students and alumni of the Wayne State University School of Medicine. Every spring, the MSMS Alliance (MSMSA) presents the school with funds to help students defray the cost of clinical skills exams, interview travel and other incidental expenses that increase their rapidly accumulating debt.

Alliance groups across the country work in partnership with the American Medical Association to educate physicians' family mem-

bers about health issues, so that they may educate others in turn and act as advocates for quality medical care. They support educational programs that improve public health and they take up causes and get involved in legislative issues that impact the practice of medicine.

Second-year WSU medical student Christine Veenstra acknowledges that her classmates and colleagues spend lots of time buried in books, on call at hospitals, and trying to serve patients—leaving little time to clue their families in to

the health care issues of the day. Alliance helps spouses get involved in medicine by educating them, giving them a voice, allowing them to volunteer for community programs that make a difference, and presenting the legislative issues and how they will impact practitioners.

"It allows medical families, not just doctors, to be informed champions for America's health," Veenstra said. ■

Congratulations to Budding Researchers

The seventh annual Graduate Student Research Day held in September boasted proud young researchers who shared their work with students, faculty and colleagues.

"As a completely student-organized and student-run activity, it increasingly demonstrates the enthusiasm and scientific talent possessed by our graduate students, and the dedication they exhibit toward their science training," said Kenneth Palmer, Ph.D., assistant dean for graduate programs.

Congratulations to the following winners:

Oral Competition

1st Place - Pam Osenkowski who presented "Structure-Function Analysis of Membrane Type 1-Matrix Metalloproteinase."

2nd Place - Sandia Waller who presented "Evening Ready-to-Eat Cereal Contributes to Weight Management."

3rd Place - Christian Kreipke who presented "NMDA Receptor Blockade Attenuates Locomotion Elicited by Striatal D1-Receptor Stimulation."

Poster Competition

1st Place - Quinn Parks who presented "Genetic Differences in Pseudomonas Aeruginosa Ocular Virulence."

2nd Place - Beth Szliter who presented "Pseudomonas Aeruginosa Infection in Contact Lens-Wearing Rats: Molecular Analysis."

3rd Place - Selina Glaros who presented "Cross-Talk Between Activated AKT and ER Alpha Leads to Tamoxifen Resistance in Breast Cancer Cells." ■



The winning graduate students for 2003 were Christian Kreipke, Selina Glaros, Pam Osenkowski and Quinn Parks.

Continuing Medical Education

Congestive Heart Failure for the 21st Century
Saturday, February 7, 2004
The Somerset Inn
Troy, Mich.

Medicolegal Investigation of Death
April 21-23, 2004
The Dearborn Inn
Dearborn, Mich.

For more information or to register for conferences, please call Wayne State University's Division of Continuing Medical Education at (313) 577-1180.

Honors Convocation Praises School's Best

The following faculty members were recognized at the annual WSU School of Medicine Honors Convocation. Congratulations to all honorees for their hard work and commitment.

2003 Teaching Awards

George Brush, Ph.D., cancer institute
James Moseley, Ed.D., community medicine
Wilma Henderson, M.D., emergency medicine
Tsveti Markova, M.D., family medicine
Anne Victoria Neale, Ph.D., family medicine
Sharon Popp, Ph.D., family medicine
John Porcerelli, Ph.D., family medicine
Kendra Schwartz, M.D., family medicine
Jeffrey Hobden, Ph.D., immunology and microbiology
Matthew Jackson, Ph.D., immunology and microbiology
Loutif Aboussouan, M.D., internal medicine
Patricia Brown, M.D., internal medicine
Basim Dubaybo, M.D., internal medicine
John Ebright, M.D., internal medicine
Willane Krell, M.D., internal medicine
James Kruse, M.D., internal medicine
Howard Rosman, M.D., internal medicine
Charles Schiffer, M.D., internal medicine
Liborio Tranchida, M.D., internal medicine
Wilhelmine Wiese, M.D., internal medicine
William Coplin, M.D., neurology
Anthony Johnson, D.O., obstetrics and gynecology
William Brown, Ph.D., pathology
Fazlul Sarkar, Ph.D., pathology
Stephen DiCarlo, Ph.D., physiology
Joseph Dunbar, Ph.D., physiology
Donal O'Leary, Ph.D., physiology
Daniel Walz, Ph.D., physiology
James Tyburski, M.D., surgery

