

THE NIH RECORD

Still The Second Best Thing About Payday

'Healthy Children, Healthy Community' North Carolina Fair Is Model For Closing Gaps in Health

Several NIH'ers recently celebrated the success of "Healthy Children, Healthy Communities," a children's health fair held June 8 at Holy Cross Catholic Church in Durham, N.C. The purpose of the effort



Keynote speaker Mary Ann Black (l) of Duke University chats with an N.C. State presenter.

was to educate people from minority and disadvantaged backgrounds about ways to prevent disease and improve their overall well-being by developing good hygiene and eating habits and otherwise conducting healthy lifestyles.

"This was a wonderful event and really
SEE CAROLINA FAIR, PAGE 4

Seminar Explores Alternative Medicine, Women's Health

More than 200 attendees listened to a seminar detailing current research involving alternative

medicine and women's health in Lipsett Amphitheater on June 3. Four speakers weighed in on the topic.



Dr. Chesney

Dr. Margaret Chesney, deputy director of the National Center for Complementary and Alternative Medicine, provided an overview, noting that 29 percent of adults use CAM therapy

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Medieval Miracle Workers

Are Maggots Making a Medical Comeback?

By Jennifer Wenger

Lucas Parks will never look at maggots the same way again. The squirming, cream-colored creatures he skillfully baits onto a hook have assumed a whole new level of significance—beyond their ability to lure bluegill and bass—to the 20-year-old. They, or at least some of their cousins, were able to come through for him when all else seemed to fail.

Parks, a strapping young man with a passion for fishing and hunting, is the first patient in the Clinical Center to receive maggot debridement therapy (MDT), a centuries-old medical treatment that employs fly larvae to clean and help heal wounds. (The term debridement refers to the removal—or "unbridling"—of

SEE MAGGOTS, PAGE 8



Lucas Parks, a true animal lover, befriends a dog with leukocyte adhesion deficiency.

No 'Maybes' Allowed

Brennan Is 'Socratic Surgeon at Work'

By Carla Garnett

Remember squirming in your seat back in school when a particularly fiendish instructor gleefully issued a pop quiz? Now make the exam oral in front of hundreds of curious spectators including your mentors and boss, consider that your performance is being evaluated by arguably one of the best teachers in the field, and imagine your responses determining someone's life or limb. That was the scene June 16 in Lipsett Amphitheater at "Caution - Socratic Surgeon at Work," the 2003/2004 season finale of the Great Teachers lectures, part of the Clinical Center's Grand Rounds series.



Dr. Murray Brennan

Introduced by a longtime friend, NCI chief of surgery Dr. Steven Rosenberg, as "the preeminent surgical oncologist of his generation," guest speaker Dr. Murray E.

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WOMEN'S HEALTH AND CAM, CONTINUED FROM PAGE 1

including herbal, chiropractic and massage. Other popular CAM practices include homeopathy, yoga and magnets. Women and college graduates tend to be the most common users. "There has been a push to look at alternative medicine strategies partly due to failures of conventional medicine which has led to frustration," Chesney observed. She also described current research on such topics as soy consumption and menopausal symptoms in Japanese women; soy appears to reduce the prevalence of hot flashes.

PHOTOS: BILL BRANSON



Speakers at a recent ORWH conference on complementary and alternative medicine and women's health included Dr. Norman Farnsworth of the University of Illinois at Chicago's College of Pharmacy and Dr. Marjorie Woollacott of the University of Oregon's department of human physiology and Institute of Neuroscience.

The growth of CAM therapy has motivated the medical community to develop integrative medical practices.

Dr. Janine Blackman, assistant professor and medical director at the University of Maryland Center for Integrative Medicine, defined integrative medicine as the blending of conventional medicine with safe CAM therapies. "We have an emphasis on therapeutic relationship with a strong philosophy on self-care and self-empowerment for the patient." Teams include herbalists, acupuncturists and nutritionists to provide individualized care of patients. Blackman used fibromyalgia as an example of an integrated approach. This condition includes widespread pain lasting more than 3 months and affecting the entire body. Because the ailment affects multiple areas, the integrative medicine team has an opportunity to prescribe a holistic treatment including changes in diet, herbal therapies, comprehensive medical work-up and mind-body-spirit work. Blackman also described treatment options for osteoarthritis using such options as glucosamine (a common herbal treatment used in combination with chondroitin to help rebuild cartilage) and fish oil (which has anti-inflammatory and lubricating effects).

Dr. Norman Farnsworth, director of a program for collaborative research in the pharmaceutical sciences at the University of Illinois at Chicago's College of Pharmacy, provided a perspective on botanicals used for women's health. He noted, "80 percent of people in developing countries utilize plants to meet their health care needs." He described clinical research involving black cohosh, red clover and Prempro in an ongoing phase II study with 120 menopausal women. The measurable endpoint is a reduction of hot flashes.

Dr. Marjorie Woollacott, professor at the University of Oregon's department of human physiology and Institute of Neuroscience, discussed benefits of Tai Chi practice, which helps elderly people keep



Dr. Janine Blackman of the University of Maryland Center for Integrative Medicine spoke on fibromyalgia; Herbalist Jonathan Gilbert joined the panel discussion.

their balance. She presented evidence that 15 weeks of training resulted in a 48 percent reduction in the number of falls. Woollacott also highlighted the value of yoga and its ability to decrease stress levels. Research data shows that meditation can provide a sense of well-being and increased immune system response.

The Office of Research on Women's Health sponsored the seminar. The next talk in the Women's Health Seminar Series, "Women and Obesity," is scheduled for Nov. 4 in Lipsett Amphitheater, Bldg. 10 at 1 p.m.—Abhijit Ghosh ■

Psychology Study Recruits Volunteers

African American men ages 18-65 are needed to participate in a 45-minute psychology study on personality and dating preferences. \$25 compensation. Call Rachel at (202) 885-1729. ■

NIH RECORD

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NIAMS Honors Its Community Partners

NIAMS recently celebrated 4 years of accomplishments for its Health Partnership Program (HPP) with the program's community partners: Washington, D.C.-area organizations and residents who represent local African American and Hispanic/Latino communities. The HPP is a community-based research program to help reduce disparities in arthritis and other rheumatic diseases among minority communities.

