Aerospace Medicine: Training Physicians to Safeguard Human Health in Space
by Mark Willis

During her record-setting journey aboard the Russian space station Mir, NASA astronaut Shannon Lucid gained a unique perspective on Earth’s changing seasons. When her space mission began in March 1996, she saw frozen lakes and endless snow across the planet’s far north. Before she left earth-orbit 188 days later, lakes thawed, snow melted, and once-barren expanses of the planet’s surface turned to verdant green.

Gaylen Johnson, M.D. (’93), had a more limited, but no less unique, perspective. The NASA flight surgeon spent the duration of Shannon Lucid’s mission at the Korolev Flight Control Center near Moscow. He and NASA operations leader Bill Gerstenmier staffed the Korolev communication console that provided a direct voice link with the astronaut orbiting 240 miles above the earth. They maintained Shannon Lucid’s lifeline to the world below.

“They were my only contact with the ground, and they did an absolutely super job of keeping me steered in the right direction,” Lucid told an interviewer for Aviation Week and Space Technology. “The three of us were like the Three Musketeers.”

Dr. Gaylen Johnson was trained in aerospace medicine at Wright State University School of Medicine. Wright State operates the world’s only civilian residency program in this specialty, which covers all aspects of medicine related to air and space travel.

A view of the Space Shuttle Atlantis connected to Russia’s Mir space station (above); Gaylen Johnson, M.D., NASA flight surgeon and WSU aerospace medicine graduate (’93) (right).

Since 1978 Wright State’s Aerospace Medicine Program has provided NASA with a steady supply of flight surgeons like Gaylen Johnson, and it has also trained the medical leadership for nascent space programs in a dozen other nations.

“They were my only contact with the ground, and they did an absolutely super job of keeping me steered in the right direction.”
A Flight Surgeon’s Duties

NASA flight surgeons are trained to perform multiple duties in support of a space mission, according to Stanley Mohler, M.D., director of Wright State’s Aerospace Medicine Program. “Flight surgeons serve as primary care physicians for the astronauts and their families on the ground. They develop close working relationships with the astronauts,” Dr. Mohler explains.

When an astronaut crew is selected for a space mission, a NASA flight surgeon is designated as crew surgeon for the mission. The crew surgeon certifies astronauts for flight readiness and trains them in the health and safety aspects of the mission. An integral member of NASA’s Mission Control team, the crew surgeon participates in all aspects of the mission’s planning and preparation, including flight simulations.

“NASA flight surgeons develop an intimate knowledge of the mission’s crew and its payload of scientific experiments,” Dr. Mohler says. “In orbit, the space shuttle becomes a very specialized workplace, and not only because of the microgravity environment. The experiments sometimes include hazardous materials. Flight surgeons and astronauts need a thorough knowledge of accident prevention and treatment procedures.”

With its emphasis on preventive medicine in the work environment, aerospace medicine is closely related to the specialty of occupational medicine. Both specialties are certified by the American Board of Preventive Medicine.

At launch time, the crew surgeon is deployed in a mobile medical unit at Kennedy Space Center in Florida, prepared to handle an emergency on the launch pad. Returning to Johnson Space Center in Houston after lift-off, the crew surgeon and two deputy crew surgeons support the mission around the clock on rotating shifts. During long hours at the surgeon console in Mission Control, they pay close attention to all communication with the astronauts. If the mission goes as planned, the crew surgeons don’t have much to do. But they’re prepared to respond immediately if something doesn’t go right.

NASA policy requires a private medical conference between crew and crew surgeon before unscheduled EVA’s (extravehicular activities, or space walks) or early landings are undertaken. Private medical conferences are scheduled routinely every day of a shuttle mission just in case there are issues to discuss. Most minor medical problems are handled by astronauts trained as crew medical officers.

At mission’s end, the crew surgeon travels to NASA’s landing site in Florida or California to conduct a medical examination immediately after the astronauts return to earth. The crew surgeon continues to perform medical evaluations after the mission is completed to monitor the long-term effects of life in orbit.

“Thorough planning and preparation make the mission. Most of the work takes place before the spacecraft ever leaves the ground. As a result, the flight surgeon’s job appears pretty routine — and that’s the way all like it,” Dr. Mohler says. “Throughout the mission, the flight surgeon is an advocate for the astronauts, for their safety and health.”
International Collaboration

During Shannon Lucid’s 3,000-orbit mission aboard Mir, Dr. Gaylen Johnson’s duties followed standard NASA procedures for a flight surgeon — with one significant exception. Most of his work, totalling more than nine months, took place in Russia.

“It was pretty different from Houston,” he says. “At first there was all the snow, and I noticed the different military uniforms everywhere. This type of collaboration with the Russian space program would have been unthinkable at the height of the Cold War.”

