From the Bench ... to the Bedside
With the dedicated efforts of faculty and staff, Wright State University School of Medicine has advanced its research efforts through the years. Successful faculty recruitment and strategic investment in the research enterprise has allowed the school to be competitive for federal grants and to partner in state initiatives. Today’s research enterprise is changing, requiring advanced technology, dynamic partnerships, and multidisciplinary teams. The feature story looks at “the big picture” of the School of Medicine’s research mission. A more in-depth research view focuses upon a new NIH grant investigating chemotaxis, the chemical SOS signaling that moves cells to the point of inflammation or injury.

The education mission is advancing as well. We have successfully recruited students into three new dual degree programs: the M.D./M.B.A.; the M.D./M.P.H.; and the M.D./Ph.D. These programs allow us to recruit academically diverse students, enrich our student body, and train physician leaders. Our pathology education faculty, with the volunteer efforts of the area’s pathologists, have developed state-of-the-art digital atlases. These efforts have provided our students with an innovative curriculum taught through team-based learning.

These are just a handful of examples that reflect the accomplishments of faculty and staff in advancing our missions of education, service, and research.

Sincerely,

Howard M. Part, M.D.,
Dean
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Preparing the Research Mission for Tomorrow’s Discoveries

Wright State University School of Medicine views advancing its high-quality research programs as an essential part of its tripartite mission. The question is—what will be needed to compete in tomorrow’s complex research enterprise?

Late last year, the National Institutes of Health (NIH) published the “Roadmap Initiative for Medical Research,” a plan that outlines three compelling themes for medical research in the future: new pathways to discovery; multidisciplinary research teams; and re-engineering of clinical research. These three focused areas, asserts the NIH, “will boost the resources and technologies needed for 21st Century biomedical science.” The NIH believes that this roadmap will accelerate the pace of discovery and speed the application of new knowledge to patient care, prevention strategies, and improved diagnostics.

Wright State University School of Medicine has developed key research centers of excellence that incorporate the goals of each of these areas.

New Pathways to Discovery

Since the discovery of DNA just over 50 years ago, science has unraveled many of the complex molecular structures that underlie human biology. Needed now, explains the NIH, is a better understanding of how these molecules, and networks of molecules, interconnect. Understanding these complex biological systems and their interactions will allow medicine to better predict the pathways that lead to health or disease.

Two examples of biomedical research excellence, while having characteristics of all three NIH goals, are leading Wright State to new discoveries. The new Center for Genomics Research houses state-of-the-art gene expression and profiling systems and the scientific expertise needed to advance knowledge in this key area.

Steven Berberich, Ph.D., associate professor of biochemistry and molecular biology and director, Center for Genomics Research.
Through a partnership with the Air Force Research Laboratory and generous support from the Kettering Fund, Wright State acquired these technologies in early 2000. The technologies, in conjunction with specialized computer hardware and software, allow researchers to identify genetic propensities and disorders. Steven Berberich, Ph.D., associate professor of biochemistry and molecular biology and center director, works closely with basic scientists and clinicians to increase our understanding of the genetic basis of human diseases. “This facility allows us to monitor changes in gene expression from cells or tissues. Future clinical applications for these technologies will likely develop as clinicians begin to examine diseased tissues using gene expression profiling,” he says. The technology provided by the center has involved more than 50 faculty members and a wide range of disease states, from ovarian cancer to light damage to the retina. The center is also part of a consortium of academic and commercial research centers in southwestern Ohio, the Genome Research Infrastructure Partnership (GRIP).

The **Lifespan Health Research Center** houses the Fels Longitudinal Study, called a “national treasure” by the NIH. The study is the world’s largest and longest running study on human growth, body composition, and risk factors for heart disease. With research data covering generations of families, the center is in the unique position of being able to tap into massive banks of information to study genetics and specific populations. This unique blend of long-term data and modern techniques has resulted in a wide range of projects. For example, the center and the Department of Pediatrics have worked collaboratively on an echocardiography study. Using decades of childhood information, the goal is to locate predictors of adverse cardiovascular markers of disease. The center is instrumental in developing the nation’s pediatric growth charts and involved in clinical trials to assess skeletal maturation in children.

**Research Teams of the Future**

Today’s research problems are extremely complex and require expertise that crosses disciplines. Past delineations between biological and physical sciences are blurring, and scientists must explore new organizational models for “team” science for tomorrow’s cures and improvements in health. Partnerships, such as GRIP, between disciplines and institutions will be a hallmark of tomorrow’s successful research efforts. Additionally, the NIH is encouraging partnerships between public and private research efforts.

Wright State University School of Medicine has established research centers of excellence based upon the multidisciplinary research team model. Established in 2000, the **Center for Brain Research** conducts “interdisciplinary investigation from the level of gene expression in single neurons to imaging of localized regions of the human brain,” says Robert E. W. Fyffe, Ph.D., director of the center and associate dean for research. “The central nervous system is such a complex structure that no single laboratory or experimental approach can solve the challenges presented by the diversity of structures and functions in the brain and spinal cord.” Faculty from a wide range of disciplines—anatomy, computer science, pharmacology, physiology, psychiatry, psychology, and toxicology—work through this center. Their diverse areas of expertise range from brain edema to spinal synapses to schizophrenia. A neuro-imaging suite, consisting of electron and confocal microscope facilities, and extensive...
resources for tissue processing and image analysis are shared resources for faculty. The Center for Brain Research also partners with other laboratories at institutions in Canada, Australia, and the United Kingdom.

The Center for Interventions, Treatment, and Addictions Research is another good example of the team paradigm reflected in numerous ongoing projects. Funded by the Ohio Department of Alcohol and Drug Addiction Services, the Ohio Substance Abuse Monitoring Network provides a “dynamic picture of substance abuse trends.” Wright State works with the University of Akron, which provides data from the eastern half of the state. The team publishes its findings statewide twice a year and frequently distributes “OSAM-O-Grams,” one-page electronic reports of significant research findings. In another project, the center partners with regional middle and high schools to survey drug use in teens. The data has been used to develop effective prevention and treatment programs.

