



Scoop

Oct. 17, 2003

THE UNIVERSITY OF TEXAS MEDICAL SCHOOL AT HOUSTON

Events to Know

October

17 SECC contributions due.

20 THE DROP OFF LANE AND ENTRANCE TO THE MEDICAL SCHOOL VIA ROSS STERLING WILL BE CLOSED. USE WEBBER PLAZA ENTRANCE.

21 History of Medicine Lecture, John Lienhard, noon, MSB 2.135.

21 Flu shots, 2 - 5 p.m., MSB Leather Lounge, \$10.

28 Flu shots, 9 a.m. - 1 p.m., MSB Leather Lounge, \$10.

November

13 Fields Lecture, Dr. John Marler, 4 p.m., MSB 3.001.

14 Research Day, 9 a.m. - 4 p.m., Hornberger Conference Center.

NOTE - Monday, **Oct. 27**, noon - 1 p.m., Fifth Floor Gallery, MSB, don't miss the 2003 Research Forum and Webber Prize for Student Research Competition. There will be a display of research projects - in poster format - by medical students who participated, and judging of the posters for the C. Frank Webber Prize for Student Research competition. For questions, call **Jimmie Pope**, coordinator, Summer Research Program, 713-500-5334.

SPEECH BY CHANCELLOR MARK YUDOF

"Greater Autonomy for State Institutions: Implications for Higher Education, Academic Health Centers, and the Public," a speech given by Chancellor Yudof Oct. 2 in Key Biscayne, Fla., is available at <<http://www.utsystem.edu/news/2003/YudofSpeech-AAHCinFlorida10-07-03.htm>>.

BACK BY POPULAR DEMAND!!!

The print version of *Scoop* is gearing up for production, starting next week.

EScoop Headlines, arriving in subscribers' e-mail boxes, will continue to be electronically posted each Thursday afternoon.

Hard Hat Update

RETOOLING A CYCLOTRON FACILITY IN ALLISON'S AFTERMATH

The medical school's cyclotron facility was just one of the victims of Tropical Storm Allison, but as a result of careful planning, the cyclotron is being "abandoned in place," said **Jeff Carbone**, cyclotron rebuild and mitigation officer, and the building is in the design phase to become the new home of the Health Science Center's Environmental Health & Safety Department. It's also being looked at as a possible site for the vivarium.



Frank Dobbs, former director, cyclotron facility, with remote arm manipulator, before Allison.

The cyclotron facility, originally installed in 1984, was used to accelerate subatomic particles to create specialized radionuclides that have very short half lives. Although not around a very long time (on the order of 20 minutes or so), radionuclides are used in a number of important clinical evaluations, ranging from studies of metabolism, to drug distribution, to changes in blood flow rate. Prior to the storm, the facility was the primary source of PET (positron emission tomography) radioisotopes in the Houston area. **Dr. Robert Emery**,

(Continued on back page)

STUDY: ANTIBIOTIC RESISTANCE INCREASING AMONG KIDS

A study by researchers at the medical school illustrating that antibiotic resistance is a growing problem among healthy children was presented at the 41st Annual Meeting of the Infectious Diseases Society of America (IDSA) in San Diego, Oct. 9-12.

Between July 1, 2000 and June 30, 2001, 60 children were hospitalized and treated for infections caused by *Staphylococcus aureus*, also known as a staph infection, at Memorial Hermann Children's Hospital in Houston. Of those, 27 (45 percent) were determined to have resistant bacteria, methicillin-resistant *Staphylococcus aureus* (MRSA). The remaining 33 children (55 percent) had staph infections that were treatable with first-line antibiotics.

"We're continuing to survey children with staph infections, and we've found that in the ensuing two years, the incidence of children with infections resistant to antibiotics has risen to nearly 70 percent," said **Gloria P. Heresi, M.D.**, associate professor of pediatric infectious diseases.

Vancomycin has become the standard antimicrobial therapy for serious infections caused by MRSA, but it must be administered intravenously, and there is concern for developing resistance to it. Clindamycin and a combination of trimethoprim and sulfamethoxazole can be given in pill form, but some MRSA infections are resistant to it.

"A new antibiotic, linezolid, can be given via a pill or intravenously, but resistance is beginning to emerge to it and it's very expensive," Heresi said.

Co-authors of the paper, in addition to Heresi, are **John F. Mohr III**, a doctor of pharmacy and instructor in infectious diseases at the medical school; **Audrey Wanger, M.D.**, an associate professor of pathology and laboratory medicine at the medical school; and **Dehuti Patel**, a doctor of pharmacy at Memorial Hermann Hospital.