Shannon Lucid’s training in Russia began a year before she was launched into space. In addition to Russian language lessons, she had to learn the operational systems of the Mir and Soyuz spacecraft. And Dr. Johnson needed to understand the details of Russian aerospace medicine procedures.

During the mission, Lucid had regularly scheduled communication sessions twice a day with her NASA support team in Russia. The NASA operations leader took one call; Dr. Johnson handled the other. Instead of medical consultation, however, much of the talk focused on the scientific research Lucid conducted aboard Mir.

“We also learned a lot about the psychological support of astronauts living in space,” he adds. “Maintaining a sense of continuity with life on the ground, especially regular and reliable contact with families, is very important.”

When Shannon Lucid’s return space shuttle landed at Kennedy Space Center, Gaylen Johnson was there for a check-up on the medical effects of her space odyssey. “It was really good to see her,” he says. “She looked great, and she walked off the shuttle without a hitch. I have no doubt that she could fly in space again if she wanted to.”

“From an American point of view, we gained a lot of valuable information.”
International Effort Launches Wright State Experiment

A life sciences experiment designed by a Wright State physician was carried into orbit last November aboard the space shuttle \textit{Columbia} (mission STS-80). Eran Schenker, M.D., an Israeli graduate student participating in Wright State’s Aerospace Medicine Program, devised the experiment to determine if mice embryo cells can develop normally in microgravity conditions in space. The experimental payload contained 2-cell and 8-cell mice embryos that continued to grow in culture media throughout the space flight. After Columbia landed on December 7, the experimental embryos were compared with similar ones grown at the same time on earth.

“Final results should give us a better understanding of some basic principles of early embryo development and may provide insight into the possibilities of human reproduction in space,” Dr. Schenker says.

Dr. Schenker devised the experiment with a Canadian colleague whom he met last August at the International Space University in Austria. Their experiment won a research competition sponsored by ITA, Inc., a U.S. research firm that paid for the experiment’s payload slot and space hardware. The experiment was readied for launch in less than three months with timely support from the Israel Space Agency and the Canada Space Agency.
Selectives: Enriching Student Experiences
by Mary Lou Graham

“I think the wide variety of experiences I had during this selective provided the energy to return to school with renewed vigor.”

— Kelly Allen, Year II Medical Student

I think the wide variety of experiences I had during this selective provided the energy to return to school with renewed vigor.” Kelly Allen’s enthusiastic critique of the selectives program offered at Wright State University School of Medicine says it all.

A unique and integral feature of the curriculum, the selectives program provides several opportunities during the first two years for students to supplement the required curriculum with selectives. These selectives, or mini-courses, consist of several two-week-long, in-depth educational experiences. As an alternative to the two-week immersion encounters, students may participate in longer in-depth experiences for six or eight weeks in the summer.

The faculty have compiled a catalog of more than 50 selectives for the students to choose from, including basic science research opportunities, early exposure to clinical medicine, and opportunities to expand knowledge of the health care delivery system. Although most students choose selectives offered by our faculty, students can design an experience that fits a particular interest locally or nationally.

Three second-year students recount the excitement and stimulation these supplemental courses foster in their undergraduate education.

Michael J. Smolak spent the summer between his first and second years in a Cleveland Clinic Foundation Medical Student Summer Fellowship Program, which provides medical students with a top-notch educational and research experience. Michael related, “The purpose of this summer fellowship is to enable participants to become acquainted with the Cleveland Clinic Foundation, to perform first-rate research, to establish professional contacts, and to further their medical training.” Michael completed a study, “Use of Clinical Features to Predict Response to Oral Sumatriptan in Migraine,” and presented his findings in a poster presentation at the Second Annual Student Research Day program.

On a more personal level, Mike recognized, “Although the primary purpose of this fellowship was to conduct a clinical study, other learning experiences were provided. I have become familiar with patient medical charts, drug names and uses, and have increased my medical vocabulary. I also gained insight as to which field of practice may be most suitable for my personality... shifting my interest toward the primary care field with an increased interest in clinical research.”

Kara Levri participated in a selective directed by William A. Spohn, M.D., associate clinical professor of pediatrics, and shares her experience. “Upon completion of my first year of medical school, I found myself in the best of both...”

“I also gained insight as to which field of practice may be most suitable for my personality... shifting my interest toward the primary care field with an increased interest in clinical research.”

— Michael Smolak, Year II Medical Student
worlds for a budding physician — fulfilling a selective at a fun-filled, activity-packed camp for young patients with cystic fibrosis (CF).

“The first part of the selective consisted of a ‘crash course’ in cystic fibrosis at Children’s Medical Center in Dayton. The days proved dynamic as we interacted with the many members of the CF team — social workers, dietitians, physicians, nurses, respiratory therapists, and pharmacists. Cystic fibrosis is an exocrine gland disorder due to a genetic defect that disrupts the digestive function of the pancreas, respiratory function of the lungs, and all other exocrine glands of the body.