“Re-engineering of Clinical Research

Both basic scientists and clinicians have been frustrated by the length of time it takes for a laboratory discovery to become a safe, effective patient treatment. The NIH plans to address that issue by developing “new partnerships among organized patient communities, community-based physicians, and academic researchers.” Crucial to this are more frequent interactions between scientists and physicians. It is not a “one-way street” to move discoveries from the bench to the bedside. Clinical scientists play the critical role of observers and can spur scientific inquiry at the bench.

The NIH refers to “bench to the bedside” research as translational, and it is placing a heavy emphasis upon new programs to improve the effectiveness of and shorten the time frame for clinical research. “What starts off as a fundamental research question in basic science can suddenly appear to have direct clinical relevance,” says Dr. Fyffe. “None of us knows where the questions will take us.”

The roadmap calls for an increased number of well-trained clinical researchers and research networks, as well as better ways to involve the public in the research process. The School of Medicine collaborates in several projects designed to meet the goals of increasing and improving translational research.

Ten regional hospitals and the School of Medicine are affiliated with the Dayton Clinical Oncology Program. One of 52 similar programs in the country, it was founded by the National Cancer Institute because the large majority of cancer patients have been treated within the community rather than at large treatment centers. Established in 1983, Dayton’s non-profit program enrolls almost 140 participants into cancer clinical trials annually, offering state-of-the-art patient care and cancer research to the community.

An example of increasing the number of both researchers and networks is the Dayton Area Primary Care Practice-Based Research Network, established by the Departments of Pediatrics and Family Medicine. Linking together urban, suburban, rural, and military-based practices, the network consists of a large group of physicians who participate in office-based research, share knowledge, and define best practice techniques. The physicians agree to answer short surveys at least weekly, sharing aggregate, not individual, patient data. The compilation of this information has been effective in notifying the entire network when a particular disease is emerging and will be used to close the knowledge gaps in childhood diseases and injuries. The research
network facilitates the formulation of clinical questions and provides support in study design and statistical analysis of data.

Wright State has excelled in involving the public in research. The Lifespan Health Research Center has collected data on more than 1,400 research participants for almost 75 years, tracking generations of families. The Center for Interventions, Treatment and Addictions Research uses community outreach workers to better understand substance abusers, an often overlooked and hard-to-reach population. Another example of how to better involve the public in research is the Alliance for Research in Community Health (ARCH), formed in 1997 to support collaborative, community-based, and participatory research. Based in the Department of Family Medicine, this alliance has been instrumental in partnering with several academic and community institutions. ARCH has worked in collaborative research areas for cardiovascular health, secondary prevention of breast cancer, and access to health care for the indigent and disadvantaged. A unique aspect is the use of trained community health advocates to support participatory research at the community level.

Training community health advocates is the forte of the Center for Healthy Communities, a community-academic partnership. This center has used specially trained community members to enhance access to health care and social services, spearhead immunization efforts, and offer health-related activities. Its research efforts are driven by community needs at the neighborhood level.

These few examples may be the blueprints for the school’s future success in research. They feature biomedical research capacity, collaborative partnerships, interdisciplinary teams, and community involvement. Over the past five years, the School of Medicine has seen a substantial increase in its extramural research funding. Much of this success is built upon a valued school asset—strong partnerships developed within the community in which it is based.

—Judith Engle
New Dual Degree Programs Integrate Education to Prepare Tomorrow’s Physician Leaders

Ten Year I and Year II students are enrolled in the dual degree programs M.D./M.B.A.; M.D./M.P.H.; and M.D./Ph.D. Master’s level students are also enrolled in the Boonshoft Physician Leadership Development Program.

(L-R) (Front Row) Karah Harvey, Christine Pham, Aaron Patterson (Second Row) Lauren Kyle Horton, Bradley Haverkos (Next to Last Row) Jessica Vinsant, Katie Bullinger, Matthew Pellerite, Rocky Jedick (Back Row) Kevin Kelley, Katherine Wehri, Mark Ryan

When Lauren Kyle Horton graduates from the School of Medicine in 2008, she will leave Wright State University with both an M.D. and an M.B.A. She is one of the first students to participate in the combined M.D./M.B.A. curriculum as part of the Boonshoft Physician Leadership Development Program (BPLDP).

This new dual degree program offers two tracks, one conferring a Master of Public Health (M.P.H.) and another conferring a Master of Business Administration (M.B.A.). When Richard Schuster, M.D., M.M.M., associate professor of community health and internal medicine and Boonshoft Chair of the Division of Health Systems Management, announced the program to incoming students last year, Lauren was immediately intrigued by the opportunity to earn dual degrees. “Based on experiences I’ve had, the interest was always there,” she says. Prior to starting medical school, she spent a year working as an emergency department unit coordinator at Duke University Medical Center. “I gained an awareness that physicians have a unique opportunity to touch people at very vulnerable points in their lives.” She also saw what a strong impact administration had on healthcare delivery in an ever-changing environment.

The Boonshoft Physician Leadership Development Program was established with the support of Oscar Boonshoft, a local philanthropist who intends to help future healthcare leaders like Lauren advance the quality of healthcare for all Americans. Part of his gift will provide ongoing scholarships for a maximum of five M.D./M.P.H. students and five M.D./M.B.A. students in each upcoming class.

More and more, physicians find that they need additional education beyond the M.D. to stay effective and productive over the life of their careers. “With these skills in their pocket, they won’t be caught mid-career thinking about getting their second degree,” says James Ebert, M.D., associate professor of community health and pediatrics and director of the leadership program.
The M.B.A. and M.P.H. program will start in the first year and end in the fifth, with most of the actual course work spread over the third, fourth, and fifth years. By merging the educational curricula, the program ensures that both skill sets will be learned in practical and applicable contexts.

