11-2-2001

Washington University Record, November 2, 2001

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Shelters get food via sophomore’s program

Older adults’ contributions researched by GWB

Environmental research
Pathfinder group performs key Mauna Kea fieldwork

Bioterrorism panel

New tax law improves retirement plan limits
Mercury-trapping technique patented by Biswas

Pratim Biswas, Ph.D., and his co-workers at Washington University in St. Louis have developed a method of trapping mercury using titanium dioxide nanoparticles. The technique is a result of the research conducted by Biswas in collaboration with other scientists.

According to a 1998 EPA report, mercury emissions from various sources, including coal combustion, industrial processes, and waste incineration, contribute to significant environmental problems. Mercury is toxic and can cause health issues, especially for pregnant women and young children.

Biswas and his team have demonstrated that titanium dioxide nanoparticles can effectively trap mercury from coal combustion. The nanoparticles have a high surface area, allowing them to adsorb mercury effectively.

The process developed by Biswas and his colleagues involves the use of activated carbon, which is known for its high adsorption capacity. The activated carbon is impregnated with titanium dioxide nanoparticles, creating a filter that can be used to remove mercury from smokestack emissions.

The team has also patented a method of using the nanoparticles to filter mercury from other sources, such as coal- and gas-fired power plants, industrial processes, and waste incinerators. The technique has potential applications in various industries, including environmental protection, energy, and manufacturing.

In conclusion, the mercury-trapping technique patented by Biswas and his colleagues represents a significant advancement in the field of environmental technology. It provides a promising solution to the problem of mercury emissions, one of the most toxic pollutants, and offers a sustainable approach to protect public health and the environment.
**Weight-loss drug blocks absorption of cholesterol**

**By Joe Dinin**

University investigators have shown that a weight-loss drug, orlistat, can help prevent obese people from absorbing cholesterol from their food. They reported their findings in the journal Obesity Research. "This is the first time that a medication for obesity has been shown to block the absorption of cholesterol," said Samuel Klein, M.D., the Danforth Professor of Medicine and director of the University’s Center for Human Nutrition. "It serves as director of the Nutrition. University researchers wanted to find out why.

Previous clinical trials have shown that orlistat, commercially known as Xenical, blocks the absorption of dietary fat and that obese patients may have beneficial effects on blood cholesterol that are independent of its effects on body weight.

The results from our study suggest that orlistat therapy in obese subjects can achieve long-term weight management. The researchers studied 184 obese subjects with moderate to severe obesity and found that those who lost weight while taking orlistat had lower blood cholesterol levels than those who dieted and took an inactive placebo. In addition, those who lost weight while taking orlistat lost the same amount of weight by dieting without orlistat, said Klein, who also serves as director of the University’s Center for Human Nutrition.

"The results from our study suggest that orlistat reduces plasma cholesterol concentrations in obese people by reducing absorption of cholesterol from the diet," Klein said.

"But it is important to remember that the cornerstone of treatment involves the difficult process of making lifestyle changes such as dietary intake and physical activity," Klein said. "Orlistat and other drugs can be used as additional tools to help selected patients successfully achieve long-term weight management. But drug therapy should be used only as part of a comprehensive weight-management program that includes medical exams, dietary counseling, exercise and behavior modification."

Klein noted that even modest weight loss—5 percent to 10 percent of body weight—combined with lower cholesterol levels can have significant health benefits for obese patients. "The researchers studied 184 obese subjects with moderate to severe obesity and found that those who lost weight while taking orlistat had lower blood cholesterol levels than those who dieted and took an inactive placebo. In addition, those who lost weight while taking orlistat lost the same amount of weight by dieting without orlistat, said Klein, who also serves as director of the University’s Center for Human Nutrition. "The results from our study suggest that orlistat reduces plasma cholesterol concentrations in obese people by reducing absorption of cholesterol from the diet," Klein said.

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**Gastric reflux diagnosed by new technique**

**By Joe Dinin**

University gastroenterologists at Barnes-Jewish Hospital have become one of five groups in the country now using a novel means of testing for one of the most common digestive-tract problems in the United States: gastroesophageal reflux.

Known as the Bravo pH System, the test measures the amount of stomach acid reaching the esophagus over 24 hours in patients who may have reflux but have never been officially diagnosed with the problem.