The ceremony honored individuals and organizations that made the initiative possible. A poster session provided updates on the program's accomplishments and new plans, which focus on community-based research to be implemented by NIAMS and its collaborators: the departments of nursing and bioethics at the Clinical Center, the National Cancer Institute and the National Institute on Alcohol Abuse and Alcoholism (with Howard University).

Speaking on the surgeon general's behalf, Rear Admiral Deborah Hopson Parham of the Health Resources and Services Administration, attributed HPP's success to the diversity and integrity of those committed individuals and organizations behind the program. She also mentioned that strong community relations, partnerships and leadership within a health care program are essential components for growth and success.



Rear Admiral Deborah Hopson Parham, associate administrator for HIV/AIDS at the Health Resources and Services Administration, offers remarks on behalf of the surgeon general.

HPP's community partners have helped reduce barriers to participation by minorities in clinical studies. They have advised NIAMS on the needs and concerns of the local community about arthritis and medical research, and on how to promote the program to the larger metro area. Partners are involved in five



Dr. Gwenth Wallen of the Clinical Center nursing department discusses with participants her study of health beliefs and health behaviors among patients with rheumatic diseases.

program areas, including public health education, patient care, health disparities research, recruitment to research careers and community relations.

Almost 900 patients have been recruited into a natural history study of rheumatic diseases in minorities at the NIAMS Community Health Center, located in a medical suite at Unity Health Care Inc.'s Upper Cardozo Health Center. The institute has also provided training for 13 medical fellows in rheumatology in a community-based setting; sponsored internships for students in physical therapy, pharmacy and nursing; and participated in more than 100 community events to promote awareness of arthritis and medical research. ■

Principles of Clinical Pharmacology Course

The Principles of Clinical Pharmacology course, sponsored by the Clinical Center, will begin in Lipsett Amphitheater, Bldg. 10 on Sept. 2. The course will be held Thursday evenings from 6:30 to approximately 7:45 and will run through Apr. 28, 2005.

The course covers topics such as pharmacokinetics, drug metabolism and transport, assessment of drug effects, drug therapy in special populations and drug discovery and development. An outstanding faculty has been assembled to present the lectures including Dr. Carl Peck of Georgetown University's Center for Drug Development Science, Dr. Jerry Collins of the Food and Drug Administration, and the Clinical Center's Dr. Arthur J. Atkinson, Jr., who is also the course director. The faculty has also prepared a textbook, *Principles of Clinical Pharmacology*, that follows the sequence of the course lectures and is available in the Foundation for Advanced Education in the Sciences, Inc. bookstore located in Bldg. 10.

Registration is open to all interested persons free of charge. More information about the course, including online registration, is available at <http://www.cc.nih.gov/researchers/training/principles/shtml> or by calling (301) 435-6618. ■

Healthy Volunteers Needed

NIAD is seeking healthy male and female volunteers ages 18-40 for a research study to determine whether lopinavir/ritonavir (antiviral medication) has direct effects on how the lining of the arteries function before and after receiving 4 weeks of therapy. In order to participate, you must be a nonsmoker in good health, not be HIV-infected and not be taking any chronic medications. Participants will be compensated for study participation. For more information, contact Jocelyn Voell, (301) 435-7913.



Vincent Keane (l), executive director for Unity Health Care, Inc., a community partner, greets Parham, as NIAMS director Dr. Stephen Katz and Unity chief medical officer Dr. Janelle Goetcheus look on.

CAROLINA FAIR, CONTINUED FROM PAGE 1

exceeded our expectations," said Dr. Marian Johnson-Thompson, NIEHS director of education and biomedical research development and event organizer. "The focus was on addressing obesity, which is very important to NIH. The children loved the sessions, were extremely involved and it helped that we had wonderful, wonderful giveaways."

Developed as a model project that any school, church, club or community-based organization could follow, the event was a collaborative effort involving staff and funding contributions from local, state and federal governments as well as other private and non-profit health organizations. Health information brochures and giveaway items, which are popular with children as well as adults, were provided by several NIH institutes. The fair capitalized on having a ready-made target audience, inviting children between the ages of 6-12 who had enrolled in area summer Bible school programs at several other local churches and encouraging their parents, grandparents, caretakers and instructors to participate in various capacities as well.

"The age groups selected were great," noted Kay Johnson Graham, EEO officer and minority outreach coordinator at NIDCD and NINR, who helped plan the fair and also gave a talk on noise and hearing loss. "These kids were bright and eager to learn. They proved that they could absorb information quickly, process it well and pass it on to others effectively. These age groups certainly appear to be ones in which intervention can play a critical role. There were a lot of interactive games for the kids. Most seemed very eager and asked good questions on health."

The fair opened with a keynote address by Mary



Dr. Marian Johnson-Thompson of NIEHS, event organizer, greets Durham City Councilman Howard Clement, who offered remarks at the fair's opening assembly.



Youngsters at the fair show off their Milk Matters booklets, which have proven popular with children.

Ann E. Black, associate vice president for community relations at Duke University Health System, who discussed diet, nutrition and improving health.

An NIAAA-supported public health vehicle from the University of North Carolina at Chapel Hill, the Traveling Science Laboratory, served as a tool to educate children and families on drugs and alcohol abuse, and how scientists and public health experts conduct research leading to better treatments for people with addictions and substance abuse disorders. In addition, several presenters offered 15-minute talks such as "Germs Make Me Sick," "Color Me Healthy," "Healthy Hearing and Noise" and "Healthy Movements and Healthy Bodies." An exercise tent was erected to merge fun and games with fitness routines. Fitness instructors from the

Durham YMCA were also on hand.

