

# SMITHSONIAN DOCUMENTS

## HISTORY OF PET

**A**S REGULATORY AND REIMBURSEMENT experts debate the role of PET in clinical practice, a research fellow at the Smithsonian Institution is busily documenting PET's manifestation in today's cultural landscape. Joseph Dumit, a 28-year-old PhD candidate in the History of Consciousness program at the University of California at Santa Cruz, is creating a PET brain imaging archive which he hopes will be housed at the Smithsonian. The archive will consist of audio and videotaped interviews of about 30 researchers, nuclear physicians and industry experts and will be completed this summer.

Dumit, who is establishing the archive as part of his doctoral dissertation, was first turned on to PET brain imaging through the popular press. "I was researching popular notions of the brain when I saw a PET brain scan on the cover of *Newsweek* [April 20, 1992]," he explained. "Many types of scientific images can make the cover of a medical or science journal, but I knew there had to be something culturally significant about PET brain imaging for it to appear in a news magazine."

Last November, Dumit attended the Radiological Society of North America's (RSNA) Scientific Assembly in Chicago to observe the diagnostic imaging community—much in the same way Margaret Mead traveled to Samoa to study Pacific island cultures. "It gave me the opportunity to have informal discussions with PET imaging experts."

Dumit was also thrilled to have the chance to meet a group of people who shared his excitement about PET brain imaging, a rather specialized part of the already specialized field of nuclear medicine. But Dumit defended his interest in this area asserting that brain imaging has universal appeal: The brain and computer, he said, have emerged as two icons of the 20th century. Without computers, PET imaging would not be possible. And without PET, many of the brain's inner workings would remain mysteries to researchers. In fact, President George Bush declared the 1990s "The Decade of the Brain" with the hope that the understanding and treatment of mental illnesses would be advanced. (In the last year alone, eight out of twelve covers of *The Journal of Nuclear Medicine* have featured brain images.)

### The Making of the Archive

Last August, Dumit began tape-recording inter-

views with researchers, nuclear medicine physicians and journalists on the history and development of PET. The Society members he has interviewed so far include: Michel M. Ter-Pogossian, PhD, Washington University, St. Louis; Alfred P. Wolf, PhD, Brookhaven National Laboratory; Henry N. Wagner, Jr., MD, Johns Hopkins Medical Institutions; and Michael E. Phelps, PhD, University of California at Los Angeles. Excerpts from some of these interviews are published in "Twenty-First Century PET: Looking for Mind and Morality through the Eye of Technology," a chapter Dumit wrote in *Science, Technology and Culture* (University of Chicago Press, 1995), a collection of anthropologists' interviews with scientists.

Once the archive is complete, the interview subjects will stipulate who will have access to their taped conversations. They could be: available to anyone upon request, available only if the interviewee approves access or closed until the interviewee dies.

Dumit has been given about a \$12,000 stipend from the Smithsonian for his research which he said will be completed by August of this year. To prepare for an interview that ranges from two to six hours in length, Dumit studies the subject's curriculum vitae and published papers as well as any newsletters and press releases relating to the subject's work.

### Controversies in the Press and Courtroom

Through his interviews and research, Dumit has discovered that the public's perception of PET brain imaging—as given to them by the news media—is often very different from reality. There's been a great deal of friction between journalists and researchers: The press wants to play up the latest research findings and hopes for widespread clinical use, said Dumit, and the scientific community wants the news reports to be accurate and reserved in their enthusiasm. "I'm interested in how PET images are being viewed by those outside of the realms of science and medicine," he added.

For instance, PET brain imaging has raised the public's hopes of finding causes and cures for mental illnesses, such as manic depression and obsessive-compulsive disorder. "One activist group in Southern California is pinning its hopes on PET," said Dumit. "Its members have been funding brain imaging studies in an effort to find the cause of

their loved ones' mental illnesses."

Dumit is also exploring the role of PET brain scans in legal cases (see *Newsline*, June 1992, page 18N). Over the past few years, juries have been making decisions on whether a criminal defendant can plead insanity based on findings from a PET scan. What's interesting, he said, is how highly charged and controversial this issue is. Lawyers present PET patterns as definitive proofs of inherent homicidal tendencies, yet researchers assert that these patterns haven't been documented in the scientific world. Dumit has written a paper called, "Objective Brains, Prejudicial Images," about the use of PET and x-ray CT scans in court cases that he presented at a meeting of the American Anthropological Association.

#### Plans for a Documentary

The Smithsonian's curator of medical sciences is currently trying to raise funds for a video his-

tory of PET. If it gets off the ground, this project will put together raw footage obtained at research institutions, clinical sites and manufacturing facilities. The videotapes could be used as stock footage in television documentaries such as those produced by Nova and the BBC that have included Smithsonian footage on x-rays, CT scans and polymerase chain reactions.

To further his contacts with nuclear physicians, Dumit said he plans to attend the SNM Annual Meeting this June in Minneapolis. Any Society members involved with PET imaging can contact Dumit by electronic mail on the Internet (dumit@nicco.sscnet.ucla.edu) or at the Smithsonian Institution, Medical Sciences Division, NMAH 5000/MRC 627, Washington, DC 20560. Questions he'd particularly like answered: Since PET is mainly used in research settings, why have you chosen to specialize in this imaging? What do you see as the future of functional imaging?

*Linda E. Ketchum*

#### LINES FROM THE PRESIDENT

## OLD PROBLEMS, NEW DIRECTIONS: LOOSENING THE HOLD OF THE NRC



*James J. Conway, MD*

**S**INCE MY LAST REPORT, I have participated in many activities on behalf of the Society of Nuclear Medicine [SNM]. I've come to understand many of the problems we're facing as nuclear physicians and have thought a great deal about the ways we can improve our practices. Three particular areas that I'd like to address are: the integration of various nuclear medicine organizations, the standardization of credentialing procedures

for those who wish to practice nuclear medicine as a subspecialty and the ways we can improve our approach to government regulatory affairs. I feel these issues are among the biggest concerns of the society right now.

#### SNM & ACNP: Consolidation of Our Resources

The changes in health care, which all of us are facing—particularly in regard to managed care—suggest that there will be a restructuring of relationships among hospitals, physicians, medical organizations, and perhaps even within medical societies. Of course, cost is a primary consideration: We must look for new ways to accomplish the same goals without duplication or excessive expenditure of our limited resources. With this in mind, I envision a close integration of primary

nuclear medicine organizations such as the SNM and the American College of Nuclear Physicians (ACNP). We decided to dub this goal: Project Integration. I envision a somewhat looser bond with other organizations, which relate to nuclear medicine as a secondary interest.

The relationship between the SNM and ACNP has been excellent since ACNP's inception. Both groups share the same membership and indeed the interests of these members carry over into both organizations. We have both enjoyed the successes of a joint office on government relations since 1984. And more recently, a serious process of integration began with the ACNP as a result of my discussions with William McCartney, MD, President of ACNP, Bob Carretta, MD, President-Elect of ACNP and Peter Kirchner, MD, President-Elect of SNM. We all agreed that it would be in our best interests to merge other committees in addition to government relations and even consider the possibility of holding joint meetings for both organizations.

The discussions were then expanded to include the President of the Technologist Section, Becky Cacciatore, the President-Elect, Lynne Fulk and the Executive Directors of these organizations (Virginia Pappas from the Technologist Section, Torry Sansone from SNM and Carol Lively from ACNP). To round out the discussions, we felt that representatives of industry should also participate, so we included John Kurantz representing equipment manufacturers and Bill Ehmgig representing radiopharmaceutical manufacturers.