Reflux occurs when the valve between the esophagus and stomach weakens, and gastric fluids flow back up into the esophagus and the throat. The test can cause symptoms ranging from heartburn to chest pain that mimics heart disease. Some people become harse and have difficulty speaking, and chronic reflux is thought to increase the risk of esophageal cancer in some people.

"All of us at reflux from time to time, but people with a serious problem will have symptoms almost every time they eat, or every time they lie down or engage in other activities that trigger the symptoms," said Ray E. Clouse, M.D., professor of medicine and of psychiatry at the School of Medicine and director of the Digestive Disease Clinical Center at Barnes-Jewish Hospital.

The most common way to diagnose reflux is to put a patient on treatment, such as antacids or other drugs, and follow the patient to see if symptoms improve or go away entirely. But even years later, symptoms may return, and many patients then opt for minimally invasive surgery to stiffen up the valve between the stomach and the esophagus.

"We don’t want to send someone into something as serious as surgery unless we are sure the symptoms really are caused by gastroesophageal reflux, and we need more than a successful record of treatment to diagnose the problem," Clouse said.

Sometimes, it is possible to diagnose reflux by examining a patient with an endoscope, a rubber tube with a camera at the end that is slipped into the esophagus of a sedated patient.

But endoscopic exams can only identify areas that have been damaged by gastric acids, "We’d rather have them free to spend a more typical day, so we can get more accurate measures of their reflux problems and see when and what comes up to occur. If it happens after meals, the new system tells us that; if it happens while lying down or gardening or walking in the mall, we’ll know that, too," Clouse said.

After about a week, the capsule falls away from the wall of the esophagus and passes naturally out of the system. Not all patients are candidates for this type of pH monitoring, but it does provide an option for some people.

**Nerve transplantation grant awarded**

**By Diane Durt Wills**

Steven E. Mackinnon, M.D., the Shoemaker Professor and chief of the Division of Plastic and Reconstructive Surgery at the School of Medicine, has received a $1.6 million grant from the National Institute of Neurological Disorders and Stroke to study the transplantation of donor nerves.

Mackinnon is considered an international authority on nerve regeneration and transplantation and on the use of limited immunosuppression following nerve transplantation. She was the first surgeon in the world to transplant peripheral nerves from a donor cadaver into a patient without the use of lifelong immunosuppressive drugs.

In the past, physicians had few alternatives to amputating the limbs of accident victims with nerve damage and attaching them to the arms or legs. They were convinced that a patient’s body would reject a donor nerve without lifetime use of immunosuppressants, drugs that prevent rejection by suppressing the body’s immune system. Unfortunately, these drugs also increase the risk of contracting potentially life-threatening illnesses or of permanently damaging the kidneys or liver.

For these reasons, the risks of nerve transplantation were thought to be higher than the risks of amputation.

Mackinnon, however, has successfully transplanted donor nerves into patients requiring only a temporary course of immunosuppressive medication. Because of her research, patients have not only avoided amputation but also have regained use of their arms and legs. Mackinnon’s grant will enable her to test new donor-specific immunosuppressive drugs that may allow doctors to transplant nerves for more common injuries.
Shimon Okshteyn’s striking creations (which often top 6 feet in height) renders obsessively detailed portraits of what might be called consumer relics — a juicer, an old-fashioned alarm clock, a shoe, a last — as colossal sculptures whose rough-white surfaces stand in contrast to the drawings’ polish.

Okshteyn’s work has been featured in a score of one-person shows in New York, London, Moscow, France, Switzerland and Israel. In 1997, he was awarded first prize at the Berlinale Internationale D’Arte Contemporary Presentation in Florence, Italy.

His articles and reviews have appeared in numerous literary, reviews, chronicles, magazines, and more. Young is working on two new books.
fiction Writer Hempel to Read for Writing Program

By lam ottens

Fiction writer Amy Hempel, author of "Tumble Home" (1998) and "At the Gates of the Animal Kingdom" (1995), will read from her work at 8 p.m. Nov. 27 in The Writing Program Reading Series. Hempel will lead a colloquium on the craft of fiction at 5 p.m. Nov. 27 in The Writing Program Reading Series.