Lamp Award

Stephen DiCarlo, Ph.D., physiology

Staff Award

James Tyburski, M.D., surgery

Pfizer Humanitarian Award

John Ebright, M.D., internal medicine

Academic Achievement Awards

Class of 2004

Ross Germani
Alex Haynes
Kathleen Stirling
Corey Treadway

Class of 2005

Thomas Pulling

Class of 2006

Dina El-Essawi



Notes

Siddhartha Annamraju, M.D., internal medicine resident at Sinai-Grace Hospital, was an award finalist for a poster presentation on "Implantable Cardiac Defibrillation Threshold Determination Via Single Ventricular Fibrillation Induction" at the American College of Cardiology-Michigan Chapter Scientific Meeting in October.

Vicki Baker, M.D., has been appointed interim associate dean for research at the Wayne State University School of Medicine.

Harry Chugani, M.D., professor of pediatrics, neurology and radiology, has been invited to be on the editorial board of *Neurology*, the official journal of the American Academy of Neurology.

Stephanie Conant, pre-doctoral student, gave an invited presentation at the Americas Committee for Treatment and Research in Multiple Sclerosis (MS) meeting in October. Her presentation was titled "Autoreactive T Cells Persist in Animals Protected Against Autoimmune Encephalomyelitis and Can Be Activated Through Stimulation of Innate Immunity." Along with co-author Robert Swanborg, Ph.D., she is studying how a disease like MS could be triggered by microbial agents.

La Ventra Ellis-Danquah, librarian and coordinator of education and community services at Shiffman Medical Library, was one of two medical librarians selected for the 2003-2004 Leadership and Career Development Program, sponsored by the Association of Research Libraries and the Medical Library Association.

Richard Gallagher, Ph.D., professor of family medicine, served as guest editor for the fall 2003 issue of the *Journal of Cancer Education* which featured a series of articles on the topic of tobacco use cessation. The lead review article titled "Tobacco Cessation: New Challenges, New Opportunities" was authored by Dr. Gallagher and **John Hopper, M.D.**, assistant professor of internal medicine and pediatrics.

Herman Gray, M.D., associate dean for graduate medical education, has been appointed chief of operations for Children's Hospital of Michigan.

Murali Guthikonda, M.D., associate professor of neurosurgery, was an honored guest of the 5th Indian Skull Base Society in September. Dr. Guthikonda led the meeting with didactic and cadaveric skull base surgical dissection demonstrations. He also gave presentations on "The Management of Tuberculum Sellae Meningiomas" and "Ophthalmic Segment Aneurysms: Classification and Management."

Xi Huang, Ph.D., research scientist in anatomy and cell biology, received a \$14,000 award from the Michigan Eye Banks and Transplantation Center to study "The Role of Toll-like Receptors in Bacterial Keratitis."

Mark Ireland, Ph.D., associate professor of anatomy and cell biology, received a \$12,865 award from the Michigan Eye Banks and Transplantation Center to study "The Epidermal Growth Factor Receptor (EGFR) and the Post-Natal Differentiation of Lens Fiber Cells."

Sinoj John, M.D., internal medicine resident at Sinai-Grace Hospital, was an award finalist for a poster presentation on "Expression of B2 Subunit Mutants Alters Localization of L-Type Calcium Channels in Rat Adult Cardiomyocytes" at the American College of Cardiology-Michigan Chapter Scientific Meeting in October.

Peter Karpawich, M.D., professor of pediatrics and director of cardiac electrophysiology at Children's Hospital of Michigan, was an invited faculty participant at the annual scientific meeting of the Southeastern Pediatric Cardiology Society. His presentation on cardiac pacing was part of the featured symposium, "Potential Applications of Cardiac Resynchronization in Congenital Heart Disease."

He also co-authored the first clinical study on use of pacing cardiac resynchronization therapy (CRT) in patients with congenital heart defects and severe heart failure as an alternative to heart transplant. His findings were presented at the 2003 scientific session of the American Heart Association.

Anna Ledgerwood, M.D., professor of surgery, was installed as first vice-president of the American College of Surgeons.

Joshua Liao, Ph.D., assistant professor of pathology, received a \$150,000 grant from the Lance Armstrong Fund to study testicular cancer.

Robert Lisak, M.D., Parker Webber Chair of Neurology, professor and chair of neurology and professor of immunology/microbiology, has been appointed vice-chair of the Accreditation Council of the United Council of Neurologic Subspecialties (UCNS).