The two tracks will have some common course work. Students in both programs will attend the Health Systems Management course, which explores health systems as an overriding mechanism of healthcare delivery and covers topics such as healthcare quality, managed care, informatics, law, evidence-based medicine, public policy, and utilization management. In addition, students will take the Economics of Health and Health Policy course, examining the economics of health and healthcare services and its role in current health policy. The program will also connect the students with physician executives in the community, providing opportunities for mentoring and real-world experience.

"Our program will not only benefit healthcare locally, but we hope this model will be copied elsewhere."

Another unique aspect of the program is that M.B.A. and M.P.H. students will be working together. "They learn from each other what being a leader in business is and what being a leader in public health is," says William Mase, M.A., associate director of the Master of Public Health Program. "To bring those two groups together is really a marriage of two different approaches of healthcare delivery."

Dr. Ebert believes that the Boonshoft Physician Leadership Development Program and integrated dual degree programs are innovative models. "Our program will not only benefit healthcare locally, but we hope this model will be copied elsewhere," he says. As healthcare continues to become more challenging and complex, integrated programs will produce physician leaders with the skill and resources needed to solve tomorrow’s problems.

"I think the M.D./Ph.D. program is a capstone program, demonstrating a sense of maturing and research expertise in basic sciences and clinical sciences."

This fall the School of Medicine has also successfully recruited students for the dual degree M.D./Ph.D. program. Students in this program complete three years of biomedical research culminating in a dissertation defense, in addition to four years of medical education. Participants in the seven-year program receive tuition waivers each year as well as stipends during the research component.

"I think the M.D./Ph.D. program is a capstone program, demonstrating a sense of maturing and research expertise in basic sciences and clinical sciences," says Gerald Alter, Ph.D., professor of biochemistry and molecular biology and director of the Biomedical Sciences Ph.D. Program. "The program is aimed at people with intense interest in science with both clinical and research aspects."

Medical students complete the first two years of the medical school curriculum while attending seminars and familiarizing themselves with research at Wright State. They then connect with a faculty mentor and spend approximately three years working on their dissertation. "Once a mentor is chosen, the mentor and the student design an educational curriculum to prepare the student to complete original research with publishable results," explains Dr. Alter. After defending their dissertation, students complete clinical rotations their final two years. The program’s first student, Elizabeth A. Muennich, M.D./Ph.D., graduated this past June.

"It’s certainly an aspiration of mine to have a leadership role in medicine," says Lauren. "If I hadn’t participated in this program, I might have postponed residency to get my M.B.A. This was just a better way to do it."

—Robert Boley
While visiting the doctor as a child, Julian Gomez-Cambronero, Ph.D., saw blood cells through a microscope for the first time and became fascinated by the implications. “It has always intrigued me that cells are able to defend us against disease,” he says.

Today, as a professor of physiology and biophysics at Wright State and the director of the Blood Course for Year II students, he is studying the fundamental cell biology question of cell migration and the immune response at the molecular level. The goal is to better understand two classes of disease: inflammation-related tissue injury and leukemia. In March, the National Institutes of Health awarded him a four-year, $1.4 million grant to continue this research.

“In my lab, we work with neutrophils, a type of leukocytes or white blood cells, which are part of the first-line defense of the immune system. In infection, neutrophils are ‘natural born killers.’ They patrol inside the blood vessels pretty much like a surveillance team and respond to inflammation or physical damage by releasing powerful toxic substances that destroy bacteria. This is the beginning of how a wound is healed,” he explains.

“But, the other side of the story is that the substances neutrophils are capable of producing also can destroy healthy tissue. The neutrophil, and a closely related white blood cell, the monocyte, are implicated in tissue destruction in at least 15 human inflammatory diseases, including emphysema, rheumatoid arthritis, inflammatory bowel disease, and atherosclerosis.”

What all these diseases have in common is the first cellular reaction to trauma or pathogen invasion—the migration of white blood cells to the compromised site in response to what is essentially a chemical SOS signal produced by the injured tissue or infectious agent. These chemicals, called chemoattractants, activate a cascade of signaling reactions inside the neutrophil, “calling it to duty” at the site of inflammation.

“Understanding this process, called chemotaxis, is crucial. Our lab has discovered that a natural hormone produced inside the bone marrow in response to inflammation, GM-CSF, is a powerful leukocyte chemoattractant. We already knew that GM-CSF induces bone marrow restoration and fast recovery of blood cell counts after chemotherapy.”

Dr. Gomez-Cambronero and his team are not only interested in understanding the process of chemotaxis, they also want to attack the problem of neutrophil-inflicted damage to healthy tissue. In studying that problem, they uncovered a new mission for an immunosuppressant used clinically to prevent rejection in organ transplants: rapamycin. Derived from a fungus discovered in the soil of Easter Island, rapamycin’s action is the opposite of a chemoattractant like GM-CSF.

“We found that rapamycin stops neutrophils in their tracks. It inhibits cell migration without killing the cell,” he explains. “It was so exciting to see it for the first time. We reason that rapamycin could be useful in the future in those conditions where you might want to stop the activity of neutrophils, like arthritis and asthma.”

The lab has undertaken several experiments to test its theories about rapamycin’s role in chemotaxis, among them that rapamycin may work through an intracellular enzyme that regulates cell growth called p70 S6 kinase. Dr. Gomez-Cambronero will use leukemic blast cells instead of

“Our goal is to find ways to alter those faulty molecules to work again and force the cancer cells to differentiate.”

—Julian Gomez-Cambronero, Ph.D., professor of physiology and biophysics.
neutrophils because they are immature and undifferentiated blood cells that are essentially immortal. Leukemic blast cells can also be induced in the lab to become neutrophil-like cells.

All this opens the window to molecular biology-based experiments. In collaboration with Patrick Dennis, Ph.D., assistant professor of biochemistry and molecular biology, and Michael Baumann, M.D., professor of medicine and chief of hematology/oncology at the Dayton VA Medical Center, they will introduce the gene for producing p70 S6 kinase into the leukemic cell, hoping to enhance its response to chemoattractants. Conversely, they will introduce mutants of the enzyme to see if chemotaxis is inhibited as it was with rapamycin.

