

Ralph Brinster to Receive Gairdner Foundation International Award

Dr. Ralph L. Brinster, V'60, the Richard King Mellon Professor of Reproductive Physiology, will be awarded the Gairdner Foundation International Award on October 26, 2006 in Toronto. Dr. Brinster is receiving the award for his "pioneering discoveries in germ line modification in mammals."

First awarded in 1959, the Gairdners are among the most prestigious international awards in medical research,



recognizing outstanding contributions by medical scientists whose work will significantly improve the quality of life. Among the 279 Gairdner winners during the past 46 years, 65 have gone on to win the Nobel Prize.

Dr. Brinster's research career is noted for many achievements in the field of reproduction, genetics and stem cell biology. In particular, Brinster has been a leader in the biology of germ

cells. Early in his career, he established techniques to grow and manipulate eggs, and later used these methods to generate genetic changes in mice and other animals. More recently, Dr. Brinster has created a technique of altering genes in spermatogonial stem cells.

"Ralph Brinster is truly a trailblazer in the field of gene modification in animals," said **Dr. Joan Hendricks, V'79, GR'80**, dean of the School. "His early findings helped usher in the era of transgenic research and its many medical and scientific benefits, while his current work is at the forefront of stem cell medicine."

Dr. Brinster is the sixth Penn faculty member—and the first from the School of Veterinary Medicine—to win a Gairdner, a list that includes Clay Armstrong (2001), Baruch S. Blumberg (1975), Britton Chance (1972), Daniel J. McCarty (1965) and John H. Gibbon (1960), all from the School of Medicine.

"Bubble Bassets" Cured of Genetic Disorder

Researchers from Penn Vet have found a way to cure basset hound puppies of a deadly immune disorder, a victory that could eventually change the way the disease is treated in humans.

The disease, X-linked severe combined immunodeficiency, or XSCID, first received public attention with "Bubble Boy" David Vetter, a victim who could survive only in an isolated, germ-free environment. Today, the disease affects one in every 100,000 boys and often proves fatal before the age of one year.

Although XSCID has been treated in the past through a gene therapy technique in which bone marrow is taken out of a patient, treated with the corrective gene, then placed back in the body, the Vet School team used a different approach, injecting the corrective gene directly into the bloodstream of the pups.

"Although ex-vivo gene therapy has been shown to be capable of restoring normal immune function in XSCID boys, there are several potential problems with this approach," said **Dr. Peter J. Felsburg, V'69**, professor of immunology, who led the team that included researchers from the National Institute of Allergy and Infectious Disease. "The number of gene-corrected bone-marrow stem cells that can be transplanted back into the patient is limited to correcting the potentially low number of bone-marrow stem cells harvested from the patient. In addition, the manipulation and culturing of the cells outside the body may alter their ability to provide for long-term generation of new immune cells."

This procedure, the team says, could prove to be both a more effective and more efficient treatment of the disease in years to come.

By Air—and Water

A recent discovery of five fossils in northwestern China provides an important link between ancient and modern birds. The fossils indicate that early birds probably evolved

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