"All of the presenters volunteered and it showed what kind of resources are available for free," Johnson-Thompson concluded. "Many groups had specific children's programs (police department, fire department, YMCA, Destiny Science Van, Delta SEE Project, NC



Dr. Joan Pakenham of NIEHS and young assistants make fruit smoothies.

Cooperative Extension Services, etc.) and they are extremely eager to contribute to activities like these. The NIEHS staff were wonderful and demonstrated to the local community that not only are we concerned, but that we can immediately do something about it. This represented NIH translation at its best." ■

The UNC Traveling Science Laboratory, supported by an NIAAA supplement, makes a stop.



NIGMS Grantees Receive Presidential Mentoring Awards

NIGMS grantees Dr. Chellu S. Chetty and Dr. Margaret Werner-Washburne were among the recipients of this year's Presidential Awards for Excellence in Science, Mathematics and Engineering Mentoring. The annual awards recognize influential individuals and institutions who have been leaders in encouraging minorities, women and disabled persons to pursue careers in science and engineering.

Chetty is a professor of biology at Savannah State University in Georgia, where he also serves as director of the school's NIGMS-funded Minority Biomedical Research Support program. He is acknowledged for mentoring undergraduate and graduate students and for his efforts to increase the number of individuals in science, mathematics and engineering disciplines.



Dr. Chellu S. Chetty

Werner-Washburne is a professor of biology at the University of New Mexico in Albuquerque, where she is also a sub-project investigator on the NIGMS Initiative for Minority Student Development grant. She is credited with using a hands-on approach for mentoring students in the areas of biology, mathematics, computer science and mechanical and chemical engineering.



Dr. Margaret Werner-Washburne

Also honored was the American Physiological Society (APS), which operates NIGMS-funded education and minority programs. APS was recognized for its programs for minority students and teachers and its efforts to increase diversity in the field of physiology.

A total of nine individuals and eight institutions received Presidential awards at a recent ceremony in Washington, D.C. The awards were established by the White House Office of Science and Technology Policy in 1996 and are administered through the National Science Foundation. Award recipients receive a \$10,000 grant and a commemorative Presidential certificate. ■

Study of Genes, Aging and Cognition

Healthy volunteers, over age 55, are needed to study the genetics of aging and cognition. Participation requires a blood draw and non-invasive clinical, neurological and cognitive testing procedures. No overnight stays. No medication trials. Compensation provided. Call Bobby Das at (301) 435-4593 or email DasB@intra.nimh.nih.gov. Refer to protocol # 00-M-0085. ■

FAES Announces Fall Courses

The FAES Graduate School at NIH announces the schedule of courses for the fall semester. The evening classes sponsored by the Foundation for Advanced Education in the Sciences will be given on the NIH campus.

Courses are offered in biochemistry, biology, biotechnology (daytime courses), chemistry, immunology, languages, medicine, microbiology, pharmacology, statistics, toxicology, alternative medicine and courses of general interest.

It is often possible to transfer credits earned to other institutions for degree work, and many courses are approved for category 1 credit toward the AMA Physician's Recognition Award.

Classes will begin Sept. 13; mail registration ends Aug. 6 and walk-in registration will be held Aug. 30-Sept. 3. Tuition is \$115 per credit hour, and courses may be taken for credit or audit. Courses that qualify for institute support as training should be cleared with supervisors and administrative officers as soon as possible. Both the vendor's copy of the training form and the FAES registration form must be submitted at the time of registration. Note that FAES cannot access training forms entered in the NIHTS system; a signed hard copy (vendors' copy of SF 182 form) is needed in order to process registrations for classes. Asking your institute to pay your tuition does not constitute registration with the FAES Graduate School.

Schedules are available in the graduate school office in Bldg. 60, Suite 230; the foundation bookstore in Bldg. 10, Rm. B1L101; and the business office in Bldg. 10, Rm. B1C18. To have a catalog sent, call (301) 496-7976 or visit <http://www.faes.org>. ■

2004 NIH Director's Awards Ceremony

All employees are invited to the 2004 NIH Director's Award ceremony on Thursday, July 22 at 2 p.m. in the Natcher Bldg. main auditorium. Awards will be presented in four categories: The NIH Director's Award, NIH Mentoring Award, Commissioned Corps awards and EEO awards. Seating is on a first-come, first-served basis. Sign language interpreters will be provided. A reception will be held following the ceremony in the Natcher cafeteria. Individuals with disabilities who need reasonable accommodation to participate in the event should contact their IC award coordinators.

Have Follicular Lymphoma?

Patients who have not had chemotherapy may call for combination chemotherapy and a vaccine: 1-800-411-1222 (TTY 1-866-411-1010). Refer to study # 00-C-0050. ■

One-Day Outpatient Study

Healthy volunteers, ages 19 to 55, are needed to participate in research studying genes and brain function. Testing procedures involve a blood draw, non-invasive neuroimaging, interviews and cognitive testing. No overnight stay. No medication trial. Compensation provided. Call the Clinical Brain Disorders Branch at (301) 435-8970 or email ThorpeK@intra.nimh.nih.gov. Refer to protocol # 95-M-0150.

SOCRATIC SURGEON, CONTINUED FROM PAGE 1

Brennan, chair of Memorial Sloan-Kettering Cancer Center's department of surgery and Benno C. Schmidt chair in clinical oncology, presented an NIH version of the interactive conference he has held weekly for 20 years with his clinical fellows.

"It's an attempt to get people to think," he said, describing the exercise in which two real medical cases would be thoroughly dissected from start to finish within an hour's time. "We're going to have the clinical associates seated in the front row to help us learn something.

"It's very straight forward," he continued, playfully addressing the 15 or so participants. "If you are confused about the ground rules, do not—do not—try to avoid eye contact, because then I will just walk right up to you. If you don't have an answer just pass the microphone to the left or the right, but you will have to answer the next time around...and when in doubt, agree with me—it's faster."

In the first case, the patient presents with a tumor mass presumed to be a soft-tissue sarcoma. As the physician, what do you want to know next about the patient or the history? Brennan asked.

