Radiation Scare at MIT Follows Complaint at NIH

Just weeks after a pregnant NIH scientist alleged deliberate radiation poisoning and coercion at the National Institutes of Health in Bethesda, MD, an almost identical incident was reported on October 16 which occurred at the Massachusetts Institute of Technology Cancer Research Center in Cambridge, MA. NRC officials have dispatched an Incident Investigation Team to begin an immediate investigation of the radioactive contamination of a male researcher who is believed to have ingested 579 μCi of phosphorous-32, said NRC spokesman Joe T. Gilliand. Maryann Wenli Ma, a researcher in the Molecular Pharmacology Section at the National Institutes of Health, unknowingly ingested the same substance in June of this year. Ma has filed a federal complaint with the NRC in which she alleges that the poisoning was deliberate and denies the NIH estimate that she was exposed to 200 to 300 μCi of ^{32}P, an amount well below the federal radiation exposure limits. Independent analysis by researchers at the Oak Ridge Institute for Science has revealed that Ma was actually exposed to 740 to 820 μCi of the material. Officials at MIT say that they did not report the incident—which occurred on August 14—earlier because they believed the individual's exposure was below reportable limits, even after confiscating all radioactive materials in the facility and learning that 500 μCi of ^{32}P were unaccounted for. The individual exposed has expressed his belief that the exposure was deliberate and has requested that an independent researcher perform tests to compare with the exposure estimates determined by MIT. With two such incidents in recent months, officials at the NRC are concerned about public response and maintaining secure work environments. In a public meeting of the Advisory Committee for the Medical Uses of Isotopes on October 18, 1995, Chairman Barry Siegel, MD expressed concern that the two incidents will have a "ripple effect." "We have to focus on keeping people from over-reacting," he said. Security measures at both MIT and NIH have been heightened to ensure that inventories are more stringently monitored and that the incidents do not detract from the important business operations taking place in the facilities. ■

OVERHEARD

Under bills passed this month by House and Senate committees, Medicaid would be cut by $182 billion by 2002, compared with what would be spent if the program were unchanged. The federal government would give each state a fixed grant and would eliminate rules that guarantee certain patients and services are covered.... In proposing to reduce Medicare training subsidies, [representatives] cite evidence that the country already has too many doctors, particularly expensive specialists. And they say the United States should not pay to import foreign-trained labor.

—Washington Post, October 19, 1995

Working with a virtual reality program, engineers at AECL see potential for the VR software to speed maintenance activities inside the reactors through simulated outage maintenance activities. Maintenance operators could "walk" through the facility making necessary repairs or upgrades. This not only limits the operators' exposure to radiation during real outages but should also speed the operators through reactor repair or improvement tasks.

—Nuclear News (NN, October, 1995)

The sight of familiar faces and objects hardly provokes a mental sweat, but it gets the brain pumping. Consider a patch of tissue at the back of the brain's outer layer, or cortex . Depictions of blood flow in living brains, generated through functional MRI, indicate that this cortical region certifies an observed entity as an object of some type. Other parts of the visual system then specify the object as a particular friend's face, a lamp, or whatever is deemed appropriate, argues a team of neuroscientists directed by Roger B. H. Tootell of Harvard Medical School.... Presentation of objects, including faces of famous people, common plants and animals, and unfamiliar abstract sculptures, uniquely activated a brain area Tootell's team calls the lateral occipital complex (LO).

—Science News (SN, Sept.16, 1995)

The main technical problem in particle acceleration centered around the demands on equipment that these extremely high voltages made; this voltage requirement placed a heavy burden on insulation and wiring and posed safety problems. Some of the first experimenters tried to solve this by reining in the energy of lightning and storm clouds. As American biophysicist Paul C. Aebersold recounts: "The strung cables between mountain peaks to pick up charges at high voltages during storms, but they were unable to control the erratic and powerful discharges."

—John M. McCurley, "The Contribution of Fundamental Discovery to the Emergence of Nuclear Medicine as a Discipline." Radiology 1995;15: 1243-1259