Hempel will lead a colloquium on the craft of fiction at 5 p.m. Nov. 27 in The Writing Program Reading Series. Hempel will lead a colloquium on the craft of fiction at 5 p.m. Nov. 27 in The Writing Program Reading Series. Hempel was named Poetry Editor of the Paris Review in 1997.

"At the time, I was only picking up 12 or 14, but I found it is very rewarding. So when I noticed that food was being thrown away here, I figured I could do something else," he said. He began volunteering at the school in 1999, and last year he delivered around 900 meals a week. He recently delivered in a more far-flung location.

"I would love to be able to do the same thing," he said. "It's wonderful that the food can be given to people who can use it instead of it being thrown away."

Retirement

University's retirement plan beginning in 2002, it also includes several provisions that will make planning for retirement a little easier," said Tom Lauman, director of Human Resources. "Employees recently should have been directed to a pamphlet discussing employee information while building additional income for a more secure financial future. The new tax law even offers a tax credit to encourage individuals with an edge on saving to begin saving for retirement. If you are not contributing to the plan or if you feel your current contribution level, now is the time to do so," he said.

Employees recently should have received a letter indicating their individual contribution level for calendar year 2002. If you are not satisfied with the amount chosen, discussing employee information while building additional income for a more secure financial future. The new tax law even offers a tax credit to encourage individuals with an edge on saving to begin saving for retirement. If you are not contributing to the plan or if you feel your current contribution level, now is the time to do so," he said.

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Pathfinder program environmental researchers — (from left) Bryan Brody, Meg McCarthy, Brian Yanites, Frank Seelos (crouching) and Megan Murphy — remotely monitor imaging with a digital camera with a reflectance spectrometer this summer at Hawai‘i’s Mauna Kea Ice Age National Area Reserve.

Elderly

Productive aging focus of reports, presentations — From Page 1

advances in gerontological theories that can support future practice and research. Morrow-Howard, Hinterlong and Sherraden conclude the volume with a research agenda that seeks to address accurate perspectives about the potential of older adults and to foster development of appropriate social institutions and policies.

"Research in this area is gaining national recognition. This fall, Morrow-Howard and Hinterlong will deliver an invited address giving an overview of the volume highlighting some of the key initiatives in productive aging at the International Longevity Center in New York. Ongoing CSD research is examining the links between productive engagement and well-being, and the relationships between frequency and outcomes of opportunities for older adults and productive behavior. Future areas of focus include reviewing current policies affecting productive behavior; developing recommendations for productive engagement and exploring the value of service as an institution for older adults."

According to census data, approximately 20 percent of the population is over age 65, with expectations that this percentage will grow to make up 20 percent of the population by 2050. Of the roughly 72 million people over age 50 today, 65 percent have retired from the labor force. "As average life expectations rise, more and more individuals need to reconsider on all levels — from personal to public policy — how to make life practice to individual life planning and economic development. Currently, older adults are, in effect, contributing to the economy through the lack of opportunities for continued productive engagement. When we look at capacity building for this generation of Americans, we need to promote policies that encourage active engagement for the benefit of both senior and society."

Research indicates that:
• 12 percent of people over age 55 who are in good or excellent health are not engaged in any work, volunteer or productive activity;
• 20 percent of those in good or excellent health are involved in three activities fewer than five hours a week;
• One in seven older adults who are not engaged in productive activity is struggling to find a job;
• More than half of workers, ages 50-64, would continue working if retraining or transition opportunities were available and pensions were age-neutral; and
• 55 percent of those who are not volunteering are willing to do so, he said.

"Productive social policy can secure access to productive roles and spark a new wave of innovative public-private programs that provide opportu- nities for senior citizens to contribute to meaningful productive activity regardless of their health status, volunteering, care-giving, leisure or civic activities," Sherraden said.

Morrow-Howard added that "active aging as a lifestyle is a separate stage of life, whereas productive engagement should be based on productivity over the entire lifespan."

The ultimate limiting factors for productivity in later life should be individual capacity and interest, not institutional shortcomings, she said. "Variables such as available information, access, incentives, variety of activities and involvement in activities for older adults need further research to determine if the physical and mental health of individuals on their retirement years in life will be key to holding older individuals achieve successful aging." For more information on CSD initiatives, visit the Web site gwuweb.wustl.edu/Users/csd/packaging/main.html.