"Age," replied the first associate.

"Good. Why do we want to know the age?"

Brennan asked the next in line.

"Because age can determine prognosis," the associate responded.

"Is that true?" Brennan queried, immediately prodding the next person.

And so it went. Within minutes, Brennan had elicited both answers and new questions from the associates regarding relevance of the patient's sex and predisposition to sarcoma. In addition to a surgeon's up-close perspective of tumor diagnosis, treatment and prognosis, the audience got a glimpse not only of Brennan as a teacher, but also of how physicians think through cases and how quickly decisions must sometimes be made. Following Rosenberg's recommendation to invite Brennan to

speak at Rounds, Dr. Udai Kammula of NCI's Surgery Branch helped organize the presentation's unique approach.

"I recently completed my surgical oncology fellowship at Memorial Sloan-Kettering Cancer Center," Kammula explained. "As fellows we would have a weekly conference called 'Chairman's Conference,'

where the fellows would present a case and Dr. Brennan would discuss important aspects in a very Socratic approach. The surgical fellows would be the target for his questions."

Brennan's renown in the world of surgery, and his history here, made it fairly easy to get NIH's current crop of surgical associates to take part in the rather rigorous Rounds.

"Since Dr. Brennan was previously in our branch and he is a very prominent figure in American surgery," Kammula said, "I had no trouble recruiting all of the



Dr. Steven Rosenberg, who recruited Brennan to NIH in 1975, introduces his friend. The two had completed their surgical residencies together at Peter Bent Brigham Hospital in 1974.

participants. They were quite excited to meet him. I believe their performance was quite good. As far as preparation, there is no way to truly prepare for Dr. Brennan's questions—I know this from experience. I did arrange for a general review session to get them up to speed."

Dr. Cary Hsu, who will return to the laboratory following his rotation in the surgery department, found the experience rewarding.

"I enjoyed Dr. Brennan's lecture," he said. "The Socratic teaching format kept everybody extremely focused on the questions being presented and the questions always seemed to center on the major points being made in the lecture. The exercise was not particularly difficult. As a group, we've been engaged in the study of this topic for some time now and we were well prepared by an advance lecture from Drs. James Yang and Kammula. I think our answers were often tentative because we were forced to answer directly to one of the world's experts on the topics being discussed. It's hard to be completely confident in your answers when the person questioning you has infinitely more knowledge and expertise in the subject."

Another participant, Dr. Gerald Gracia, who recently completed a year-long immunotherapy fellowship in the surgery branch en route to starting a 2-year surgical oncology research fellowship there,

PHOTOS: BILL BRANSON

In the hot seats: Drs. Cary Hsu (top row, r) and Gerald Gracia (top row, second from r) are among more than a dozen NIH clinical associates recently quizzed on surgical diagnostics and treatments by Great Teacher Dr. Murray Brennan of Memorial Sloan-Kettering Cancer Center.



said Brennan's presentation was designed to be challenging.

"The Socratic exercise was difficult," he pointed out, "but that was intentional. Typically the lecturer would keep asking the same person questions until the person gets one wrong. Most individuals will never forget the answer to a question they got wrong. Dr. Kammula's prep discussion was key. He provided insight into certain specifics that Dr. Brennan likes to focus on...Although it was a

"...I was as likely to stumble as were the clinical associates. It is okay to be 'wrong' as long as you learn. I hope I conveyed [that] I want people to learn. I want them to enjoy continually learning."
—Dr. Murray Brennan, MSKCC

different approach than the lecture formats here, I really enjoyed it. Of course, Dr. Brennan is a phenomenal speaker. Most of us were simply excited to hear his view on certain topics, since he is an expert in the field."

Brennan also hoped to share his enjoyment of the process.

"The first case presentation was mine, so I knew what to ask," he explained, after the lecture. "The second was from NCI, so I knew nothing of it. The goal was to show the same process can work—either with a prepared case or with a totally unknown. With the second case, I was as likely to stumble as were the clinical associates. It is okay to be 'wrong' as long as you learn. I hope I conveyed [that] I want people to learn. I want them to enjoy continually learning. I was pleased no one fell asleep!"

A former senior investigator at NIH who spent 6 years here from 1975 to 1981 as chief of the surgical metabolism section helping to develop endocrine surgery programs, Brennan also delivered a few NIH history lessons during the presentation.

"What observation was made in this institution about familial associations of sarcoma?" he asked, coaxing a somewhat hesitant associate into a discussion of Li-Fraumeni Syndrome. In 1969, Dr. Frederick Li and Dr. Joseph Fraumeni, both of NCI then, identified the syndrome that bears their name, a disorder in which a genetic component was found to explain unusually high occurrence of several site-specific malignancies in a number of families. Discovery of the syndrome (also called "SBLA syndrome," for sarcoma, breast, leukemia, and adenocarcinoma) laid the foundation for further research on the role of heredity, environment and cancer that is still conducted today.

Later, when Brennan moved to what questions should be asked during patient examination, the clinical associates were prompted to recall that it was a pioneering clinical trial conducted at NIH by Rosenberg that determined that amputation was not always necessary for site-contained sarcomas. By the end of the hour, the assembly had also learned that a

study standardizing use of an imaging technique called selective venous sampling for endocrine tumors had been led at NIH by a former CC director of radiology, the late Dr. John Doppman.

"This was someone who was really special," Brennan mused aloud about Doppman, who died of cancer in 2000. "He would have been a great surgeon, but he went for radiology."

Sprinkling personal observations in among his promptings, Brennan also questioned a standard of patient care that he said ought to be reconsidered, the benefits weighed against the risks of new disease.

"We are now creating an environment that predisposes both to radiation induction [new cancer caused by radiation therapy] and to lymphedema with the very liberal use of radiation therapy for breast cancer," he said. "I could be a cynic, but in my opinion the medical profession has seduced the women of this country, that every woman with a 1-centimeter breast cancer with negative [lymph] nodes needs radiation and chemotherapy to improve the survival from 90 percent to 92 percent. There isn't anything in biology that says you can deliver 1 percent with accuracy, no matter how big the clinical trial.