This relates to the other major interest in Dr. Gomez-Cambronero’s lab. “In trying to understand the molecular basis of acute leukemia, we ask two fundamental questions: What is the difference between the intracellular signaling in leukemic blasts and in normal leukocytes? And, is there a way to force the immature blasts to stop dividing and make them differentiate into mature neutrophils?” he says. “The lab has already identified a number of cell signaling molecules that are different in both cells. Our goal is to find ways to alter those faulty molecules to work again and force the cancer cells to differentiate.”

“Over the past decade, our view of leukocytes has been revolutionized in the molecular strategies underlying complex diseases like inflammation-related tissue injury and leukemia. Several research teams are, like us, seeking to unravel the central cell biology paradigm of cell migration. The next few years are likely to see even more exciting advances in this fascinating biomedical field.”

—Robin Suits

GLOSSARY OF TERMS

**Chemotaxis**: directional migration of cells toward a chemical (chemoattractant) stimulus

**FMLP**: bacterial formyl peptide, a powerful neutrophil chemoattractant

**GM-CSF**: granulocyte-macrophage colony-stimulating factor, a hormone-like substance that stimulates blood cell growth in the bone marrow

**Leukemic blast cells**: immature, undifferentiated leukocytes found in acute leukemia that cannot perform normal physiological functions

**Leukocytes**: white blood cells (neutrophils among them) that defend us against pathogen infection

**MAPK**: mitogen activated protein kinase, an intracellular signaling enzyme important in cell growth

**p70 S6 kinase**: a signaling enzyme that modifies ribosomes during protein synthesis

**PLD**: a phospholipase that breaks down phospholipids in the cellular membrane

**PA**: a lipid product of PLD action that acts as an intracellular second messenger

**Rapamycin**: an immunosuppressant used to prevent rejection in organ transplants
Pathology is more than just the Crime Scene Investigation concept of forensic science so popularized today through the television media. It is the science of studying human disease and its effects on human beings. Learning the specialty of pathology is as intense and lengthy as that of becoming a surgeon—five years of residency and usually an additional one- to-two-year fellowship in a specific subspecialty.

Nationally, less than two percent of medical school graduates enter the pathology field each year. Wright State has more than 15 alumni who are working in this specialty, with three practicing here in the Dayton area.

This year 24 medical students from Wright State, more than a quarter of the class, have chosen to take pathology as one of their fourth-year electives. These month-long pathology electives are supported by 54 area practicing pathologists who serve altruistically as clinical faculty in the Department of Pathology. The pathology electives are offered at Children’s Medical Center, Dayton Veteran’s Affairs Medical Center, Kettering Medical Center, Miami Valley Hospital, and the Montgomery County Coroner’s office. In addition, some students work closely with an individual specialist in pathology, such as a hematopathologist or dermatopathologist, pursuing a student-initiated elective designed to fit specific areas of interest.

Many clinical faculty in pathology participate in meetings of the Dayton Area Pathology Group. This group was organized in the 1970s through the efforts of James W. Funkhouser, M.D., clinical professor emeritus of pathology, along with Al Batata, M.D., professor emeritus, and others dedicated to pathology education in this region. The group now meets four times per year for specialized teaching, discussion, or lectures in current applicable topics. These professionals share a love of learning and teaching as they seek to understand new information, enhancing their effectiveness as practitioners and investigators in pathology.

“Pathology education at Wright State acts as a bridge between the basic and clinical sciences,” explains Paul G. Koles, M.D., assistant professor of pathology and surgery and director of pathology education. “In teaching our second-year medical students, the emphasis is not on the clinical practice of pathology, as it is performed in hospitals, but instead on the scientific foundations for the practice of pathology—the principles and concepts of disease, rather than the diagnostic interpretation of tissues.”

Stuart J. Nelson, Ph.D., associate professor of pathology, adds, “More than just studying the morphologic manifestations of diseases (what the disease looks like), faculty try to help students learn the pathogenesis (the causes of disease) and sequelae (the effects of disease), helping students discover the mechanisms by which things go awry.”

“One of the newest trends in pathology education,” Dr. Koles explains, “is the use of digital image technology. Medical students no longer have to handle delicate...
Medical students work together in small groups to solve clinical case problems in pathology education.

glass slides, microscopes, and organs—the logistics of which can be challenging. Instead, they view an atlas of high-quality digital images that demonstrate the essentials of gross and microscopic pathology and include questions and explanations.” Wright State has created several digital image atlases to teach second-year students. These atlases explore diverse topics, such as blood diseases, the central nervous system, gastrointestinal tract, and urinary tract.

Another innovative method for pathology education at Wright State is team-based learning. This format includes interactive lectures, side-by-side images of healthy and diseased tissues, individualized study and preparation for team-based learning sessions, and interactive problem-solving exercises. In these exercises, groups of six second-year students work individually and cooperatively to make conclusions about clinical cases presented as unknown problems. Interspersed in this learning process are faculty-coordinated discussions during which teams publicly present their conclusions.

Competition is “tough” between the teams and, according to Dr. Nelson, “Everybody brings something to the table.” Most of the cases are built around principles of pathology, but the unfolding evidence may include history and physical exam, clinical lab data, X-rays, MRIs, CT scans, pathology reports, and photographic evidence. The students may have to pick out the picture that corresponds to the disease; decide what they would do next, choose an appropriate treatment, or decide what test might be indicated. “This integrated teaching method really mimics life,” says Dr. Nelson. Just as a patient’s case unfolds for physicians as exams are completed and test results come in, similarly do these cases progress for the medical students.

L. David Mirkin, M.D., professor and acting chair of the Department of Pathology, states, “One important area in teaching medical students pathology is teaching the value of the postmortem examination. An autopsy provides more than just the answer to why death occurred. It is also a vehicle that can assist loved ones in the process of grieving.” There are instances, he explains, where the autopsy has disclosed vital information such as the discovery and diagnosis of the hanta or HIV virus.