Pathfinder Environmental researchers — from left: Bryan Brody, Meg McCarthy, Brian Yanites, Frank Seelos (crouching) and Megan Murphy — remotely monitor imaging with a digital camera with a reflectance spectrometer this summer at Hawai‘i’s Mauna Kea Ice Age National Area Reserve.

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Introducing new faculty members

The following are among the new faculty members on the Hilltop and Medical campus. Others will be introduced periodically in this space.

Patrick Eisenlohr, Ph.D., joins the Department of Anthropology in Arts & Sciences as assistant professor with a joint appointment in women's studies. He earned a bachelor's degree from Yale University in 1994 and a doctorate from Cornell University in 2000. His research interests are nationalism, diaspora, language ideology, colonialism, and the ethnolinguistics of language. He works in South Asia and Mauritius.

Sara Friedman, Ph.D., joins the Department of Anthropology in Arts & Sciences as assistant professor with a joint appointment in women's studies. She earned a bachelor's degree from Yale University in 1994 and a doctorate from Cornell University in 2000. Her research focuses on social and political change in China and Taiwan and market reform, marriage, gender and sexuality, and the popular mass media. She works in China and Taiwan and speaks the Minnan dialect of Mandarin Chinese.

Shanti Parikh, Ph.D., joins the Department of Anthropology in Arts & Sciences as assistant professor with a joint appointment in African and African-American Studies. She earned a bachelor's degree from the University of Virginia in 1988 and a doctorate from Yale University in 2000. During 2000-01, she was a postdoctoral research fellow in African & Afro-American Studies at the University of Wisconsin. Her research interests are AIDS, sexuality, gender, social change, community development, popular and mass culture, and globalization. She works in East Africa and speaks Kiswahili and Lusoga, a language in Uganda.

Dorothy Katherine Grange, M.D., joins the School of Medicine as an associate professor of pediatrics in the Division of Medical Genetics. She comes to the University from Saint Louis University, where she held positions in pediatrics and pathology. She earned a bachelor's degree in biochemistry from Mount Holyoke College in South Hadley, Mass., and a medical degree from the University of Florida College of Medicine. After residencies in pediatrics and pathology at the University of Wisconsin, she completed the Interdepartmental Medical Genetics Fellowship Program at the National Institutes of Health. She now practices medicine at the Children's Hospital at Barnes-Jewish Hospital.

Of note

Howard L. McLeod, Pharm.D., associate professor of medicine in the School of Medicine, is principal investigator on a grant from the National Institute of General Medical Sciences titled "Functional Polymorphism Analysis in Drug Pathways." McLeod has received additional funding, bringing the total to more than $7.2 million.

Kerry Hill, who earned a master's degree in social work degree in August, has been awarded a two-year, $40,000 Presidential Management Internship with the Department of Health and Human Services, Health Resources and Services Administration, HIV/AIDS Bureau. He will monitor and offer technical assistance to metropolitan and state HIV/AIDS programs funded through the Ryan WHITE CARE Act.

Ronald P. Lesn, Ph.D., associate professor of computer science, is a program committee member for the 14th Annual International Conference on Legal Knowledge and Information Systems, to be held in 2001. In addition, Lesn has been named conference chair for next year's annual meeting of the Society for Education and Philosophy.

Gruie-Catalin Roman, Ph.D., chair of the Department of Computer Science, is a program committee member for the Fifth International Conference on Coordination Models and Languages, to be held in York, England, in April.

Ronald S. Inock, Ph.D., the Das Family Distinguished Professor of Electrical Engineering, has received a one-year, $50,000 grant from the National Institute of Standards and Technology for his study, "Quasi-static and Dynamic Switching of Perpendicular and Patented Recording Media." He is also coordinator of a three-year, $450,000 grant from the National Science Foundation for a study titled "TTR/ADP Coordination in Air Pollution Through Virtual Work Groups."

Husar also received $111,060 from the U.S. Environmental Protection Agency to support an ongoing study titled "Chloro and Perchlorate Matter Air Quality Analysis in Support of Public Needs." In addition, he has received a $50,000 grant from the National Oceanic and Atmospheric Administration for a study titled "ASOS Visibility Data Evaluation and Analysis.