"What's the price of improving survival from 90 to 92 percent?" he queried, showing a slide of a mastectomy survivor badly burned from radiation and suffering from grossly disfiguring lymphedema.

Answering his own question, Brennan said, "If you improve from 90 percent to 92 percent, 8 percent still recur and you didn't help them, 90 percent weren't going to recur anyway. So you've treated 50 patients for the potential benefit to one and yet that's standard therapy in the United States. That means 49 people will be treated with no chance of benefit.

"Sooner or later we have to come to grips with that kind of problem," he continued, showing a slide documenting the rising number of angiosarcomas developed by women who underwent radiation therapy after breast cancer surgery. "As surgeons, radiation therapists and medical oncologists, we are very reluctant to address this issue, but it will come back to haunt us, in my opinion."

Perhaps one of the best lessons Brennan taught that day—delivered offhandedly, as a reminder to the associates, certainly, but also to the audience of onlookers—was about the nature of surgeons, their responsibility and the potential consequences of their often difficult choices.

"You're a surgeon," Brennan stressed during a particularly long pause between question and answer. "You make decisions on inadequate information. You either do the test or you don't do the test. You can't have Grand Rounds on maybes." ■



A recent survivor of Brennan's surgical fellowship program at MSKCC, Dr. Udai Kammula (r) of NCI's Surgery Branch helped organize the presentation's unique approach.

MAGGOTS, CONTINUED FROM PAGE 1

dead or infected tissue.) Once used by physicians in the Civil War to help treat soldiers' injuries, maggot therapy grew in popularity during the 1930s for the treatment of bone infections, abscesses and pressure sores, only to be replaced by antibiotics during the 1940s. Now, as some bacteria have developed a resistance to antibiotics, maggot therapy appears to be staging a comeback in some situations.

Maggots and Medicine—Here Comes Debride

"When surgeons clean a wound, they cut away the dead tissue—but sometimes they can't tell the difference between what's alive and what's dead," says Dr. Steven Holland, Parks' attending physician. In addition to heading the immunopathogenesis unit of NIAID's Laboratory of Host Defenses, Holland was recently named chief of NIAID's newly orga-

nized Laboratory of Clinical Infectious Diseases. "A maggot knows what's alive and what's dead because it only eats dead tissue."

Such is the case for the larvae of the green blowfly—also called the greenbottle fly—the species most commonly used for maggot therapy. Large and metallic green in color, the adult green blowfly, like its larval form, lives solely on dead organic matter. It's also the type of fly you're more likely to

see hovering over a dead animal or garbage can on a sweltering summer day.

That a maggot is able to help heal wounds is becoming more readily accepted in medical circles. How it does so is still being determined. Currently, researchers believe that maggots help wounds in three ways. First, they secrete strong enzymes that break down dead tissue into a liquid they can readily lap up. Second, they kill bacteria—by feasting on them along with the dead tissue and also by secreting fluids that raise the pH of the wound, creating an alkaline environment in which the bacteria can no longer live. Third, maggots may also secrete a substance that actually stimulates the development of new blood vessels, and as a result, new tissue growth.

Holland's decision to try maggot therapy is owed to Parks' unusual set of circumstances. The young man—then 18—had developed a large wound on his inner thigh that was failing to heal properly, a common complication of his rare immune disease known as leukocyte adhesion deficiency, or LAD.

Normally, when a bacterium or virus enters a person's body, white blood cells called phagocytes enter the tissues from nearby blood vessels and rush to the site of the infection, engulfing the invaders and stopping the infection in its tracks. But people with LAD lack special receptors on the surfaces of their phagocytes that, under normal conditions,

would help the phagocytes latch onto the blood vessel walls on their way into the tissues. Because the phagocytes never make it to the site of the infection, the infection thrives—in some cases, to the point at which it becomes life-threatening. It's these recurring infections that have brought Parks to the Clinical Center for months at a time since the age of one.

"We'd tried everything for this particular wound—burn experts, skin grafts, everything," says Holland. "Then, about a year after it had been grafted, it opened up again and began to spread. We weren't sure what step to take next. It was at that point that my colleague Dr. Harry Malech suggested, 'What about maggots?'"

Maggot Therapy: Cure-all, or Can of Worms?

Anyone familiar with maggot debridement therapy admits that there's a certain "yuck" factor that must first be overcome before a patient is ready to take the plunge. Nevertheless, it didn't take long before Parks, a typical, curious teen, was game.

"I read a little about it. I was interested in it," he said from his home in Crossville, Tenn. "I didn't care what it was, really, as long as it helped."

Members of the CC staff needed more convincing, however. They wanted to know how clean the maggots would be. [The maggots, which are purchased from a laboratory in Irvine, Calif., are treated with an antibiotic before they are shipped, so they are clean, though not sterile.] And what if they got loose and turned into flies? [The maggots are well-contained throughout treatment. Once they are

done eating, they are dropped into a jar of alcohol, which kills them.] And what if the maggots reproduce? [Because maggots are fly larvae, they are incapable of laying eggs. Only mature, adult flies lay eggs.]

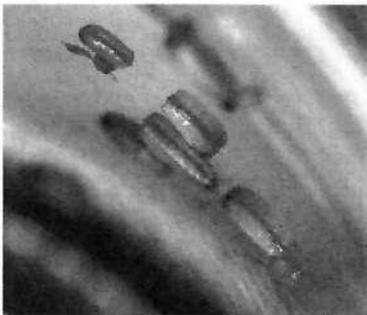
Currently, the Food and Drug Administration does not approve



Parks' wound is a healthy pink after being debrided by maggots.

the use of maggots for therapeutic use in humans. However, a physician is permitted to use any product on the market if he or she feels it will benefit a patient. To further allay staff concerns, Holland obtained from the FDA a special exemption for the compassionate use of maggots in the treatment of Parks.