“A fellow student and I simulated CF patients, performing respiratory therapy procedures on each other and tasting all the nutritive supplements (some more enjoyable than others). In addition, we reviewed the pharmaceutical regimen for these patients and observed the work of the pulmonologists. At the completion of our hospital rendezvous, we felt confident in our clinical knowledge of the disease and competent to expand that knowledge in the best way possible — to live it!

“Five young rompers, aging from six to eight, became my family for the next five days. Full of energy and imagination, we hiked ‘The Hilly 500,’ hunted for fossils, swam until our skin was ‘pruny,’ slid down into the mudpit, participated in the traditional CF camp water balloon fight and even the 6:00 A.M. polar bear swim. In between the many escapades, I helped the CF team monitor the girls’ dietary intake, ensure they took their enzymes with every meal, drank plenty of water, wore lots of sunscreen, gave meds and nebulizer treatments, and percussed their chests to unclog their damaged little lungs.”

In addition to gaining a great deal of insight into understanding and coping with chronic disease in children, Kara learned to value the multidisciplinary team approach in providing health care to patients.

Kelly Allen took advantage of the summer program to address her interests in working with the medically underserved. In her student-initiated selective, Kelly designed a program to “assess the protocols in treatment of asthma at the Family Care Health Centers in St. Louis, MO.” Her project was a part of the National Health Service Corps Health Promotion Disease Prevention Project that delivers primary care to traditionally underserved communities.

Kelly profiled her experience very eloquently. “I think I gained much more from this project than insight on asthma alone. First, I learned what it means to serve a medically underserved community. The patients for whom I worked all had very limited health care options. This made the delivery of their care incredibly difficult, but incredibly rewarding when it is achieved. Second, I realized the opportunity that a family practice specialty holds for my future. Before this selective, I was sure that family practice was not in my future. Afterwards, I see the opportunity for me to have a career that varies in its daily duties as well as the potential it has for my family life. Finally, I was recharged about the practice of medicine. After my first year in school I was exhausted.” Now, Kelly says, she is excited about continuing.

Excitement, insight, and new perspectives are the embodiment of the philosophy of the selectives program and the reasons for its success.
If you swell, sneeze, and wheeze thanks to allergies, there is hope in the work of two faculty researchers at the Dayton Veterans Affairs Medical Center (VAMC). Cassandra C. Paul, Ph.D., associate professor of medicine and a research health scientist, and Michael Baumann, M.D., professor of medicine and associate chief of staff for research and development, have established a continuous cell line that acts like a rare, delicate type of white blood cell called an eosinophil, the cell responsible for many of the symptoms of allergic reactions.

Dr. Paul explains, “Basically, cell lines are clones so that after a long enough time, they are very well defined and you can proceed under the assumption that every daughter of the cell line is the same.” Cell lines originate from malignant cells, which may grow essentially forever in culture; the finite life spans of normal cells limit their use.

Drs. Baumann and Paul have done what researchers have struggled to do for decades. While other blood cell lines have been established, Drs. Paul’s and Baumann’s new cell line, AML 14.3D10, is the only one in the world that demonstrates most of the characteristics of normal eosinophils. Before AML 14.3D10, scientists had to laboriously purify a few short-lived eosinophils from liters of blood to acquire enough of the cells to study. Acting as a “stand in” for eosinophils, the new cell line grows easily to huge numbers in a common medium and “just keeps going and going.”

Dr. Baumann observes that the development of this cell line was “largely luck, being in the right place at the right time and Dr. Paul’s skill in tissue culture.” Although they established the cell line more than three years ago, Dr. Baumann notes, “Once it became apparent what we had, it took two years of hard work to prove that this cell line does what eosinophils are supposed to do.”

Because eosinophils mediate allergic reactions, new allergy treatments might focus on deactivating these troublemakers. When the pharmaceutical industry and academic scientists learned about the cell line after a few publications, presentations, and a lot of word of mouth, the researchers were besieged with
requests. In keeping with the academic code of conduct to share information, Drs. Baumann and Paul donated the cell line to academic scientists although that meant relinquishing sole access to the line and perhaps competing with other scientists on research on AML 14.3D10.

The pharmaceutical companies’ requests posed different problems. As Dr. Baumann says, “We’re scientists, not salesmen.” Once the VA gave them ownership of the cell line, they could have sold it to pharmaceutical companies and kept the profits. However, conflict of interest would have prevented Drs. Paul and Baumann from continuing their work at the VAMC, and they chose to transfer ownership of the cell line to Wright State. The doctors are currently distributing the cell line through Wright State, allowing academic scientists to use the line at no cost and licensing the line to industry. License fees from the cell line, minus university expenses, support their research.