Because of the generous dedication and expertise of Dayton area pathologists, technological advances embraced by the school, and innovative teaching methods, Dr. Koles believes that, “Pathology at Wright State is at the forefront of medical education.”

—Nancy Harker
“Never a dull moment!” That is how Paula Termuhlen, M.D., describes her life. A native of Dayton, Dr. Termuhlen returned to Dayton in 2001 to join the Wright State University School of Medicine faculty. A surgical oncologist, she became the director of the surgery residency program in 2002.

Dr. Termuhlen attended medical school at St. Louis University, completing her residency and fellowship training in Houston at the M. D. Anderson Cancer Center. Initially interested in family practice, her interest in surgery was sparked by a cancer patient. One aspect of surgery that appealed to her was the educational element. “I like talking with patients about what’s going on. I like that relationship. Spending time with patients is rewarding for me. Also, surgery is very intellectually satisfying.”

Her vision is to promote Wright State so that its name is always foremost in the medical community. “We do very good work here. Our strongest piece is the educational component. Nationally, we have a reputation of providing good training experiences. By promoting that more, we can attract excellent applicants to Wright State who will go out and be successful and bring in more faculty with national connections. I want our name to continue to grow.”

End-of-life care is of special interest to Dr. Termuhlen. She has done palliative work with patients and sponsors an end-of-life communication skills program for the residents. Dr. Termuhlen works with the American Cancer Society and is director of the Miami Valley Breast Cancer Task Force.

Married for 19 years with two young children, Dr. Termuhlen spends time with them at gymnastics, swimming, and Brownies. She enjoys yoga and loves to read and travel.

Dr. Termuhlen’s involvements result from her personal goals. “I want to make a difference. That is what drives my experiences in life.” In closing, she comments, “I’m back in my hometown and happy to be here. It’s been a good fit.”

—Gwen Sloas

“SPENDING TIME WITH PATIENTS IS REWARDING FOR ME. ALSO, SURGERY IS VERY INTELLECTUALLY SATISFYING.”
New Scholarships Established for Medical Students

The Advisory Board of the Medical Alumni Association recently established the Medical Alumni Association Scholarship to promote the humanistic ideals of School of Medicine alumni and reward fourth-year medical students who best exemplify those ideals. “I do believe that it is critical that we as alumni support scholarship programs for the medical students today,” says Holli Neiman-Hart, M.D. (’90), vice-chair of the Medical Alumni Association. “The amount of debt is enormous for many of them as they come to medical school with debt from their undergraduate programs as well.”

At this year’s graduation, the Class of 2004 made a class gift to establish the Global Health and Medical Student Research Fund. “The common theme in so many of our classmates’ extracurricular work has been participation in an endeavor, whether international or research oriented, that is greater than oneself,” said Kara Hughan at commencement. “In that vein, our class has decided to establish a scholarship to encourage future Wright State medical students to engage in extracurricular pursuits outside of the required medical school curriculum. By doing so, we hope to allow students following us access to opportunities to pursue their dreams, whether by improving global public health or by improving patient care through research.”

Voluntary faculty member Dr. Mohan Nuthakki and his grateful patient, Gerald Ditmer, have contributed funds to establish the Dr. Mohan Nuthakki and Gerald Ditmer Endowed Scholarship Fund. The scholarship will be awarded to an African-American medical student in his or her third or fourth year who has demonstrated excellence in community service and class activities. According to Dr. Nuthakki, the scholarship is a way to express the good will of the patient. “This is a good example for other patients who want to leave money for a good cause,” says Dr. Nuthakki. “A lot of times they want to do something, but they don’t know what to do.”

Snapshots of Recent Giving

Mrs. Barbara Falls donated $30,000 to the Richard A. Falls, M.D., Endowed Scholarship, named in honor of her husband for his outstanding contributions to students, residents, the university, and the community. Sadly, Mrs. Falls passed away in June 2004, preceded by her husband in October 2003.

Dr. Lois Fortson gave $5,000 to the Charles Fortson Memorial Lecture Series, an annual lecture featuring prominent African-American physicians. The lecture is named in memory of local surgeon and faculty member Dr. Charles Fortson.
The Arnold P. Gold Foundation gave $11,670 to support the development of physician teaching modules on communication, end-of-life care, competence, and ethics.

The Montgomery County Medical Society Alliance donated $18,224 to the Montgomery County Medical Society Alliance Scholarship, awarded each year to students at the School of Medicine and the College of Nursing.

Thomas and Ann (Davies) Moyer contributed $7,500 to the Bob and Shirley Davies Endowed Scholarship Fund. This gift, along with support from family, friends, and School of Medicine alumni and employees, brings the scholarship to its endowment goal.

Henry and Emily Webb bequeathed more than $850,000 of their estate to support Dr. Lawrence Prochaska’s research on energy and oxygen requirements of the brain.

Campaign a Great Success

In February, the university kicked off the Family Celebration portion of Tomorrow Takes Flight: The Campaign for Wright State University. This collaboration is a combined effort of faculty, staff, retirees, parents, and students to demonstrate their belief in the school and to provide ongoing support to the areas most important to them. As the campaign comes to a close, our faculty and staff have stepped forward to end the Family Celebration on a high note. This year, School of Medicine faculty and staff gave $492,781 in support of programs and scholarships.

To date, alumni, friends, and community partners continue to show their support for the School of Medicine in grand fashion:

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Represents giving to the School of Medicine between April 1, 1999 and August 31, 2004.
1981

George A. Pascarzi, M.D., is the associate medical director at County of Orange Children and Youth Services in Santa Ana, California. He and his wife, Karin M. Pascarzi, R.N., have two children: Alexander (21) and Christina (19).

1982

Thomas F. Gavagan, M.D., M.P.H., is currently vice chair for community health at Baylor College of Medicine’s Department of Family and Community Medicine. He and his wife, Amy, have two children: Marie and Maeve.