Jeanne Lusher, M.D., distinguished professor of pediatrics and Marion I. Barnhart Hemostasis Research Professor, was appointed to the National Heart, Lung and Blood Institute's Data and Safety Monitoring Board for Hemostasis and Transfusion Medicine Clinical Trials. In addition, Dr. Lusher:

- chaired the Third International Conference on Inhibitors of Clotting Factors in September and will be publishing the proceedings soon.
- was an invited speaker and session chair at the Fifth International Symposium on Immune Tolerance Induction in Patients With Inhibitor Antibodies Against Clotting Factors in October.
- organized and chaired the 20th anniversary International Symposium on Clotting Factor Inhibitors—New Basic, Translational, and Immunologic Aspects, held in September. She is now editing the proceedings for publication.

Husseini Manji, M.D., professor of psychiatry and behavioral neurosciences, is well cited in the September 11 issue of *Nature* in an article about lithium. He and **Gregory Moore, Ph.D.**, are recognized for shedding light on how lithium works as a therapeutic agent.

Tsveti Markova, M.D., assistant professor of family medicine, has been elected chair of the Program Directors Committee and a member of the board of directors for the Michigan Academy of Family Physicians.

Mark Marunick, D.D.S., associate professor of otolaryngology, was inaugurated as the 52nd president of the American Academy of Maxillofacial Prosthetics in November. He was also selected for inclusion in the 2004-2005 first edition of "The Best Dentists in America."

Yousha Mirza, M.D., psychiatry and behavioral neurosciences resident working in Dr. David Rosenberg's lab, published "Reduced Glutamate in Childhood MDD" in the *Journal of the American Academy of Child and Adolescent Psychiatry*.

David Rosenberg, M.D., professor of psychiatry and behavioral neurosciences, was highly praised in the *Journal of the American Academy of Child and Adolescent Psychiatry* book review of his text, "Pharmacotherapy for Child and Adolescent Psychiatric Disorders, Second Edition."

Michael Simon, M.D., associate professor of internal medicine (oncology), received a Blue Cross Blue Shield of Michigan Foundation grant for his research, "Comparison of Dietary Assessment Methods in a Low Fat Dietary Intervention Program," which was published in *Nutrition and Cancer*.

Jack Sobel, M.D., has accepted the newly created position of assistant dean for clinical science research at the Wayne State University School of Medicine.

Dan Walz, Ph.D., has assumed the newly created position of assistant dean for basic science research at the Wayne State University School of Medicine.

Jayne Weiss, M.D., professor of ophthalmology and pathology at the Kresge Eye Institute, was appointed to the board of directors of The Cornea Society, a national organization for corneal subspecialists.

Lucia Zamorano, M.D., professor of neurological surgery and radiation oncology, received an honorary appointment as professor at the Department of Computer Science and Biomedical Engineering at Rutgers University. This appointment will enable research collaboration in the field of computer-assisted surgery. ■



Rounds

DMC Board Appoints Duggan CEO

The Detroit Medical Center board of trustees announced on December 8, 2003, the selection of Michael Duggan, former Wayne County prosecutor, as the new president and chief executive officer of the health system.

The decision follows a national search to replace former DMC CEO, Dr. Arthur Porter, who stepped down in October. Duggan took the position effective January 5, 2004.

"Our board is very confident in the selection of Michael Duggan as CEO," said Chuck O'Brien, DMC chairman of the board. "After a three-month search, interviewing hospital executives from Michigan and around the nation, Mike's name surfaced as someone who is very aware of the importance of the DMC, the challenges some of our institutions are facing and who is very concerned about the future stability of this organization. He has an outstanding record of achievement as an administrator and is well respected by our community leaders."

"The complement of business and political knowledge Mike will bring to our physicians and management team is outstanding, which will truly give us the opportunity to continue the restructuring and repositioning we have been focused on since the beginning of the year. I am confident that Mike and our established executive team will accomplish a successful turn-around for the DMC," said John Levy, DMC board member and chair of the CEO search committee.