Drs. Paul and Baumann continue to use their cell line in their research studies. As a hematologist, Dr. Baumann is interested in the process of lineage commitment — what makes a cell become what it does, especially “what makes a baby white blood cell decide to grow up and become an eosinophil,” and what regulates the expression of lineage-specific genes during this process. Since the cell line originated from leukemia cells, it also holds promise for determining some causes of leukemia. Dr. Paul’s interest in the cell line is more than academic; as an allergy sufferer, she finds extra motivation in her work. Dr. Paul believes that AML 14.3D10 “will be a valuable tool in allergy research” and hopes that industry will find more effective treatments to relieve her allergy symptoms and those of others.

A proposal for a major national symposium devoted just to this cell line is being considered; if approved, industry researchers and academic scientists will come together to share their knowledge about Wright State’s cell line, AML 14.3D10. As a result of this technology transfer, allergy sufferers and leukemia patients may be the biggest beneficiaries of all.

"Once it became apparent what we had, it took two years of hard work to prove that this cell line does what eosinophils are supposed to do."
The waiting room was already full on a recent winter evening when Wright State medical student Ardis Martin, Year II, began to take patient histories. If any more people came in for the free medical care provided by Reach Out of Montgomery County, they might have to be turned away.

Martin knew that most of the people waiting to see the doctor faced a common problem for working poor people. They had jobs but no health insurance, and they didn’t make enough money to pay for health care. After six months of service as a Reach Out volunteer, she also knew that many of them had no where else to turn and no one else to talk to about their problems.

“You have to let them talk, but you also have to get the relevant information,” Martin says. “It helps you hone your clinical history taking skills.”

Martin and 20 of her Wright State classmates volunteer regularly at Reach Out clinics. The experience gives them an opportunity to use knowledge and skills learned in medical school “where it’s needed the most.” She adds, “It gives you a good perspective about what you’re studying for, about why you want to be a doctor.”

Reach Out of Montgomery County is a nonprofit organization that provides free health care to underserved people in the Dayton area. It is a collaboration between the Montgomery County Medical Society, the Combined Health District of Montgomery County, Wright State University School of Medicine, and numerous community groups and organizations. Reach Out was launched in 1994 with a grant from the Robert Wood Johnson Foundation. The grant supported the development of a demonstration model for providing free health care using volunteer physicians and other health care professionals.

Reach Out operates evening clinics once a week at the East Dayton Health Center and the Charles R. Drew Health Center in West Dayton. In its first 20 months of clinical services (completed November 1, 1996), Reach Out provided free medical care for 1,048 patient visits. Reach Out volunteers include 65 local physicians, 40 nurses, 3 social workers, and 66 other support volunteers.

To make the most effective use of volunteer efforts, Reach Out recently conducted a detailed study of Montgomery County’s underserved population and the barriers that limit their access to health care. The Reach Out study is the first of its kind to survey working poor people at the community level. Conducted by Reach Out and the Center for Urban and Public Affairs (CUPA) at Wright State University, the study used a door-to-door survey of 413 working-age adults and their families.

The study found that 27 percent of the poor in Montgomery County, about
The success of the Reach Out program attests to the concern and outstanding goodwill of the volunteers in our community.

Syed Ahmed, M.D., and Robbie Stone, R.N., Reach Out’s project coordinator, go over patient files (left); Dr. Ahmed and Ms. Stone with a few volunteer staff, including community health advocates, social worker, nurse practitioner, and medical students (right).

26,250 people, work full-time. More than half (51.3 percent) of the county’s poor families include a worker, and 41 percent include a full-time worker. About 20,600 adults of working age in Montgomery County are poor and do not have health insurance, according to the study. The working poor are more likely to be without health insurance (44 percent) than the nonworking poor (18 percent). Less than 15 percent of poor families with employer-sponsored health insurance have coverage for every family member.

The Reach Out study identified six types of barriers that limit health care access for poor people in Montgomery County. Over 80 percent of the poor face at least one of these barriers, and 59 percent face more than one barrier.

- **Inability to pay.** 63 percent had difficulty paying for medical care, even with insurance; 44 percent (36 percent of those with health insurance) avoided getting needed medical care because they were worried about the cost.
- **Lack of information.** 90 percent did not have any knowledge of special medical services with reduced or waived costs for the poor.
- **Child care.** 38 percent of poor parents said lack of child care was a barrier to obtaining health care.
- **Time off work.** 31 percent of the working poor had difficulty taking time off work to get medical care.
- **Transportation.** 31 percent said that lack of transportation was a barrier to obtaining health care.
- **Negative past experiences.** 19 percent said negative past experiences in the health care system discouraged them from seeking needed medical care.

“Overcoming the barriers that limit access to health care is not as simple as having a job, health insurance, or free medical care,” says Syed Ahmed, M.D., Reach Out project director and assistant professor of family medicine at Wright State. “This study shows us specific problems in Montgomery County so we can begin to look for solutions that will work here. The success of the Reach Out program attests to the concern and outstanding goodwill of the volunteers in our community.”
Emma Wilson, recuperating in the hospital after suffering a heart attack, suddenly experiences severe chest pain. Within minutes, a resident physician is at her bedside. Residents of Wright State University School of Medicine (WSUSOM) programs in Dayton have historically provided around-the-clock, on-site medical coverage for patients like Emma Wilson.