Dawn E. Light, M.D., M.P.H., recently retired after 22 years in the Army. She has returned to Dayton and joined the staff of Dayton Pediatric Imaging at Children’s Medical Center. In the Army, she served as chair of the department of radiology at the Madigan Army Medical Center in Ft. Lewis, Washington. Her children are Margaret (15) and Philip (13).


1983

Michael S. Oleksyk, M.D., has been in private practice at the Medical Center Clinic in Pensacola, Florida, for over 18 years, and has served as medical director for seven years. He has worked with the U.S. Olympic Committee in areas of sports medicine and drug testing and is a national speaker on venous thromboembolic disease. He organized and led multiple medical missions to Ecuador and has been team physician for two professional minor league basketball teams and the Pensacola Open PGA and senior PGA tournaments.

1984

Parmie Andaloro Herman, M.D., is board certified in Hospice and Palliative Care. She and husband George (’84) have a family medicine practice in Wapakoneta, Ohio.

Jeffery J. Kirlangitis, M.D., practiced anesthesiology with the United States Army Medical Corps from 1984 to 1995. He then started working at a private group practice in Dallas, Texas. He and his wife Dr. Lisa White Kirlangitis, also an anesthesiologist, have twin daughters, Lauren and Lindsey, born in April 2003.

1986

Morris L. Seal, M.D., has been in family practice since 1989 and currently practices at Henry County Hospital. He has also been practicing correctional medicine, behavior health medicine, emergency medicine, and nursing home medicine. He was chief resident at his family practice residency and chief of medical staff at Orange County Hospital. He is on the board of directors for Bloomington Hospital OC, team physician for Springs Valley High School, and medical director for local fire and rescue squads. He and his wife Jacqueline live in Napoleon, Ohio. The couple has two children: Derrick (29) and Bryan (25).

1987

Kimberly May, M.D., has been named Governor for the American College of Physicians, Air Force Chapter. She is an assistant professor of medicine at the Uniformed Services University.

Randi Callahan Tracy, M.D., and her husband Robert N. Tracy, M.D. (’88), work for Patient First, Inc., the largest physician owned group in Northern Kentucky. They enjoy practicing together and help to staff their local homeless clinic. They also enjoy traveling and keeping up with their children: Erin (12) and Jake (10).
1990
Mark S. Pack, M.D., recently started a new general surgery practice at Holzer Medical Center in Jackson, Ohio. Prior to this, he treated patients through Holzer Medical Center’s Emergency Department. Dr. Pack completed his surgical residency at Eisenhower Army Medical Center in Augusta, Georgia.

Raymond A. Vallera, M.D., practices gastroenterology with Texas Digestive Disease Consultants in Irving, Texas. He and his wife Raphaelle, an endocrinologist, have two children: Anthony Stuart (9) and Alexandra Celine (6).

1994
Thomas A. Dalagiannis, M.D., F.A.C.S., completed his general surgery residency at Fairview Hospital in Cleveland. From there, he went on to do a fellowship in hand and microsurgery and completed a fellowship in plastic and reconstructive surgery. He spent an additional three months at the Manhattan Eye, Ear and Throat Hospital training exclusively in cosmetic surgery. He has been in private practice since July 2000 and was recently appointed the chief of plastic surgery at the St. Vincent Mercy Hospital and Regional Burn Center in Toledo. Last month he was appointed the section head of plastic surgery at St. Luke’s Hospital in Maumee. He and his wife Cindy an occupational therapist, have four children: Nicholas (5), Madelyn (4), William (2), and Grace (9 months).

1998
Steven F. Brezny, M.D., recently received the American Medical Association’s Excellence in Medicine Award, presented to young professionals who support medical education by taking leadership positions in the community. He is active with numerous committees for the Ohio Academy of Family Physicians and is a national speaker and advocate of electronic medical records. He practices in Powell, Ohio.

Harold W. Goforth, M.D., is completing his residency in adult psychiatry and will begin a fellowship in geriatric psychiatry in July 2004 at Duke University Medical Center. Dr. Goforth has been published in multiple journals and pursues research in neuroimaging cognitive changes related to cerebrovascular disease and dementia.

1999
Megan K. Baker, M.D., married Mark Ruppel in June 2004. She is entering her sixth and final year of general surgery residency at Medical University of South Carolina in Charleston.

Patricia B. Mickunas, M.D., is currently practicing psychiatry. She is married to Dr. Gregory Mickunas (’98).

Rick M. Wiecek, M.D., will be moving back to Ohio in July 2004 to begin a general surgery practice in Fremont, Ohio. He and his wife Karen are the proud parents of three children: Alyssa (11), Victoria (6), and Aaron (2).

2002
John M. Fay, M.D., is currently chief resident at St. Mary-Corwin’s family medicine in Pueblo, Colorado, a position he has held since the end of March. He and three other residents, including his wife Lori will be alternating chief resident duties throughout the year.

Angela R. Kill, M.D., is currently living in Columbus, Ohio, where she is an internal medicine resident at Mount Carmel Health.

Amy K. Straiko-Howerton, M.D., received the 2004 American Academy of Family Physicians/Bristol Myers Squibb Award for Excellence in Graduate Medical Education. Amy resides in Columbus, Ohio, and is a resident at the Riverside Family Practice Residency Program. During her residency, Dr. Straiko has written patient education articles for Riverside’s quarterly Family Practice Newsletter, served as an active member of the Patient Education Committee, completed physicals for both Recreation Unlimited and the Special Olympics, been a team doctor at local high school football games, and volunteered at the Columbus Health Department’s Free Clinic. She has a special interest in hospice and presently is working with faculty to develop residency curriculum to include end-of-life issues.

2003
Casey R. Boyce, M.D., (formerly Braddock) married Scott Boyce in March 2004. She is currently a resident in the Ob/Gyn program at Miami Valley Hospital in Dayton.