Duggan has lived in Livonia, Mich. for 40 years. He is a graduate of Detroit Catholic Central, and received his undergraduate and law degrees from the University of Michigan. Following a private law practice, Duggan joined Wayne County as the deputy county executive, overseeing a \$2 billion budget, 10 county departments and 6,000 county employees. Duggan ran for and was elected Wayne County prosecutor in August 2000. In 1987, he worked to pass legislation for the "plus card"

system. This is a health assistance program that put 50,000 unemployed poor people into a Wayne County system that allowed local HMOs to bid for their business. In 1995, he led efforts to establish another county health program called Health Choice, and he was board chair of Health Choice from 1995-2000.

Dr. Heppner Accepts Associate Vice President Position at WSU

Gloria Heppner, Ph.D., has been named associate vice president for research at Wayne State University.

Dr. Heppner, professor of internal medicine, has been a member of the WSU community for 24 years. She most recently served as assistant dean for cancer programs at the School of Medicine and deputy director of the Karmanos Cancer Institute.

In her new position, Dr. Heppner will be primarily responsible for the developing and implementing new research at WSU, securing new research funding, managing and updating internal research support programs and administering intellectual properties.

According to John Oliver, vice president for research, Dr. Heppner's two decades in university and hospital leadership should give her all the tools she needs to help WSU's research enterprise continue to grow.

"Wayne State's School of Medicine has benefited from Gloria's expertise for years," Oliver said. "We feel very fortunate to have someone with her level of commitment and experience join the university-wide research effort."

Dr. Diamond Takes Part in National Infertility Study

Michael Diamond, M.D., is one of eight researchers in the U.S. to lead a National Institute of Child Health and Human Development (NICHD) study to treat infertility in women with polycystic ovary syndrome (PCOS). The study is the largest of its kind.

In polycystic ovary syndrome, an excess of male hormones, interferes with normal ovulation and other body systems. Five to 10 percent of women of reproductive age have PCOS. The syndrome begins in childhood but is often undiagnosed until adulthood when women fail to become pregnant.

Dr. Diamond, professor of obstetrics and gynecology and director of the Division of Reproductive Endocrinology and Infertility, said

women wishing to take part in the study should:

- Be between the ages of 18-39;
- Be seeking to become pregnant;
- Have eight or fewer periods a year, or have periods that are 45 or more days apart; and
- Have elevated levels of testosterone.

Volunteers can expect to participate in the study from 30-32 weeks, to be monitored for possible side effects and for pregnancy while taking the medication. Study participants will receive free of charge all study medications, blood tests performed after enrollment, a physical exam including an ultrasound of the ovaries, a pregnancy test, and, if they become pregnant, an ultrasound test to confirm the pregnancy.

Medical Anthropologists and Linguists Characterize Safety in Emergency Rooms

A National Science Foundation study by a team of medical anthropologists and linguists at Wayne State University's Institute for Information Technology and Culture (IITC) has identified patterns of speech and social interaction that contribute to maintaining medical safety in a hospital emergency room. The study, titled Learning to Listen, used airline cockpit voice recorder technology to record more than 300 hours of informal conversation among doctors, nurses and technicians in an emergency room, and compared the changing speech patterns with patterns and trends in patient care.

As researchers Dr. Allen Batteau and Margaret Karadjoff reported Nov. 20 at the annual meeting of the American Anthropological Association in Chicago, they found that the emergency room in the study has a very safe environment, with a significantly low incidence of error. Errors, such as leaving patients unattended or ordering incorrect medications, rarely occur. When such errors do occur, they are nearly always caught before patients are affected.

This pattern of being able to detect and correct errors is typical of high reliability organizations, characterized by a high level of teamwork among all personnel. Teamwork – open communication, respect for expertise, constant learning, and mutual reinforce-

ment – is created and reinforced through informal communication.

The researchers are now studying the speech patterns to see if they offer clues for when teamwork is about to break down. If changes in linguistic patterns indicate a degradation of situational awareness, then this becomes a powerful tool for improving patient safety. This suggests that when medical teams monitor their own teamwork, they can become more aware of when the team needs to pull together for the patients' safety.

Detroit Receiving Wins Circle of Life Award

The palliative care service at Detroit Receiving Hospital recently received an award of recognition from the Circle of Life Committee of the American Hospital Association.

The service, initiated by Dr. Robert Frank, associate dean for academic and student programs, and Dr. Richard Carlson, former chief of critical care, was one of the first in the country.