Outstanding faculty

Daniel L. Keating, J.D. (left), associate dean for academic affairs and the Tyrrell Williams Professor of Law, receives a Distinguished Faculty Award from Chancellor Mark S. Wrighton at the Oct. 27 Founders Day event at the Ritz-Carlton in Clayton. Keating was one of four recognized for outstanding commitment and dedication to the intellectual and personal development of students. Other Distinguished Faculty Award recipients were Erika C. Crouch, M.D., Ph.D., professor of pathology and immunology in the School of Medicine; Robert G. Hanson, associate professor in the School of Architecture; and Donald L. Snyder, Ph.D., the Samuel C. Sachs Professor of Electrical Engineering in the School of Engineering and Applied Science and professor of radiology in the medical school.

Marilyn B. Marcus, Ph.D., and Rebecca Copeland, Ph.D., associate professors in the Department of Asian and Near Eastern Languages and Literatures in Arts & Sciences, traveled to Berlin to attend the recent 2nd International Convention of Asia Scholars at the Free University. Marcus served as a discussant on the panel "Reimagining the Child in the Literary Culture of Twentieth Century Japan" and participated in a roundtable discussion of the book "Births to Japan — From "Pilgrimage" to the West." Copeland presented "Implied by Fashion: Werbelow in the Groove and the Modern Girl Student" in the panel "Construction by Language: Modernity and Femininity in Meiji Japan." Copeland subsequently attended the conference "Across Time & Tenant Reading & Writing Women's Texts at the University of Alberta, Edmonton, Canada, where she presented the paper "M is for Miyabe Miyuki in the panel "Est M for Murder I... Monsters, Mandaughtering, Miyabe Miyuki and Mamiwata.

Speaking of

Milouda Doudakovic, Ph.D., chair of the Department of Chemical Engineering and the Laura and William Ives Professor, presented an invited keynote lecture on "Analysis of Nontransparent Multiphase Systems" at the Fifth Liquid Gas Solid Symposium, held recently in Melbourne, Australia. The symposium provides a place in conjunction with the Sixth World Congress on Chemical Engineering. Doudakovic also presented three papers at the world congress.

International court debated by law experts

International court debates on law experts International war crimes tribunal expert Leela Nadya Sadat, J.D., D.E.A. (center), professor of law, introduces the participants in a debate on "Should the United States Ratify the International Criminal Court Treaty?" at a Lake Hall of Law Oct. 27. Michael P. Schert, J.D. (left), associate professor of law at the Center for International Law and Policy at New England School of Law, argued for ratification. Lee A. Casey, J.D. (right), an expert in international humanitarian law, argued against ratification. William R. Freytag, J.D., deputy editorial page editor for the St. Louis Post-Dispatch, moderated. International law experts have said such an international court could be used to prosecute Osama bin Laden and others allegedly involved in the Sept. 11 terrorist attacks. Sponsored by the law school's institute for Global Legal Studies, the debate can be viewed on the Web site, law.wustl.edu/igls.
Washington People

Projecting empathy and concern

As a breast-imaging specialist, Maria E. Schmidt, M.D., knows the value of effective patient communication.

By Darrell E. Ward

Maria E. Schmidt, M.D.

Born: Portovia, Haiti

Education: Stanford University, B.S. 1979; Yale University, M.D. 1983

University position: Assistant professor of radiology, Breast Imaging Section, Mallinckrodt Institute of Radiology

Almost daily, Maria E. Schmidt, M.D., must tell frightened women they may have breast cancer. It's an unavoidable part of her job as a radiologist at the School of Medicine and a breast-imaging specialist at Barnes-Jewish Hospital's Breast Health Center.

"Emotionally, this is a stressful area in which to work," Schmidt said. "But it's also rewarding because we have a good staff, people who are empathetic and caring."

In addition, Schmidt and her co-workers share in the joy when a suspicious shadow on the first mammogram proves harmless on the second one.

"We often get hugs and kisses when we tell a woman everything is fine," she said. "Some women are so relieved and want to cry."

Schmidt, assistant professor of radiology at the School of Medicine's Mallinckrodt Institute of Radiology, chose radiology for its mix of technology, clinical care and interaction with patients. She enjoys the challenge of making a diagnosis correlating clues from radiological images, physical exams and biopsies.

Whereas some people enter radiology to tweaks and improve machines, Schmidt is more interested in working with people.