Once all questions had been asked and answered, Parks' treatment began in June 2002. A maggot "condo" of sorts with walls of a foam-like substance called Duoderm and a roof of sterilized netting was constructed around the wound to contain the



Medicinal maggots in their packing material

maggots as they ate. Next, larvae the size of uncooked rice—about 5 to 10 per square centimeter—were dropped in. For two full days, Parks lay stoically on his back as the maggots gorged themselves on dead tissue, their bodies darkening with blood and tripling in size as the wound transformed from yellow to vibrant red.

“When they would eat and clean, you could kind of feel them as they got down to where they needed to go,” Parks says of his new cohabitants. “Most of the time it was OK, though it was painful at times.” If the pain became too great—usually, near the end of the second day when an occasional plump and overzealous maggot bit into a nerve ending—Parks would be given medication to help quell his discomfort. Once in a while, the maggots would need to be removed ahead of time.

In all, Parks received approximately 40 maggot applications over a 6-month period. Although the maggots worked remarkably well at cleaning Parks’ wound, there was little progress in its ability to completely heal. For this and other reasons, Holland recommended that Parks receive a bone marrow transplant in September 2003. Because the new bone marrow generates normal phagocytes with working receptors, there was no need for further maggot treatment at that time.

Since Parks’ experience, several other CC patients have received maggot therapy, with mixed results. For Vickie Anderson, an NIAID nurse practitioner who helped administer Parks’ treatment, maggot therapy worked very well in healing an abscess on the right calf of a woman with an atypical mycobacterial skin infection. On the other hand, it was not effective for the nonhealing ulcer of a man with graft-versus-host disease, an immune disease that can develop following a bone marrow transplant. Barbara Fuller and K.C. Chandler, who specialize in wound treatment in the CC nursing department, have used maggots to treat the nonhealing foot ulcer of a woman with sickle cell disease. Though the maggots debrided the wound beautifully, more dead tissue accumulated quickly, and the patient chose not to undergo the treatment again.

Nevertheless, Anderson considers maggot therapy an excellent option for the treatment of nonhealing wounds, particularly for the CC’s eight other LAD patients, should the need arise.

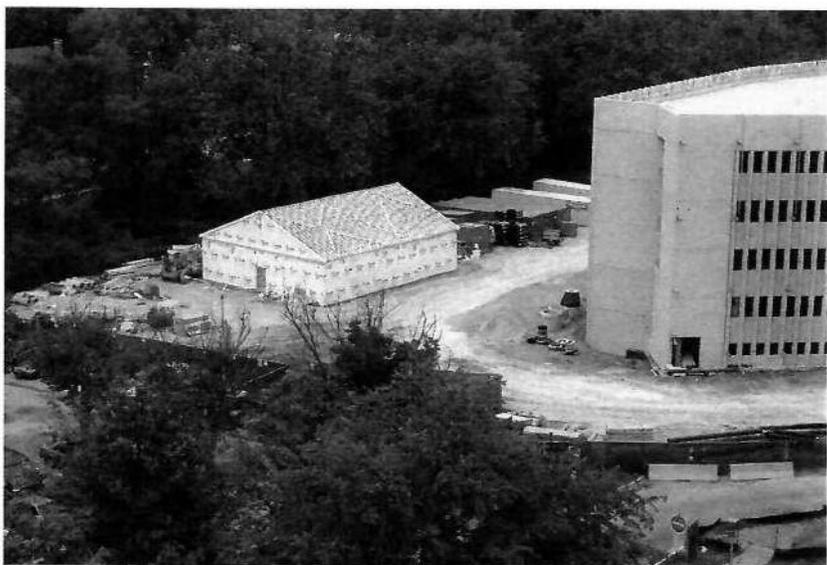
“Thousands of dollars’ worth of care was able to handle what millions of dollars of care could not,” she says, referring to the sheer economy of the procedure. A container of 500-1,000 disinfected maggots costs \$70.

Are maggots the answer to wound treatment? “It depends on what your question is,” offers Holland. “If the question is ‘How can I clean up this wound and make it heal?’, then maggots may be the answer. But if the question is ‘Can maggots treat an infection?’, the answer is no, because they do nothing to

address the source of that infection.” Holland does not recommend the treatment for young children, as the maggots may feel strange or itchy to them, or make them feel afraid.

Although maggot treatment is not for everyone, Holland, Anderson and Parks agree that it is a possible solution for some individuals with specific health problems.

“Sometimes, the solution isn’t going to be high-tech medicine,” says Parks with a maturity that transcends his youth. “Sometimes, it could be something simple that’s been around for years and years.” ■



A laboratory mock-up structure has been built just north of the new multi-level parking garage 10; it will be used to help the design team finalize layout of the labs and the lab systems that will go into Bldg. 33, NIH’s new biodefense facility. None of the systems in the mock-up will be functional. The mock-up will be housed in a double-wide trailer, one-story in height. Minimal outside lighting will be provided with the structure. “Once constructed, the mock-up structure will stay in place until the end of the Bldg. 33 construction, which is anticipated to be around October 2005,” said Stella Serras-Fiotes of the Office of Research Facilities Development and Operations. “The mock-up will be removed at that time and the construction staging area north of the garage will be restored to a landscaped open space condition, as called for in the campus master plan.”

Attractiveness and Health Study

What is attractive and healthy to you? The Uniformed Services University of the Health Sciences is conducting a study examining definitions of attractiveness and health among African American and Caucasian women between ages 18-60. Participation includes completing questionnaires and attending a one-time interview in Bethesda. Volunteers will be compensated for their participation. If interested, call Dawnavan Davis at (301) 295-3672. ■

NHLBI's Janie McClellan Retires After 42 Years

By Louise Williams

Janie McClellan says she doesn't know what she'll do now that she's retired after 42 years of government service, 30 of which were spent with NHLBI's Division of Blood Diseases and Resources (DBDR). But she doesn't sound like she'll be idle. Just a few of her plans are to: start a book club, garden, travel, spend time with her family, and become even more involved in her church and community ministries.