After 6:00 P.M., many patients in Dayton hospitals are seen by resident physicians. Residents, under the supervision of faculty physicians, also care for special patient groups such as the uninsured, underinsured, and Medicaid patients. “Resident physicians contribute significantly to the health care of the Dayton community,” states Joseph Krella, president of the Greater Dayton Area Hospital Association.

In Dayton, residents are trained through graduate medical education programs sponsored by WSUSOM and its affiliate hospitals. Graduate medical education is the physician’s training after medical school to become certified in a practice specialty.

WSUSOM and its affiliate hospitals are collaborating to preserve the quality of Dayton’s graduate medical education and health care system. Building on a history of trust, WSUSOM and seven local teaching hospitals—Children’s Medical Center, Kettering Medical Center, Miami Valley Hospital, Veterans Affairs Medical Center, and Wright-Patterson Medical Center—formed the Dayton Area Graduate Medical Education Consortium (DAGMEC). DAGMEC, a trailblazer, is the only allopathic graduate medical education consortium in Ohio and one of fewer than 40 in the nation.

To respond to proposed changes in the nation’s health care system, DAGMEC has established multidisciplinary working groups with approximately 150 volunteers representing residency programs, medical staffs, hospital administrations, and the community. These groups are investigating ways to position its members for changes in health care and medical education, to address the complex challenges of graduate medical education, and to create a spirit of unity.

Position for Change

Recent changes in the health care system are directly affecting graduate medical education. For example, graduate medical education is being conducted more frequently in ambulatory settings rather than in-patient settings.

Medical technology, too, is changing medicine. New technology provides residents with valuable learning tools as well as a resource for practicing medicine. “To prepare outstanding physicians for the 21st century they must be trained by creative..."
faculty in appropriate medical environments using current innovations in medical and educational technology,” says Howard Part, M.D., associate dean for faculty and clinical affairs.

**Address Complexity**

In Dayton, local residency programs are administered by individual institutions with different roles and training sites for residents. Residents train in hospitals, offices of private practice, clinics, and community health care centers; therefore, coordinating residency programs involves negotiating contracts between institutions and tracking each resident’s location and activities. For a resident to become certified, residency program administrators must coordinate and document the instruction, supervision, and evaluation of each resident. DAGMEC is planning an information system to track residents’ clinical activity, skill evaluation, and community involvement. Careful documentation will maximize resources available from external sources that fund graduate education, allowing DAGMEC to create model training programs that better fit the new health care environment.

**Create a Spirit of Unity**

Through DAGMEC, individual institutions will improve communication between and among its members by sharing resources, personnel, and programs. In the past, individual members of the consortium have recruited their residents independently. DAGMEC has begun efforts to create and manage a common system to support recruiting residents. By unifying efforts, the focus becomes the enhancement of recruitment and retention of residents.

“**DAGMEC’s efforts will strengthen Dayton’s health care delivery system.**”

One of DAGMEC’s major contributions is building relationships. “By bringing the strengths of many institutions together to form a system that is synergistic, the consortium will position Dayton to compete nationally to attract the best and brightest medical students to an innovative educational milieu,” says Al Painter, Psy.D., chair of DAGMEC’s Operations Committee responsible for the ongoing management of the consortium. “DAGMEC’s efforts will strengthen Dayton’s health care delivery system,” explains Dr. Painter. “Because DAGMEC’s partners are committed to improving the quality of graduate medical education and patient care, the real winners are the patients.”

**DAGMEC Goals**

- Establish and maintain the highest standards for medical education and related research;
- Promote cooperation and collaboration among the DAGMEC members and their programs;
- Assure a firm financial base for managing graduate medical education activities;
- Anticipate legislative initiatives affecting graduate medical education, appropriately revising DAGMEC’s strategic plan to ensure that graduate medical education continues to grow and remains viable.
Did you receive a call from a medical student asking for a gift to the School of Medicine? Student volunteers called hundreds of alumni during the school’s annual phonathon held the week of February 3. The phonathon is only a part of the overall Annual Alumni Appeal program chaired for the first time this year by an alumnus of the School of Medicine — Dr. James Augustine, M.D. (’83).

A great supporter of the School of Medicine, Dr. Augustine enjoys talking to other alumni about the school’s current and future programs. “I chose to attend Wright State’s medical school because of the community-based training,” says Dr. Augustine. “Wright State produces high-quality clinical physicians. Learning in a community-based setting allows students to understand multiple approaches to clinical problems. I strongly believe there continues to be a real need for the type of physician produced at Wright State.” He has remained involved with the school over the years, not only through his association as an alumnus, but as an associate clinical professor.