The service is currently staffed by Meg Campbell, R.N., and Dr. Michael Stellini, assistant professor of internal medicine. ■



Patricia Dhar, M.D., assistant professor of internal medicine, received a \$7,500 grant to host the Pfizer Visiting Professorship Program in Rheumatology. Dr. Carolyn Gordon, a rheumatologist from the University of Birmingham in England conducted a series of WSU seminars in October, thanks to Dr. Dhar's award.

Samuel Johnson, M.D., and **Faysal Saksouk, M.D.**, associate professors of radiology, were honored with the Magna Cum Laude exhibit award at the 2003 Radiologic Society of North America meeting in November-December. There are six such awards given out of over 600 scientific exhibits and presentations.

Yousha Mirza, M.D., psychiatry and behavioral neurosciences resident, received a \$1,000 travel grant to attend the American Academy of Child and Adolescent Psychiatry's 50th anniversary meeting in October. He was one of 50 residents nationwide to be chosen for this honor.

Apurva Motivala, M.D., internal medicine resident at Sinai-Grace Hospital, won second place in the poster research competition for the American College of Cardiology-Michigan Chapter Scientific Meeting in October. The winning research project focused on "The Role of Fine Particulate Air Pollution and Elevation of Circulating Asymmetric Dimethylarginine Level."

Kamal Nasser, M.D., internal medicine resident at Sinai-Grace Hospital, won first place in the poster research competition for the American College of Cardiology-Michigan Chapter Scientific Meeting in October. His research was on "Maturation of the Microvasculature in Healing Myocardial Infarcts: A Potential Role for Platelet Derived Growth Factor."

Ananda Prasad, M.D., Ph.D., professor of internal medicine, was among eight honorees inducted into the International Institute's Heritage Hall of Fame.

Norbert Reinstein, M.P.H., adjunct instructor in community medicine, was honored with a Service Recognition Award as a preeminent health educator and historian in recognition of his 30 years of outstanding and distinguished service to the Department of Community Medicine and the Detroit community.

Mark Ritter, M.D., psychiatry and behavioral neurosciences resident, was awarded a \$1,500 travel grant to attend the American Academy of Child and Adolescent Psychiatry's 50th anniversary meeting in October. He was one of 50 residents nationwide to be chosen for this honor.

Natalia Tanner, M.D., professor of pediatrics, is featured in the National Institute, National Library of Medicine exhibition titled "Changing the Face of Medicine: The Rise of America's Women Physicians." The exhibit opened in Washington, D.C., in October and will travel through major U.S. cities. ■

Two Medical School Professors Join Academy of Scholars

The Wayne State University Academy of Scholars is the highest recognition bestowed upon faculty by their colleagues. Congratulations to Robert Sokol, M.D., and Serge Vinogradov, Ph.D., two medical school professors who were inducted into the academy this year.

Dr. Sokol is a distinguished professor in the Department of Obstetrics and Gynecology. He served as dean of the WSU School of Medicine from 1989 to 1999, and has served the university since 1983. His personal research with the National Institutes of Health helped Dr. Sokol develop a

well-earned reputation as the leading expert on the subject of fetal alcohol syndrome. He continues to serve as director of the C.S. Mott Center for Human Growth and Development, which houses the prestigious Perinatology Research Branch, funded by the National Institute of Child Health and Human Development.

Dr. Vinogradov is a professor in the Department of Biochemistry and Molecular Biology. For four decades, he has contributed to biophysics and biochemistry through his work on oxygen binding proteins. In 1971, he authored "Hydrogen Bonding," which became the standard text on the subject and he founded the first Gordon Conference on "Oxygen

Binding Proteins," well-known as the most prestigious scientific meeting of its kind in the United States. His research focuses on the physical and chemical properties of invertebrate hemoglobins; kinetics and thermodynamics of their dissociation and reassociation; and thermodynamics and kinetics of ligand and cation binding.

Founded in 1979, the Academy of Scholars recognizes outstanding scholarship and creative achievement among faculty members at Wayne State University. Election to the academy is a rigorous process and life-long appointment.

Faculty Research Excellence Awards

Congratulations to the following faculty members who won research excellence awards from the university this year.

Alan Hudson, Ph.D.
Immunology and Microbiology

Jeffrey Loeb, M.D., Ph.D.
Neurology

Assia Shisheva, Ph.D.
Physiology

Errol Crook, M.D.
Internal Medicine

Stanley Terlecky, Ph.D.
Pharmacology

Kenneth Honn, Ph.D.
Radiation Oncology

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