
RSNA Press Release

RSNA Announces Honored Lectures and Annual Oration Topics

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CHICAGO, Dec. 1, 2008 — The Radiological Society of North America (RSNA) annually invites three eminent researchers to deliver honored lectures during the RSNA Scientific Assembly and Annual Meeting. Presenters for the 94rd Scientific Assembly are Michael J. Welch, Ph.D., of St. Louis, Mo., Elizabeth G. McFarland, M.D., of Chesterfield, Mo., and Minesh P. Mehta, of Madison, Wis.

Eugene P. Pendergrass New Horizons Lecture

Nanoparticles hold great potential not only as diagnostic agents, but also as therapeutic agents, according to the RSNA 2008 New Horizons lecturer.

"The promise of nanoparticles results from their unique size and the ability to attach or encapsulate many different detection, targeting or therapeutic groups to the particles," said Michael J. Welch, Ph.D., professor of radiology, chemistry, and molecular biology and pharmacology at the Mallinckrodt Institute of Radiology at Washington University in St. Louis. He also teaches biomedical engineering at the university.

Dr. Welch will discuss this topic on Monday, Dec. 1, in his New Horizons Lecture, "Nanotechnology in the Future of Imaging: Prospects and Pitfalls."

Dr. Welch added that radionuclides for PET and SPECT imaging can be attached to nanoparticles, as can probes for optical imaging and gadolinium or other metals used as MR contrast agents.

Currently, Dr. Welch is the principal investigator of the PET component of Washington University's small animal imaging resource, one of the five original small animal imaging programs funded by the National Cancer Institute (NCI). He is also principal investigator of the NCI-supported radionuclide resource and co-principal investigator of integrated nanosystems for diagnosis and therapy, supported by the National Heart, Lung and Blood Institute.

Dr. Welch's investigation into the rapid synthesis of positron-labeled organic chemicals is

recognized as essential to the development of PET in the early 1970s. His contributions earned him the Society of Nuclear Medicine's Benedict Cassen Award in 2004.

Since 1979, Dr. Welch has been the primary investigator of the study "Cyclotron Produced Isotopes in Biology and Medicine," supported by the National Institutes of Health. It is the longest continuously renewed research grant at Washington University, now approaching 50 years of progress.

Annual Oration in Diagnostic Radiology

In the decade and a half since CT colonography, or virtual colonoscopy, was introduced, tremendous technological gains and validation trials of diagnostic performance have pushed the technique to new levels of potential.

"Although CT colonography can provide a time efficient, noninvasive structural examination of the whole colon, the many achievements gained are countered by significant challenges to overcome," said Elizabeth G. McFarland, M.D., radiologist with Diagnostic Imaging Associates at St. Luke's Hospital in Chesterfield, Mo.

Dr. McFarland will present "CT Colonography: Achievements and Challenges" at the Annual Oration in Diagnostic Radiology on Tuesday, Dec. 2.

Dr. McFarland noted how in the first decade of CT colonography development she was among the researchers who were able to attain National Cancer Institute or corporate funding to pursue optimization of three-dimensional (3-D) endoscopic views and CT techniques and conduct validation trials of enriched cohorts of patients for detection of colorectal polyps. Novel work in 3-D imagery, computer aided diagnosis, preparation-free patient protocols and larger validation trials in screening cohorts followed.

Currently serving as medical director and director of CT colonography at St. Luke's Center for Diagnostic Imaging in Chesterfield, Dr. McFarland is also an adjunct professor in 3-D imaging and radiology in the Mallinckrodt Institute of Radiology at Washington University, where she previously spent 10 years as an associate professor.

Dr. McFarland is chair of the American College of Radiology (ACR) colon cancer committee and has served on the board of directors for the Association of University Radiologists and on interdisciplinary panels for the American Gastroenterology Association, American Medical Association and ACR. Dr. McFarland also led recent efforts to establish colorectal screening guidelines for the American Cancer Society.

Annual Oration in Radiation Oncology

The origins of radiotherapy are in diagnostic radiology and, while the two fields diverged over the last 30 years, advanced molecular imaging is now driving the need to re-integrate the two fields into a common strategy for improved patient outcome, according to the presenter of the RSNA 2008 Annual Oration in Radiation Oncology.

"Advances in molecular medicine and diagnostic radiology will be central to moving the field of radiation oncology to the ultimate goal of personalized medicine or theragnostic radiation oncology," said Minesh P. Mehta, M.D., professor of neurological surgery at the University of Wisconsin (UW) at Madison.

Dr. Mehta will address this topic during his presentation "Alchemy, Early Detection, Precision Guidance and Radiotherapy," at this year's Annual Oration in Radiation Oncology on Wednesday, Dec. 3.

Earning international recognition for his investigation of innovative therapies for brain tumors, Dr. Mehta has explored techniques with radiosurgery, fractionated stereotactic radiotherapy, intensity-modulated radiation therapy, and image-guided radiation therapy. He has also studied promising methods to overcome therapeutic resistance, such as using targeted agents in conjunction with radiotherapy. Through clinical patient care programs at UW, Dr. Mehta has chaired major international phase-three randomized studies.

Dr. Mehta is Eric Wolfe Professor of Human Oncology at UW. He serves at five of the university's specialized cancer clinics and maintains staff appointments at nearly a dozen hospitals in Wisconsin and Illinois.

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RSNA is an association of more than 42,000 radiologists, radiation oncologists, medical physicists and related scientists committed to excellence in patient care through education and research. The Society is based in Oak Brook, Ill. (RSNA.org)