Dr. Augustine chairs Miami Valley Hospital’s Department of Emergency Medicine and is associate director of the hospital’s Emergency and Trauma Center. As a medical student, Dr. Augustine planned to specialize in pediatrics, but during his third year, a gentleman knocked at his door recruiting volunteer fire fighters. Because of his interest in community service, he decided to give it a try. “After six months I became hooked on emergency medicine and became a certified fire fighter and emergency medical technician,” explains Dr. Augustine. He completed his residency in Wright State’s emergency medicine program and continues to serve as a volunteer fire fighter and consultant to several area rescue units.

Realizing the high burnout rate of emergency medicine physicians, Dr. Augustine helped found Premier Health Care Services and now serves as the company’s CEO. Premier is a multispecialty physician practice group established originally to staff the emergency department at Upper Valley Medical Center. Since its conception, Premier has grown to a staff of nearly 150 health care professionals and offers physicians a variety of experiences. Premier places physicians in settings that include urgent care and corporate occupational services. Dr. Augustine describes Premier as a multiprofessional group of people trying to design a health care system that is patient friendly, efficient, and cost effective. He believes that with the changes in the health care field and managed care, physicians must work more closely to deliver services under capitated arrangements.

A love of emergency medicine is a family affair in the Augustine household. As a nurse on CareFlight for 10 years, his wife Linda understands the stresses of the job. Both parents involve their children, Jill, Josh, and Jenna, in their professional lives, but they also find time for a family game of street hockey.

According to Dr. Augustine, a good physician should show compassion, solve medical problems, reduce pain, and help the whole person. “My very favorite thing is delivering medical care that exceeds the patient’s expectations,” explains Dr. Augustine. “I love being a doctor and feel lucky that I can make a difference in people’s lives.”
How interesting it is to watch a promising student employee progress from a part-time temporary position to a key role in a major department within the School of Medicine. It is especially exciting if the employee has adapted to each new challenge with the efficiency of a seasoned professional.

That’s just what happened to Jan Austin, director of the Department of Surgery. She began her tenure with Wright State University as a student employee in the History Department in the College of Liberal Arts in 1978. After graduation in 1981, Ms. Austin began working parttime in the School of Medicine, halftime in the office of the business manager, and halftime in the word processing center. In 1982 she accepted the position of student curriculum coordinator in the Department of Surgery. Later, as administrative assistant, Ms. Austin watched the Department of Surgery grow from three full-time faculty to its current size of eight full-time faculty and 193 volunteer faculty.

Development of the faculty has always been a priority within the department, and coordination of the effort has been part of Ms. Austin’s role since the beginning. Currently, she manages two or three annual continuing medical education programs for the department, including a major annual course held each September at Sinclair Community College. The major course of 1996, Endocrine Surgery, attracted 150 Wright State School of Medicine faculty and clinicians from area hospitals. She is already hard at work planning a course on breast surgery, which is scheduled for the fall of 1997.

Ms. Austin manages departmental resources that include School of Medicine, hospital, and state funds, as well as department personnel, and is proud of her involvement in a department that has gained national recognition as a leader in surgical education.

She notes that several faculty have mentored her and encouraged her to stretch to do her best: “Dr. Margaret Dunn has been a colleague, a friend, a mentor who is always willing to listen to my concerns and encourage my efforts.” Ms. Austin credits Dr. James Peoples, professor and chair of the Department of Surgery, with providing the leadership and support that has resulted in her success in the department, and more specifically, with the attainment of her personal educational objectives.

Ms. Austin, who received the Wright State University President’s Award for Excellence in Human Relations in 1992 and the Department of Surgery’s Chairman’s Award in 1995, has not been a passive bystander in the development of the Department of Surgery nor in her personal development. Although Jan insists that “I work to live; I don’t live to work,” her pride and excitement about working in the Department of Surgery is evident. In addition to working full time in the department, she has earned a master’s degree in management from Antioch University and relishes her role as wife to John, and mother to 10-year-old Jessica.

Dr. Peoples describes Ms. Austin as “possessing the rare ability to completely alter course as currents dictate. This adaptability, connected as it is to her innate skills, intelligence, and knowledge, has produced a flexible, responsive, proactive organization.”

— Jacqueline McMillan
WSU School of Medicine scholarship students met and personally thanked donors who created their awards at the Thelma Fordham Pruett Recognition Ceremony. On September 29, more than 140 people attended the ceremony that highlighted the achievements of 1996 scholarship recipients and announced newly established funds to benefit medical education at Wright State University.

Formerly called the Donor Recognition Reception, the event was renamed to honor Mrs. Pruett’s long-term support for the School of Medicine. Her investments helped establish the Fordham Health Science Library, the Pruett Rare Book Room, and a third of the donor-based scholarships for medical students. Dean Kim Goldenberg, M.D., lauded the generosity of alumni, friends, faculty, and corporations. Their support created a record year in giving to the WSU School of Medicine, exceeding $1.1 million. Also successful was Wright State’s 1996 Campus Scholarship Campaign, which had a record-setting year of $125,000 in gifts and pledges. Almost half of this total was designated for medical scholarships.