"Many women who are faced with the breast provokes great anxiety in a woman," she said. "Our work requires a lot of empathy. It's challenging to tell people they have a serious problem in a way that is honest and straightforward but not frightening."

Schmidt is particularly interested in helping patients deal with the pain that comes with a breast-cancer diagnosis, focusing on minority and low-literacy patients.

Last year, Schmidt and colleagues Diane Farria, M.D., and registered nurse Jill Bokern obtained funding from the Susan B. Komen Breast Cancer Foundation to produce a video that translates medical roots into language.

Medical roots

As a breast-imaging specialist, she helps others embrace their breast cancer into readily understandable language.

Medical roots: travel and the challenge to communicate well interfaced like fiber to form the fabric of Schmidt's youth. Her father was a family practitioner who served in the U.S. Army Medical Corps in both world wars. Her mother was an ear, nose and throat specialist who attended medical school in Germany in the 1940s and immigrated to the United States.

"My mother was a maverick and a groundbreaker," Schmidt recalled. "She was the only woman in her medical school class. When she came to California, she was the first board-certified female otolaryngologist in the state and the first female surgeon in her hospital."

Her parents, now deceased, divorced when Schmidt was a child. She lived with her mother, who loved to travel.

"She took me around the world when I was a very adventurous child," Schmidt said. They often visited her grandparents in Germany and traveled widely through Europe, Asia and Egypt.

At age 6, Schmidt lived in Panama and learned Spanish while her mother was a physician in the Canal Zone. As a child and teen, she lived in southern California and spent many weekends in Mexico. In her high school, she traveled with her mother and a friend in a yellow and black van.

"I learned that health care means in the Third World," she said. "Some of those clinics had dirt floors, but they were clean and filled of pride." This experience marked the beginning of her interest in medicine.

After high school, Schmidt attended Stanford University as a biology major. Through a work-study job she met Carmelo Romano, Ph.D., then a graduate student in pharmacology. Today, Romano is associate professor of ophthalmology at Washington University and studies how neurons communicate.

"We met in the worm room," Schmidt recalled. "I was working under a sterile hood beside a Bunsen burner with stacks of petri dishes in front of me."

Like any good investigator, Romano recognized a first-rate discovery.

"Maria not only was pretty and smart," Romano said, "she was well-traveled, with interest stories about her adventures. I saw her as cool, brave, sophisticated girl."

Schmidt graduated from Stanford in 1979 and entered medical school at Albany Medical College. Then Romano entered a post-doctoral program at Yale University. They married a year-and-a-half later, and Schmidt transferred to Yale. In the years that followed, she attended medical school through a military scholarship from the Navy. She joined "Physicians for a National Health Program" in 1998 and chaired a local committee of "Call to Action" to help address those problems.

Among friends and co-workers, Schmidt is known for her almost boundless energy, range of interests and dedication to family.

"She's a good scientist and a good activist, and she does the kind of outreach activity that makes you proud to work for Washington University," said Lori Fein, associate general counsel for the university and a close friend of Schmidt's.

Barbara S. Mennenga, M.D., professor of radiology and chief of the Breast Imaging Section, said, "Maria does a remarkable job balancing her personal and professional life. Too many doctors are so immersed in what they do that they give short shrift to their home life. Maria's kids genuinely like her: she is an active partici- pant in their lives, and they embrace that."

Maria enjoys gardening, bicycling and scuba diving.

Working with the Ethical Society of St. Louis is her main extracurricular activity. For the last four years, she has led the society's high school youth group, spending Sunday mornings and other times during the week exploring topics, and helping to develop social responsibility among the 27 teen-aged.

At the Breast Health Center, Schmidt teaches residents and fellows about breast imaging and issues in patient care. She stresses the importance of the "little things" — being polite, showing compassion, easing anxiety.

"When I meet with a patient whose mammogram looked fine, I tell her the result immediately after introducing myself," Schmidt said.

"Touch is also critical to support a patient when giving bad news," she explained. "Radiologists get extensive training in interpreting images and data, but we usually receive little training in how to speak to patients in a way that is kind, compassionate and reassuring. We shouldn't send them away thinking they'll get a letter in three days. Most patients aren't that very anxious. But you get to right to the point, and they want the straight story. It's only human — and that's what my job is all about."