

Continued from page 10

Harding. Equally important as the infrastructure made available through NCCR's support, according to Stuart M. Zola, director of the Yerkes NPRC, was NCCR's recognition that "the research was high risk, but it offered a potentially high payoff. NCCR was willing to take that risk."

According to Chan, the Hereditary Disease Foundation and several other Huntington's disease advocacy groups have expressed optimism about the prospect that these animal models can help science take the next steps toward a cure for Huntington's disease.

Future efforts by Chan and colleagues at Yerkes NPRC will be directed along several different paths. First, more tests need to be conducted to validate the nonhuman primate model of Huntington's disease. The transgenic monkeys will undergo cognitive testing and continued blood sampling to monitor their genomic and metabolic profiles and gene expression patterns. The study team will use the Yerkes NPRC's facilities to conduct noninvasive magnetic resonance imaging studies to follow any anatomical changes. "We will integrate all these studies into a picture of the disease and validate the animal models by comparing the results with information on human pathology and clinical features of Huntington's disease," explains Chan. Having a validated model will be a key step before scientists can confidently proceed to using the animals for developing and testing possible therapies.

Because the disease seems to be progressing rapidly in the two animals currently under study, Chan plans to develop additional transgenic models with later onset of disease. Having more transgenic monkeys available will allow translational research aimed toward potential cures to progress more quickly, says Chan.

Zola foresees using transgenic primate models for studying other important diseases: "One barrier in terms of neurodegenerative diseases is the lack of adequate animal models. For example, no other species develops Alzheimer's disease; therefore, it is hard to explore the dynamics and underpinnings of the disease, its stages, and how we might be able to intervene effectively," he says. "This transgenic approach in nonhuman primates is exciting, because the models show the full spectrum of the disease so we can better develop and assess interventions." ■

The research described in this article is supported in part by grants to the Yerkes NPRC, one of eight NCCR-funded primate research centers nationwide, and by grants awarded to several of the investigators by the National Institute of Neurological Disorders and Stroke.

ADDITIONAL READING: Yang, S.H., Cheng, P.H., Banta, H., Piotrowska-Nitsche, K., Yang, J.J., Cheng, E.C., Snyder, B., Larkin, K., Liu, J., Orkin, J., Fang, Z.H., Smith, Y., Bachevalier, J., Zola, S.M., Li, S.H., Li, X.J., Chan, A.W. Towards a transgenic model of Huntington's disease in a non-human primate. *Nature* 453:921–924, 2008.

NEWS FROM NCCR

People, Awards, Grants, and New Developments

Four New Members to Serve on NCCR Advisory Council

The 18 members of the National Advisory Research Resources Council advise NCCR on policies and programs and perform second-level peer review of grant applications. Four new members, who are leaders in their respective professions, have recently been appointed to serve four-year terms.

William F. Bria, II, chief medical information officer at Shriners Hospitals for Children and clinical associate professor of internal medicine at the University of South Florida in Tampa. Bria has been a leader in applied medical informatics for

more than 20 years and has authored numerous articles and books on informatics. He is currently engaged in research and applied medical informatics and is developing a new five-year combined M.D./master's program for informatics at the University of Michigan.

Wendy Chaite, president of the Lymphatic Research Foundation. Chaite, whose daughter was born with systemic visceral and peripheral lymphatic disease and lymphedema, is an advocate for



lymphatic research. In 1998 she founded the Lymphatic Research Foundation, a not-for-profit organization dedicated to promoting and supporting lymphatic research and to fostering an interdisciplinary field of research. Chaite also serves as emeritus director of Research!America and is a former member of the NIH Council of Public Representatives (COPR) and a former COPR liaison to the NIH Advisory Committee to the Director.

Henry N. Ginsberg, Irving Professor of Medicine and director of the Irving Institute for Clinical and Translational Research at the College of Physicians and Surgeons



of Columbia University. Ginsberg is part of a group that will be studying the role of glycemic, lipid, and blood pressure control in the prevention of cardiovascular disease in patients with diabetes. This 10-year trial will involve 10,000 patients at six sites across the United States. Ginsberg also has a long record of research into the effects of diet on lipid and lipoprotein metabolism in humans and has conducted numerous controlled feeding studies in humans.

Dallas M. Hyde, director of the California National Primate Research Center and professor at the School of Veterinary Medicine at the University of California, Davis. Hyde conducts research on the interactions of white blood cells, epithelial cells, and other types of cells in the lungs, with an emphasis on asthma, pulmonary fibrosis, and emphysema in animal models.



NCRR Launches National Gene Vector Biorepository

NCRR has replaced its gene vector laboratories program with a national gene

vector biorepository and coordinating center, with a three-year grant to Indiana University School of Medicine. The new center, directed by Kenneth Cornetta, will be a central storehouse for gene therapy materials and will promote gene therapy research by permitting the sharing of information to promote discoveries, patient safety, and compliance with the FDA and to broker material transfer agreements between researchers and owners of patent-protected or proprietary reagents.

“This resource will maximize our investment in gene vector research and help translate new knowledge into tangible benefits for patients,” says NCRR Director Barbara Alving. For more information, visit www.ngvbcc.org.

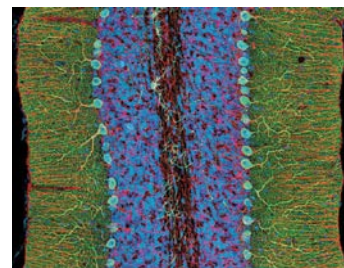
NCMIR Scientist Wins Photographer of the Year

Thomas J. Deerinck, a researcher at the University of California, San Diego’s NCRR-supported National Center for Microscopy and Imaging Research (NCMIR), received first place in the science category at the prestigious Sony World Photography Awards. Submitted micrographs — images taken

through a microscope — depicted NCMIR’s cutting-edge research and included a variety of tissues and cancer cells.

An NCRR Biomedical Technology Research Resource, NCMIR was established in 1988 and is led by principal investigator Mark H. Ellisman. It leads the way in technologies for high-throughput multiscale imaging and analysis of biological systems, with an emphasis on mechanisms underlying diseases of the nervous system.

Deerinck’s images have been featured on the covers of scientific journals and in museum shows. In recent years, Deerinck has won numerous prizes in various photography competitions. A gallery of his micrographs may be found at www.microscopyu.com/featuredmicroscopist/deerinck/deerinckgallery.html.



■ One of Deerinck’s 10 award-winning images depicts the mid-sagittal section of a rat cerebellum. The image above was acquired with one of NCMIR’s confocal microscopes.

U.S. DEPARTMENT OF HEALTH
AND HUMAN SERVICES
National Institutes of Health
National Center for Research Resources
One Democracy Plaza, 9th Floor
6701 Democracy Blvd. MSC 4874
Bethesda, MD 20892-4874

Official Business
Penalty for Private Use, \$300

Presorted Standard
U.S. Postage Paid
DHHS/NIH/RR
Permit No. G-818