The dean announced the establishment of the following new funds:

- **The Cruikshank Family Scholarship** — $100,000 commitment over 10 years
- **The Alonzo McWilliams Donnell Jr. Aerospace Medicine Scholarship** — $25,000 gift
- **The Glaser Family Research Fund** — $10,000 pledge
- **The Watson Parker Memorial Scholarship** — $15,000 in gifts
- **The Samuel Pitner Memorial Scholarship** — $10,000 gift

The program’s climax was the public introduction of Jennifer D. Byrd, Dana M. Caylor, Francine M. Oelrich, and Miguel A. Parilo, the first recipients of the E. W. Kettering Family Scholarships. These four students were selected to receive $25,000 scholarships and have agreed to serve the Dayton community, with an emphasis on elderly patient care, for two years after their residency training.

The first E. W. Kettering Family Scholarship recipients, Jennifer D. Byrd, Dana M. Caylor, Francine M. Oelrich, and Miguel A. Parilo.
David G. Place Scholarship

The highlight of the annual Reunion Weekend October 25–27 was the David G. Place, M.D., Memorial Scholarship presentation. During the dinner program, Brian Esselstein, M.D., vice president of the class of 1986, announced the establishment of the Place Memorial Scholarship. Contributions from Dr. Place’s family and classmates successfully funded the scholarship in excess of the $10,000 goal needed to endow the scholarship. Third- and fourth-year students who demonstrate excellent leadership abilities and high academic standards will be eligible to receive the Place Memorial Scholarship.

Glen and Rita Place, David’s parents, and other family members attended the reunion to honor him and to celebrate his life. Dr. Place received the 1986 Dean’s Award and served as president of the class of 1986. He worked as an emergency room physician at Doctors Hospital in Columbus and served part time at Lima Memorial Hospital.

School of Medicine graduates from the classes of 1981, 1986, and 1991 attended Reunion Weekend. Activities began Friday evening when the three groups gathered for individual class parties. A Saturday morning continuing medical education program featured Robert P. Turk, M.D., professor of surgery at Wright State, who spoke about the history of medicine, and Robert Kalb, M.D., a Toledo-area orthopedic surgeon, who discussed the evaluation and treatment of knee injuries. Saturday evening the alumni gathered for dinner and dancing.

The School of Medicine Theatre Reception

In appreciation for their generosity, the WSU School of Medicine invited its friends to a reception and viewing of the WSU Theatre Department’s production of 1913: The Great Dayton Flood. Walter Pickutowski, donor to the biochemistry department and a flood survivor, was among the 60 people who attended the reception and viewed the displays of flood memorabilia. Another attendee and donor, Mrs. Mary Mason, a retired school teacher, wrote her master’s thesis in 1944 on the Dayton flood.

Alumni Advisory Board

A new Alumni Advisory Board will help align School of Medicine alumni activities and programming to alumni interests. The first quarterly meeting was held in June, and the annual meetings of alumni board members will be during Reunion Weekends. Board members are asked to attend at least one of three meetings during the year, and any alumni can be a member.

As a result of the recent election of officers, members of the executive committee are: President Gary LeRoy, M.D. (’88); Vice President Sean Convery, M.D. (’81); Secretary Cheryl Robinson, M.D. (’82); Treasurer Christ Ticoras, M.D. (’91). The Advisory Board will provide valuable insight to the Office of Advancement in shaping alumni programs. For more information, please e-mail advancement@med.wright.edu or call (937) 775-2972.
Dean Kim Goldenberg Receives Recognition Award

The Dayton Veterans Affairs Medical Center (DVAMC) presented Dean Kim Goldenberg, M.D., with the Director’s Recognition Award at the annual Veterans Affairs and School of Medicine Mixer on November 20, 1996. This award is “intended to honor people in the community who have demonstrated their commitment and support to the mission of the DVAMC and its veteran patients.” The award certificate lists Dr. Goldenberg’s accomplishments that support the teaching, patient care, and research missions of the DVAMC. The plaque, given by Steven Cohen, M.D., director of the DVAMC, reads, in part, “In recognition of your many years of tireless support of, and friendship to, the DVAMC . . . Our patients, students, and staff have been enriched by your efforts.”

“This award from our community partner, the DVAMC, is an honor to receive,” says Dr. Goldenberg. “It would not have been possible without a great team of people to work with at the DVAMC and the School of Medicine.”

New Leadership at the DVAMC

Steven Cohen, M.D., associate professor of medicine, was recently named director of Dayton’s Department of Veterans Affairs Medical Center by Laura Miller, network director of Veterans Health Care System of Ohio and confirmed by Jesse Brown, Secretary of the Department of Veterans Affairs.