"I like to help people," she explained.

Helping people is what she's been doing on the job



Dr. Charles Peterson, director of NHLBI's Division of Blood Diseases and Resources, makes Janie McClellan a member of the division's Alumni Society.

at NHLBI. She has helped countless scientists and constituents while working in DBDR's National Sickle Cell Disease Program and its thrombosis and hemostasis scientific research group (THSRG), the division's largest grant program. At

the time of her retirement, she was the THSRG's program assistant.

Dr. Ahmed Hasan, now a program administrator in DBDR, recalled how McClellan helped him when he was still a grantee at the University of Michigan. "Before I even came here, I used to talk with Janie over the phone. She was always courteous and helpful. I developed an excellent opinion about her. She was of great help to me during my transition from academia to government service.

"I'm sorry to see her leaving for retirement," Hasan continued. "On the other hand, she deserves it. I was lucky to have her as my colleague."

McClellan, 63, was born in Litroe, a small town in northern Louisiana near the Arkansas border. At age 11, her family moved to Baltimore. She attended the all-girl Eastern High School and Baltimore Junior College.

She joined the federal government as a clerk-typist in the Civil Service Commission and then took a job at NIH, working as a ward clerk at the Clinical Center. Soon after, she returned to Baltimore to work at the Public Health Service Hospital. She served first as a unit clerk on the children's ward, then as secretary to the chief of pathology and secretary/assistant to the director of the volunteer services department.

"Working for the volunteer services department kindled an interest in me in being an advocate for the underprivileged," said McClellan. "That was the beginning of my involvement in outreach efforts."

In 1974, McClellan came back to NIH, first in the

accounting department and next in the then-National Heart and Lung Institute's Sickle Cell Disease Branch. She served as secretary to the executive secretary for the national sickle cell disease advisory board and the branch's public health educator.

"I enjoyed working in the education component of the National Sickle Cell Disease Program," McClellan said. "It was meaningful work and I was able to provide educational materials to constituents, communities and universities. I helped manage the sickle cell exhibit, wrote letters, answered questions and directed constituents to the appropriate source for their needs. It's rewarding to look back and know that I made a contribution to the education effort."

McClellan also helped develop a curriculum for NHLBI's sickle cell centers and became a grant technical assistant and program assistant for the Sickle Cell Disease Branch.

Along the way, she also married—her husband, Raymond, retired after 40 years with the FDA as a chemist and program analyst—and had two sons, Carlton and Eric, both grown and pursuing careers in medicine and business.

"I'd like to travel to Portland, Oregon, to visit the grandkids," said McClellan. "I'm also blessed in that my parents are living. They reside in Baltimore and I'd like to spend more time with them."

McClellan is continuing her involvement with her church and with the Community Ministries of Rockville and of Montgomery County.

"I'm thankful for the journey," McClellan said. "I don't think of it as a goodbye to those I met over the years at NIH. I'll keep thinking of them because they were wonderful colleagues. Working in DBDR was a wonderful, unbelievable journey." ■

NIH Training Center Classes

The Training Center supports the development of NIH human resources through consultation and provides training, career development programs and other services designed to enhance organizational performance. For more information call (301) 496-6211 or visit <http://LearningSource.od.nih.gov>.

Intercultural Communications at the NIH	7/22
Intercultural Communications for the NIH Scientist	7/22
Foreign Travel	7/26-27, 8/19-20
Fellowship Payment System	7/28
Travel for Administrative Officers	7/29
Purchase Card Processing System	8/2
Purchase Card Training	8/3, 8/5
Professional Service Orders	8/4
Simplified Acquisitions Refresher	8/6
Basic Time and Attendance Using ITAS	8/16-17
Price Reasonableness in Simplified Acquisitions	8/25

Computer Classes

All courses are given without charge. For more information call (301) 594-6248 or consult the training program's home page at <http://training.cit.nih.gov>.

BlackBerry Tips and Tricks	7/22
Microarray Analysis in GeneSpring - Quality Control & Clustering Tools	7/22
Microarray Analysis in GeneSpring - Statistical Analysis Tools	7/22
PubMed	7/22
Introduction to NIH Portal Community Management	7/23
Elements of Modern Data Analysis	7/23
Introduction to FileMaker Pro	7/23
Getting Started with Medical Image Processing Analysis and Visualization (MIPAV)	7/26
Visualization in MIPAV	7/27
Introduction to mAdb	7/27
Advanced QVR for Roadmap	7/27
Introduction to Cascading Style Sheets	7/27
Advanced CSS/XHTML	7/28
Network Security and Firewalls	7/28
Introduction to Quark Xpress	7/28
Intermediate QVR Training	7/28
Microsoft SQL Server Reporting Services	7/28
NCBI's Blast Quick Start	7/29
Advanced QVR for Roadmap	7/29
MATLAB Fundamentals and Programming Techniques	7/29
MATLAB - What's New in R14?	7/30
Fundamentals of Unix	8/3-5
Relational Database Overview	8/3
Save Your Time - Learn How to Manage Email	8/4
Statistical Analysis of Microarray Data	8/4-5
Statistical Analysis with R	8/5
Remote Access: VPN, Parachute and More	8/5

Sailing Association Open House, Picnic

Would you like to learn to sail? Does the idea of racing sailboats appeal to you? Come check out the NIH Sailing Association at its open house and picnic on Saturday, Aug. 7 from 10 a.m. to 3 p.m. at the Selby Bay Sailing Center, Mayo, Md. The event will introduce the NIH and NOAA communities to NIHSA. Short sails will be available to adults over 18 on a first-come, first-served basis, weather permitting, and there will be cookout food and drink. Cost is \$5 per person. Membership applications will be available, as will sign-ups for fall basic training class (if spaces are available). For more information, including directions to the picnic, visit www.recgov.org/sail. ■

