

No field in research is evolving more rapidly than biomedical imaging. Advances such as functional magnetic resonance, computed tomography and digital radiography with 2D detector arrays, flow ultrasonography and computer-enhanced displays are enhancing the sensitivity and specificity of imaging for detection and diagnosis of human disease and disability. Biomedical imaging to guide therapeutic interventions in cancer and cardiovascular disease, and to identify new, more effective treatments for chronic and neurodegenerative diseases, is yielding longer and more productive lives for millions of individuals. Imaging techniques are opening windows into genetic and cellular mechanisms underlying biological structure and function, leading to new knowledge about human health and disease. Even the concept of an image is changing, as multidimensional databases of genetic and patient information are expressed as progressions of color-coded displays in order to facilitate their interpretation in response to questions about genetic variability and predictions of patient response to specific medications. Biomedical imaging is one of the most dynamic and exciting fields of medical science, and is attracting some of the brightest and most creative scientists into its research laboratories in the United States and around the world.

A young scientist aspiring to a career in biomedical imaging is well advised to map out a career-development lattice that will support both vertical and lateral growth as opportunities for advancement in knowledge and research arise. Individuals experienced in biomedical imaging and career development can be helpful in structuring this career lattice for the young scientist, and he/she should seek advice wherever it can be found. One opportunity for advice is the "Meet the Expert" session on Imaging Physics Research presented at the 2006 Annual Meeting of the AAPM. This session will be orchestrated by Bill Hendee PhD, Distinguished Professor of Radiology, Radiation Oncology, Biophysics and Bioethics at the Medical College of Wisconsin in Milwaukee. Dr. Hendee earned the PhD in physics in 1962 from the University of Texas, and has held the following positions during his career in medical physics: Professor and Chair of Physics and Astronomy, Millsaps College; Director of the Division of Radiological Sciences and Professor and Chair of Radiology, University of Colorado; Vice President for Science, Technology and Public Health, American Medical Association; and Senior Associate Dean for Research, Dean of the Graduate School of Biomedical Sciences, and President of the MCW Research Foundation, Medical College of Wisconsin. Dr. Hendee is past-president of the AAPM, Society of Nuclear Medicine, American Institute of Medical and Biological Engineers, and American Board of Radiology. He is editor of Medical Physics, and has published more than 350 peer-reviewed articles.