In Memoriam
Jacob Deerhake, M.D. (’00), passed away in May 2004. He had completed a residency in internal medicine at the University of Michigan and was Chief Resident there from 2003–04.
Graduation 2004
The Schuster Performing Arts Center was almost filled to capacity for the conferring of the Doctor of Medicine degree on the Class of 2004. Judy Ann Bigby, M.D., from the Center of Excellence in Women’s Health at Harvard Medical School, spoke on the “Physician as Advocate.” Dr. Bigby, an associate professor of medicine, has devoted her career to addressing the health care needs of disadvantaged and vulnerable populations.

Howard Part, M.D., dean for Wright State University School of Medicine, presented the Dean’s Award to Joseph Seaman. This award is given to a graduating student who exemplifies the school’s goals and demonstrates “integrity, good citizenship, and good interpersonal relationships with peers, patients, and the community.” Joseph is from Winchester, Ohio, and holds a B.S. in biology from the University of Cincinnati.

The Leonard Tow Humanism in Medicine Awards, presented by the Arnold P. Gold Foundation, went to graduate Ryan Buchholz and to faculty member Gary LeRoy, M.D. (’88). This award is presented to those who best demonstrate the foundation’s ideals of outstanding compassion in the delivery of care, respect for patients, their families, and health care colleagues, as well as demonstrated clinical excellence.

This year’s Appreciation Award was presented to Oscar Boonshoft, who was honored for his outstanding leadership and support for innovative programs at the School of Medicine.
College. Approximately 130 individuals are selected nationally to attend. The weeklong session is devoted to exploring the many issues that affect the current and future security of our country.

Dr. Miller was awarded the title of Frederick A. White Distinguished Professor of Professional Service by the Wright State University Board of Trustees. Dr. Miller helped establish a statewide trauma system and was appointed by Governor Bob Taft to the state’s Trauma Committee. His other professional service includes serving as president of the Ohio chapter of the American College of Surgeons, chairing the Ohio Committee on Trauma, and serving on the National Committee on Trauma.

Elisabeth Righter, M.D. ('89), assistant professor of family medicine, has been named president-elect of the Ohio Academy of Family Physicians.

Barbara L. Schuster, M.D., professor and chair of internal medicine, received the prestigious Dema C. Daley Founder’s award, given annually to a member of the internal medicine community who is recognized nationally as an educator, innovator, and leader. She was honored by her peers at the annual meeting of the Association of Program Directors in Internal Medicine (APDIM). Recipients of the award have influenced undergraduate or graduate medical education and the development of training programs in internal medicine, APDIM, or other organizations that are educationally focused.
In Memoriam

Death of Former Chair of Psychiatry
Arnold Allen, M.D., passed away in September in Dayton. Dr. Allen served as chair of psychiatry from 1979–1986 and retired as professor emeritus in 1987. He was a past president of the Ohio State Psychiatric Society and a prolific author who contributed to six textbooks. Dr. Allen received his M.D. from the University of Cincinnati and trained at the University of Pennsylvania and the Chicago Psychoanalytic Institute.

Death of Founding Chair of Surgery
Dan W. Elliott, M.D., founding chair and professor emeritus of surgery, passed away in August. He came to Dayton in 1976 to help found a new medical school at Wright State University. Early in his tenure, full accreditation was achieved for the integrated five-year residency program in general surgery sponsored by Wright State University with the full cooperation of all seven Dayton hospitals. He directed this program for 45 surgical residents until his retirement at the end of 1988. Dr. Elliott was a native of Greenville, Ohio. He attended The Ohio State University and served as a military corpsman during World War II. He graduated from Yale University School of Medicine and completed an internship at the Columbia-Presbyterian Medical Center in New York City. He completed his specialty training in general surgery at The Ohio State University, joined its faculty and began research on pancreatic and biliary diseases.

Awards and Recognition Outstanding Collaborative Unit
The Division of Health Systems Management, Department of Community Health, and the Raj Soin College of Business were recognized as Outstanding Collaborative Units in the 2004 President’s Awards for Excellence. The units worked together to develop the Health Care Management Certificate Program designed for physicians and health care administrators.

Bringing Home the Bronze
The American Academy of Family Physicians presented Wright State University School of Medicine with a Bronze Achievement Award at the Society of Teachers of Family Medicine Annual Conference. The award is based upon the average percentage of graduates who have entered a family medicine residency in the past three years.

The Healer As Artist
Sixty-three entries were received from faculty, students, and staff for the annual art show. The Founders’ Award was presented to Jason Korn, Year II medical student, for his painting, “Untitled.” Carol Levine, M.D., assistant professor of internal medicine, received the People’s Choice Award for her sculpture, “Celebration of Movement.” Second place went to Mark Anderson, staff member, for a photograph entitled “Kentucky Bourbon”; third place went to Art Pickoff, M.D., professor and chair of pediatrics, for the photograph, “Tree.”

New Faces

Khalid M. Elased, R.Ph., Ph.D.
Assistant Professor, Pharmacology and Toxicology
Ph.D.: University of Strathclyde, UK (biochemical pharmacology)

Gregory Haack, M.D.
Assistant Professor, Internal Medicine
M.D.: University of Cincinnati College of Medicine
Residency: Wright State University School of Medicine/Wright Patterson USAF Medical Center (internal medicine)

Thomas M. Koroscil, M.D., Ph.D.
Associate Professor, Internal Medicine
Ph.D.: State University of New York at Buffalo
M.D.: Uniformed Services University of the Health Sciences
Residency: Keesler USAF Medical Center (internal medicine)
Fellowship: Wilford Hall USAF Medical Center (endocrinology and metabolism)
Of Primary Interest

New Faces

Samuel A. Lippert, Ph.D.
Assistant Professor, Orthopaedic Surgery
Ph.D.: Wayne State University (biomedical engineering)

William Mase, M.A.
Instructor, Community Health
M.A.: West Virginia University (applied social research)

Jill D. McCarley, M.D.
Assistant Professor, Psychiatry
M.D.: James H. Quillen College of Medicine
Residency: Wright State University (psychiatry)

Oleg Paliy, Ph.D.
Assistant Professor, Biochemistry and Molecular Biology
Ph.D.: University of Manchester, UK
Fellowship: University of California at Berkeley

Awards and Recognition (con’t)

Mini-Medical School
Mini-Medical School received the 2003 Prism Award of Merit for Community Relations for a non-profit organization from the Dayton/Miami Valley Chapter of Public Relations Society of America. With around 90 participants, the series is designed to give an inside look at how we train medical students, share accurate, up-to-date health and science information, and provide hands-on learning experiences. More than 40 faculty members have served as presenters for the series since its inception in 1999.