- S. Rasp



THE UNIVERSITY OF TEXAS
HEALTH SCIENCE CENTER AT HOUSTON
MEDICAL SCHOOL

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RETOOLING A CYCLOTRON FACILITY, CONTINUED

tive director, Environmental Health & Safety, and associate professor of occupational health, stated - post Allison - that radioactive contaminants had not escaped from the cyclotron into the flood waters and the surrounding area. "Despite the cyclotron being completely underwater, we found no indication of any leakage of radioactivity," he said. In addition, confirmatory tests by an independent third party supported through FEMA funding and funding from other sources, verified the findings.

"Inherent to the production of any cyclotron-created radioisotopes is the induction of radioactivity into the surrounding shielding materials. But the radioactivity is fixed in place and represents no harm when left in its fixed and shielded configuration."

Cyclotron past

The vault that contains the actual cyclotron unit was purposefully constructed below ground so that the earth would aid in shielding against radiation exposure. But by being below ground, the building became a reservoir for more than 20 feet of water during the storm, submerging the entire cyclotron, along with the control room, the power room, and the "hot cells." Hot cells are heavily shielded enclosures equipped with remote manipulators for the safe handling and processing of PET radioisotopes produced by the cyclotron.

Independent tests then laid out three options facing the now inoperable facility: prompt demolition and removal, letting the building sit while the induced radioactivity decayed away with time, or some combination of the two.

Since the cost of demolishing the building was too prohibitive — not only financially, but also in terms of possible radiation exposures — the store for decay option was the logical choice. The next question then became: What could the building be used for?

Present plans

"Our present plans consist of providing constant oversight and monitoring of the cyclotron by placing a portion of the Environmental Health & Safety Department's staff on the first floor of the building, over the cyclotron vault," Emery said.

Sections of the lower level of the building outside the vault will be converted to hazardous waste processing facilities. This alternative use of the building provides for a true "win-win" situation, as the EH&S can

maintain its presence and provide stewardship over the vault. "And since about 80 percent of our safety services are provided to the research and clinical efforts of the medical school, we will be located right next to our biggest customer," Emery added.

Slashing waste disposal costs

In addition to providing immediate access to safety services, Emery's team is focused on reducing unnecessary and wasteful cost expenditures. In 1993, UTHSC-H spent over \$300,000 on hazardous waste disposal. Ten years later, a larger volume of hazardous material is generated, but the associated cost expenditure is only \$60,000. A big difference.

The dramatic drop in waste disposal cost was brought about by the use of various minimization and management techniques. "We're in the business of efficiently disposing of — and recycling where possible — radioactive waste, potentially hazardous chemical wastes, and infectious and biochemical agents," Emery said. And EH&S's efforts have been acknowledged nationally. In 2000, they received the National Safety Council's Innovative Program Award for their hazardous waste management program.



The former cyclotron facility

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Using facility as a learning lab

The innovative approaches and techniques used by EH&S to provide services to the medical school community are not confined to routine departmental operations.

Through his faculty appointment in the School of Public Health, Emery instructs students on how to operate EH&S programs in ways that support the underlying mission of an organization. "We intend to use the remodeled cyclotron facility as a teaching lab for students, so that they can see first hand how a major research enterprise is supported," Emery said. "I don't think you could find a better learning laboratory than what we will have right here."

Safety tips

For tips on safe interaction in and around the Texas Medical Center, as well as when the MetroRail train begins running on Fannin Street in early 2004, see "Safety Bob" Emery's Safety First Web page at <http://www.uthouston.edu/safety1st/index.html>.

- C. O'Brien

FUN FEST ROUNDED UP MORE THAN 1,700

More than 1,700 people participated in Fun Fest Friday, Oct. 10, at the Hornberger. Best



Best Booth and Showmanship winners "Pirates of the Curry-Beans."

Chili was "Drew's Chili Brew," from MSB and LBJ Chief of Staff Office; Best Salsa was "Hot Stuff Salsa" from the School of Public Health and the Center for Health Promotion and Prevention Research; and Best Booth and Showmanship was "Pirates of the Curry-Beans," from the MSB, Structural Biology Research Center. The University Classified Staff Council Scholarship Fund received more than \$4,000 from silent auction proceeds, with such items as tickets to a Texans football game, and a one-week stay at a condo in Angel Fire, New Mexico.

FAILLACE LECTURESHIP

FEATURES CHILDHOOD TRAUMA EXPERT

Dr. Lenore C. Terr, clinical professor of psychiatry, University of California School of Medicine, San Francisco, will speak on "Three Prongs to Recovery from Trauma," at 3 p.m., Wed., Oct. 29, in the Dental Branch's auditorium, Room 207. The talk is sponsored by the Department of Psychiatry and Behavioral Sciences.

Terr specializes in childhood trauma and resultant disorders that can develop, including visualized or otherwise repeatedly perceived memories of the trauma, repetitive behaviors, trauma-specific fears, and changed attitudes about people, life, and the future. Author of *Unchained Memories: True Stories of Traumatic Memories, Lost and Found*, she studies repressed memory and post traumatic stress syndrome both in children and adults who suffered traumatic events in their childhoods.



Dr. Lenore Terr