Dr. Cohen has been a faculty member since 1985 and served as chief of staff at the Dayton VA Medical center since 1991. Multiple roles are the norm for Dr. Cohen, and he is widely recognized for his teaching, patient care, research, and administrative capabilities.

Department of Surgery Writes Reviews for National Magazine

Wright State’s School of Medicine Department of Surgery was featured in the May 1996 issue of Current Surgery, the official journal of the Association of Program Directors in Surgery. Each month, Current Surgery features reviews in general surgery and surgical subspecialties from a different academic institution in the United States or abroad.

Each reviewer selected a surgical topic and reviewed three or four original papers on the subject. Reviewers then wrote a brief editorial commentary regarding each abstract and a summary discussing their surgical philosophy on the topic. Also included in the issue was an introduction of the department and a photo and short biography of James B. Peoples, M.D., professor and chair. The project was coordinated by Daniel P. McKellar, M.D., associate clinical professor.
New Pharmacology Chair

Mariana Morris, Ph.D., has been appointed chair of the Department of Pharmacology and Toxicology. She comes to the position from the Bowman Gray School of Medicine at Wake Forest University where she was professor of physiology and pharmacology and associate in the hypertension center. Dr. Morris received her Ph.D. degree in physiology from the University of Texas Health Science Center in Dallas, completed post doctoral training at the University of Rochester School of Medicine, and has been a faculty member at Bowman Gray since 1976.

Dr. Morris has extensive teaching experience with graduate students as well as directing undergraduate research for minority students and leadership development programs for women faculty. Her internationally recognized research is centered on the neuroendocrine basis of hypertension. Dr. Morris has over 90 publications, continuous grant support since 1977, and served on NIH study sections on cardiovascular and neurological sciences. She also received the prestigious Established Investigator Award of the American Heart Association and has served on the editorial board of prominent journals in her field.

Alumnus Becomes National Leader

Gary Onady, M.D., Ph.D. ('87), program director of Wright State’s Internal Medicine/Pediatrics Residency Program (MED/PEDS), has provided national leadership as president of this specialty’s professional organization, the Medicine-Pediatric Program Directors Association. He also is an elected member of the AMA Section on Graduate Medical Education and represents the specialty on the Primary Care Organizations Consortium (PCOC). While serving on PCOC, Dr. Onady has been responsible for drafting Medicare exemptions covering ambulatory care academic practice settings.

MED/PEDS, established 30 years ago, was the topic of Dr. Onady’s plenary speech at the national meeting of the Association of Pediatric Program Directors, and was published in the recent November issue of Academic Medicine. Dr. Onady notes that the specialty has grown from nine internship positions in four programs to 445 internships in 1995. Wright State’s program was established in 1980 and uses the university’s Frederick A. White Center as an ambulatory training site. Tertiary care training sites for adults are Miami Valley Hospital and Veterans Affairs Medical Center; for children, Children’s Medical Center and Wright-Patterson Air Force Base Medical Center. Ninety percent of WSU MED/PEDS graduates remain in primary care with 40 percent of these graduates choosing collaborative practice careers with family physicians.
New Faces

Samuel A. Adebonojo, M.D.
Chief of Surgery, Dayton VA Hospital
Professor, Surgery
M.D.: School of Medicine, University of Pennsylvania
Residency: Bryn Mawr Hospital, Bryn Mawr, PA (general surgery); Hahnemann Medical Center, Philadelphia (thoracic surgery)

David M. Burkhart, M.D.
Assistant Professor and Associate Residency Director, Family Medicine
M.D.: Case Western Reserve University School of Medicine
Residency: University of Rochester-Highland Hospital, Rochester, NY (family medicine)

Lisa N. Gelles, M.D.
Assistant Professor, Dermatology
M.D.: Case Western Reserve University School of Medicine
Residency: Case Western Reserve University School of Medicine (dermatology and pediatrics)

Holli K. Neiman, M.D.
Assistant Professor and Associate Residency Director, Family Medicine
M.D.: Wright State University School of Medicine
Residency: St. Elizabeth Medical Center, Dayton (family practice)

Alvin H. Niemer, M.D.
Assistant Professor, Dermatology
M.D.: University of Louisville
Residency: University of Michigan, Ann Arbor (dermatology)

Elsira M. Pina, D.O.
Assistant Professor, Internal Medicine
D.O.: Philadelphia College of Osteopathic Medicine
Residency: Case Western Reserve University (internal medicine)
Fellowship: University of Cincinnati Medical Center and VA Medical Center (pulmonary-critical care)

William H. Wiist, D.H.Sc., M.P.H.
Associate Professor, Community Health
Executive Director of the Injury Prevention Center of the Greater Dayton Area
D.H.Sc., M.P.H.: Loma Linda University School of Public Health, CA