

NIGMS Funds Center for Quantitative Biology

To probe the complexities of living systems, the National Institute of General Medical Sciences (NIGMS), part of the National Institutes of Health (NIH), has established its fifth Center of Excellence in Complex Biomedical Systems Research. The new center, headed by David Botstein, PhD, at Princeton University in Princeton, New Jersey, will explore how biologic molecules interact with each other and their environment to create dynamic systems.

NIGMS will award \$3 million to the center this year and expects the project to total \$14.8 million over 5 years. Central to the effort is the integration of multidisciplinary research and teaching. In addition to bringing together 40 scientists from physical, computational, and biologic science

fields, the center will establish a new undergraduate and graduate curriculum at Princeton that focuses on quantitative biology and collaborative research.

Called the Center for Quantitative Biology, the effort will focus on three key biologic questions: how body patterns are established during an organism's early development, how cells control their internal functions and communicate with each other, and how viruses interact with host cells. The researchers will use state-of-the-art microscopes and imaging tools to examine molecules in living cells and tissues. They will also create gene chips to study the activities of genes from viruses, bacteria, yeast, mice, rats, and humans.

A key feature of the project is the use of advanced computational methods to model complex biologic systems based on large quantities of experimental data, a systems biology approach. To help spur further biomedical discoveries, the center will make all of its data and analysis tools freely available to the scientific community.

The goals and approaches of the center fit squarely with the NIGMS mission, according to Jeremy M. Berg, PhD, NIGMS director. The Princeton center joins other Centers of Excellence in Complex Biomedical Systems Research at the University of Washington Friday Harbor Laboratories, Case Western Reserve University, Harvard University, and the Massachusetts Institute of Technology.

Genome Research Initiative Establishes Four University Centers for Excellence

The National Institutes of Health (NIH) National Human Genome Research Institute (NHGRI) has selected four universities to serve as interdisciplinary centers for a new initiative that will address some of the most pressing ethical, legal, and social questions raised by recent advances in genetic and genomic research. The NHGRI initiative,

The Centers for Excellence in Ethical, Legal and Social Implications Research, will receive significant contributions from the US Department of Energy and the NIH National Institute of Child Health and Human Development. The first four interdisciplinary centers to be awarded funding for this initiative are Case Western Reserve

University's Center for Genetic Research Ethics and Law, Duke University's Center for the Study of Public Genomics, Stanford University School of Medicine's Center for Integration of Research in Genetics and Ethics, and University of Washington's Center for Genomic Health Care and the Medically Underserved.

NIH Funds Centers to Study Islet Transplant

The National Institutes of Health (NIH) announced that it plans to award about \$75 million over 5 years to five clinical centers and a data coordinating center to conduct studies of islet transplant in patients with type 1 diabetes. The network includes centers located in Iowa City, Miami, Minneapolis, and

Philadelphia, as well as in Edmonton, Alberta, Canada, and Uppsala, Sweden.

The studies will focus on improving the safety and long-term success of methods for transplanting islets, the insulin-producing cells of the pancreas, in people whose own islets have been destroyed by the autoimmune

process that characterizes type 1 diabetes. Some studies will focus on improving combined islet and kidney transplants in patients with type 1 diabetes and kidney failure, a common complication of diabetes.

Type 1 diabetes accounts for up to 10% of diagnosed cases of diabetes in