



NIH BACKGROUNDER

National Institutes of Health

Interdisciplinary Research

Biomedical research traditionally has been organized much like a series of cottage industries, lumping researchers into broad areas of scientific interest and then grouping them into distinct, departmentally based specialties. But, as science has advanced over the past decade and the molecular secrets of life have become more accessible, two fundamental themes are apparent: the study of human biology and behavior is a wonderfully dynamic process, and the traditional divisions within biomedical research may in some instances impede the pace of scientific discovery.

To lower these artificial organizational barriers and advance science, this set of NIH Roadmap initiatives will establish a series of awards that make it easier for scientists to conduct interdisciplinary research. These new awards include funding for: training of scientists in interdisciplinary strategies; creation of specialized centers to help scientists forge new and more advanced disciplines from existing ones; and planning of forward-looking conferences to catalyze collaboration among the life and physical sciences, important areas of research that historically have had limited interaction.

Interdisciplinary research integrates the analytical strengths of two or more often disparate scientific disciplines to solve a given biological problem. For instance, behavioral scientists, molecular biologists, and mathematicians might combine their research tools, approaches, and technologies to more powerfully solve the puzzles of complex health problems such as pain and obesity. By engaging seemingly unrelated disciplines, traditional gaps in terminology, approach, and methodology might be gradually eliminated. With roadblocks to potential collaboration removed, a true meeting of minds can take place: one that broadens the scope of investigation into biomedical problems, yields fresh and possibly unexpected insights, and may even give birth to new hybrid disciplines that are more analytically sophisticated.

By establishing new awards aimed at building interdisciplinary research teams, NIH hopes to help accelerate research on diseases of interest to all of its components with an eye toward improving the nation's public health. The first awards will establish several planning grants for interdisciplinary research centers. In addition, the Interdisciplinary Research Roadmap effort plans to fund innovative training programs in this emerging area of science.

In developing these NIH Roadmap initiatives, organizers have taken great pains to lower several traditional barriers that have slowed interdisciplinary studies. For instance, the new awards will: grant principal investigator status to not one investigator, as is now the norm, but to all key members of the research team; provide indirect research costs to multiple institutions involved in the research; require integrated reviews of grants, which take into account the melding of the

various disciplines to the problem at hand; and encourage the interdisciplinary team to evolve in both directed and serendipitous ways.

The URL for the NIH Roadmap web site is nihroadmap.nih.gov. For more information on the Research Teams of the Future Interdisciplinary Research initiatives, contact Wendy Liffers, National Institute of Dental and Craniofacial Research, (301) 435-2007, wendy.liffers@nih.gov. Further information about NIH can be found at its Web site: www.nih.gov.