

It is a privilege to be a medical physicist. Few professions can match medical physics in the depth of intellectual challenge, the opportunity for technology development, and the prerogative of improving the care of patients singly and collectively through applications of physics. To exercise this privilege while making a decent living is a personal benefit that we all share. But with this comes a responsibility to advance the state of knowledge in medical physics, nurture young physicists entering the field, engage in clinical practice with patients' welfare foremost in mind, and relate to physicists, other healthcare providers, patients and the public with forthright honesty and integrity.

For the past 30 years, medical imaging has been experiencing a massive expansion in technology and applications. This expansion is continuing, with new horizons to conquer such as molecular imaging, quantitative imaging, imaging in multiple dimensions (4D, 5D, etc), image-guided adaptive therapy, multi-modality imaging platforms, and many others. This expansion is a major opportunity for medical physicists, whose many roles include ensuring that what is present in medical images reflects conditions in the patient and not in the imaging system. To seize this opportunity, medical physicists always must remain open to new knowledge and new ways of thinking, and must commit to a lifetime of study and learning that will keep them productively engaged in the discipline and its contributions to advancing knowledge, mentoring students, and caring for patients.

Usually financial support is needed to conduct research in medical physics. There are several possible sources of support, including institutional funds, industry contracts and government grants. Each of these sources has benefits and limitations, which will be discussed in this session. To facilitate this discussion, copies of a recent publication will be provided (A. Wolbarst and W. Hendee, **The National Institute of Biomedical Imaging and Biomechanics and NIH Grant Process: An Overview**; Radiology 2007; 242:322-355). This publication is intended as guidance for the young investigators submitting a first application to one of the institutes of the National Institutes of Health.

This session will encourage questions and discussion among participants, and will be led by William Hendee. Dr. Hendee has over 40 years of experience in medical physics, including Professor and Director of the Division of Radiological Sciences of the University of Colorado Department of Radiology; Professor and Chair of the Department of Radiology at the University of Colorado; Vice President of the American Medical Association and Executive Secretary of the AMA Council of Scientific Affairs; and Professor and Vice Chair of Radiology, Dean of the Graduate School of Biomedical Sciences, Senior Associate Dean for Research, Acting Dean of the Medical School, and President of the Research Foundation at the Medical College of Wisconsin. Currently Dr. Hendee is Distinguished Professor of Radiology, Radiation Oncology, Biophysics, and Community and Public Health at the Medical College of Wisconsin, Professor of Biomedical Engineering at Marquette University, Adjunct Professor of Electrical Engineering at the University of Wisconsin-Milwaukee, and Clinical Professor of Radiology at the University of New Mexico. Dr. Hendee serves as editor of Medical Physics.