Student Recruitment
The new recruitment product, a DVD called “An Outstanding Choice,” received two awards, one regional and one national, in categories related to electronic communications. The Dayton Chapter of the International Association of Business Communicators awarded the School of Medicine the Award of Merit. At the national conference in November, the Group on Institutional Advancement of the Association of American Medical Colleges awarded the product an Award of Distinction.

Student Notes
Carmen Blissit, Year I, has been named the National Collegiate Athletic Association Woman of the Year for West Virginia, where she graduated from Wheeling Jesuit University. Carmen, a Beavercreek High School graduate, was a three-time All-American selection at the Division II school’s track and cross-country program.

Erin Elizabeth McConnell, Year III, was presented with the First Place Award for her poem “Atopy*” in the annual Creative Arts Contest, sponsored by the American Medical Student Association. The poem was published in the July-August 2004 issue of The New Physician.

Student Clinician’s Ceremony

(L–R) Year II students Matrika Johnson, Sarah Turner, Deepti Hemrajani

The Class of 2006 reaffirmed its dedication to the ethics and professionalism of medicine in the annual Student Clinician’s Ceremony. Organized by students, this rite of passage celebrates entry into the third year of medical school, a year of rotations through Dayton’s “teaching community.” Barbara Schuster, M.D., professor and chair of internal medicine, served as guest speaker.

During the ceremony, the Class of 2005 honored six medical residents with “Humani-}
**White Coat Ceremony**

Welcome to the Class of 2008! Beginning with a welcoming family brunch hosted by the Class of 2007, new class members and their families arrived on campus August 1 for Family Orientation and Convocation. Art Pickoff, M.D., professor and chair of pediatrics, gave the keynote speech. Entering students received their White Coats as part of the ceremony and pledged their first oath of professionalism. The class of 2008 includes students who are enrolled in each of the dual degree programs, the M.D./M.B.A., the M.D./M.P.H., and the M.D./Ph.D.

In May, the Class of 2006 held its first charity golf outing—Drive for a Difference—to benefit Reach Out of Montgomery County.

**New Faces**

**Thomas A. Reid, M.D.**
Assistant Professor, Obstetrics and Gynecology  
**M.D.:** Wright State University School of Medicine  
**Residency:** Wright State University/Wright Patterson USAF Medical Center (general surgery)  
**Fellowship:** University of Michigan (gynecologic oncology)

**Jerzy E. Tyczynski, Ph.D.**
Associate Professor, Community Health  
**Ph.D.:** Maria Sklodowska-Curie Memorial Cancer Center and Institute of Oncology (epidemiology)

**Mbaga Walusimbi, M.D.**
Instructor, Surgery  
**M.D.:** University of Illinois, Chicago  
**Residency:** University of Illinois Hospitals, Chicago (general surgery); York Hospital (general surgery); Lincoln Hospital, (general surgery); State University of New York at Buffalo (general surgery)  
**Fellowship:** Cook County Hospital Burn Unit (burn); Lincoln Hospital (hand surgery, critical care and trauma); University of South Florida (plastic surgery)
In mid-September, the School of Medicine unveiled an update to its web site, www.med.wright.edu. The site includes an expanded admissions section for prospective students and pages for each faculty in the practice plan, University Medical Services Association. Besides hosting sites for academic departments, divisions, programs, centers, and residences, the school hosts web sites for the local asthma coalition, the Miami Valley EMS Council, and the patient education media campaign, “Know Your Numbers” as a community service.

Statistics for the Month of September 2004

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<td>Most Popular Operating System</td>
<td>Windows XP</td>
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Calendar

Student Awards Ceremony
November 17, 2004
5:00 p.m. Reception
5:30 p.m. Ceremony
E156 Student Union
Multipurpose Room
For more information, contact: (937) 775-2934

School of Medicine/VA Medical Center Mixer
November 18, 2004
4:00 p.m.
Veterans Affairs Medical Center
Bldg 330, Room 1D–104
For more information, contact: (937) 268-6511, Ext. 2738

Faculty Meeting
January 20, 2005
4:30 p.m.
232J Frederick A. White Health Center
For more information, contact: (937) 775-3010

Match Day
March 17, 2005
Noon
Medical Sciences Auditorium
For more information, contact: (937) 775-2934

Healer As Artist Exhibit
April 2005
Frederick A. White Health Center lobby
For more information, contact: (937) 775-2951

Academy of Medicine Annual Distinguished Guest Lecture and Dinner Meeting
April 13, 2005
For more information, contact: (937) 775-2972

DAGMEC Resident Research Forum
April 22, 2005
5:00 p.m.
Elizabeth Place
For more information, contact: (937) 228-6011

Faculty Meeting
May 19, 2005
4:30 p.m.
232J Frederick A. White Health Center
For more information, contact: (937) 775-3010

Skin Cancer Screening Week
May 16–20, 2005
For more information, contact: (937) 775-2951

Medicine Ball
May 25, 2005
For more information, contact: (937) 775-2951

Graduation
May 27, 2005
Schuster Performing Arts Center
6:30 p.m.
For more information, contact: (937) 775-2934

Reunion Weekend
July 15–17, 2005
Cincinnati, OH
Classes of '80, '85, '90, '95, and '00
For more information, contact: (937) 775-2972

Vital Signs is published twice a year for alumni, faculty, staff, and friends of Wright State University School of Medicine.

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