Cataract Study Needs Volunteers

NEI needs healthy volunteers and patients, 18-80 years of age. Subjects will undergo a complete eye exam, cataract photography and testing with a special cataract detector developed by NEI and NASA. For information, call Dr. Manuel Datiles or Rita Hiller at (301) 496-6581. ■



Golfer Adam Scott (c), who won the recent Booz Allen Classic golf tournament, also was named Crestor Charity Challenge winner that week. For Scott's performance at the Avenel Tournament Players Club, AstraZeneca, on behalf of its Crestor brand, and the Classic donated \$50,000 to the Children's Inn at NIH and \$50,000 to the health care-related charity of Scott's choice. Shown above with Scott are (from l) Jeff Cook of AstraZeneca; Chris Downey of the Children's Inn; Tyrrell Flawn, executive director of the inn; and Marty Russo of Washington Golf Charities. The Crestor Charity Challenge is a season-long weekly competition that recognizes the tournament leader entering the final round at most PGA tour events throughout the year. "We are so grateful to the Washington Golf Charities, AstraZeneca and the Crestor Charity Challenge for this generous gift to the Children's Inn," said Flawn.



A recent change in the menu at the Clinical Center nutrition department resulted in a surplus of food on hand in the kitchen, so several employees decided that the excess food should be donated to Shepherd's Table, a service with locations in Silver Spring and Rockville that feeds needy people. On hand for the donation were (from l) Toney Darden, a cook assistant; Dorothy Martin, food service cook, shop steward for AFGE Local # 2419 and UCAN (Union Community Action Network) councilor; and Kenneth Joholske, library technician in the NIH Library who is also a UCAN councilor and union steward for the library. UCAN councilor Darin Thomas (not shown) helped load the food onto a truck.

Volunteers Needed

Doctors at NIH are seeking individuals being treated with a widely used anti-depressant agent called welbutrin. Participants will be asked to donate 4 tablespoons of blood for routine screening and evaluation of platelet function. The visit will be no longer than an hour and compensation is provided. If interested or for more information call Donna Jo McCloskey, (301) 496-5150.

From MIS to CRIS

Hospital's Computer Information System Debuts on July 31

CRIS, the NIH Clinical Research Information System, goes live on July 31. The long-anticipated implementation covers the patient-care aspects of CRIS, functions now handled by the Clinical Center's 28-year-old MIS (Medical Information System).

"With CRIS, you'll be able to enter orders and documentation and retrieve in a new way that will be a dramatic improvement over MIS," said Dr. Stephen Rosenfeld, CC chief information officer and associate director for clinical research informatics.

"MIS essentially will be shut down at midnight on Friday, July 30. After several hours of switch-over work, CRIS will be turned on. Much of the historic information in MIS can be transferred to CRIS electronically," Rosenfeld said. "But some of the operational information—including

the several thousand inpatient orders—will have to be transferred manually."

While CRIS will be an improvement over MIS, the change will likely generate some anxiety. "Activation will be a very busy time for the organization," Rosenfeld noted. "While this is a new computer system, our processes of care are not changing in any fundamental way. CRIS is not going to enforce any new standards of practice that will significantly change the way we do things."

Prior to the debut, staff need to complete training, which is available through July 27. Employees will not be able to get a CRIS access code until they complete training. The CRIS Support Center will offer help after the debut. "We're planning to offer on-site help round the clock during August," Rosenfeld said.

Fifty training stations are available in three classrooms within the department of clinical research informatics (Bldg. 10, Rm. 1C290), which is CRIS training headquarters. Classes will be offered from 7 a.m. to 11 p.m.; some weekend classes will be available. Your job determines the classes you must take. Training for prescribers is consolidated within one class. All prescribers (physicians, nurse practitioners, physician assistants, nurse anesthetists, dentists) should view the online tutorial, Introduction to CRIS, before attending class. The tutorial is part of training for all other CRIS classes and is a great option to help prepare for class or to review what you've learned.

Anyone who hasn't yet scheduled training should call the CRIS training hotline to confirm training requirements and register for classes: (301) 435-5077.

Members of the affiliate medical staff (except

nurses) must complete and have a supervisor sign a form before attending training so that a CRIS account can be created and available for use at CRIS debut. Prescribers and nurses do not have to complete this form. The form is available on the CRIS web site, cris.cc.nih.gov.

A CRIS Practice Lab is available to help you get a head start in learning CRIS. It is located on the first floor of the Clinical Center. Look for the blue curtain near the CRC exhibit across from the admissions desk. It's open Monday-Friday, 9 a.m.-noon and 1-4 p.m.

For more information call the training hotline, the CRIS Support Center (301) 496-8400 or take an online tutorial at <http://cris.cc.nih.gov/public/cristraining/tutorial.html>. ■



About 3,000 NIH'ers will receive training on CRIS, the Clinical Research Information System, before the system debuts on July 31. Rubi Defensor (standing) is one of the CRIS instructors. With her are (from l) Janet Rowan, pain clinic (Outpatient Clinic 3); Fu-Meei Robbins, department of transfusion medicine; Bart Drinkard, department of rehabilitation medicine; and Sabas Carino and Arlene Hagan, department of laboratory medicine.



The NIH R&W recently hosted a bullpen party for the employees of NIH with the Baltimore Orioles at Camden Yards. Among the special guests was a Little League team (above) from Simon Elementary School, from Ward 8 (Anacostia), Washington, D.C. Team members enjoyed their first visit to Camden Yards as guests of the R&W and were treated to a picnic lunch from Boog's Place, as well as tickets to the game. The team also witnessed baseball history as Barry Bonds of the San Francisco Giants hit his first home run at Camden Yards. Also on hand was Camp Fantastic's Michael Taft (below), who was selected to receive the Heavy Hitter Award by the Baltimore Orioles on behalf of the NIH R&W. He is shown with his mother, Georgiann, and the Oriole Bird before he went on the field to receive the award.

Camp Fantastic is a program of NCI, NIH and R&W to assist children undergoing treatment of cancer with recreational programming.

