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National Award for Penn Researcher

First molecular genetic test

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The test requires only a few drops of blood from which the genetic code (DNA) is extracted and tested for the presence of the mutation by a polymerase chain reaction, a modern laboratory technique. Dogs can be tested at any age, even right after birth, allowing early determination of whether an animal has affected, carrier, or normal status.

Because of the intermittent and variable clinical signs and the suspected high prevalence of PFK deficiency in the English springer spaniel breed, Dr. Giger

recommends the testing of all English springer spaniels with suggestive clinical signs and all springers used for field trialing or breeding, or prior to purchase of a springer puppy. Affected dogs should not be bred, and appropriate precautions taken to ensure their health and welfare. It is not recommended that carrier dogs be used for breeding; however, if they are bred, they should only be bred to dogs tested as normal, and all of the resulting puppies should be tested. Carrier puppies should be neutered and

normal puppies used to continue the breeding program. By testing and breeding appropriately, PFK deficiency can be rapidly eliminated from this breed, and the further spread of this disease and future suffering of affected animals can be prevented.

For further information on testing dogs, please contact Drs. Urs Giger/Beth Callan, School of Veterinary Medicine, University of Pennsylvania, 3850 Spruce Street, Philadelphia, PA 19104-6010 (FAX 215-573-2162).

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A Burroughs Wellcome Fund New Investigator Award in Molecular Parasitology for 1993 was awarded to Dr. Phillip Scott, assistant professor of parasitology at the University of Pennsylvania School of Veterinary Medicine. The \$60,000 award, provided over two years, will enable Dr. Scott to continue his work on the development of a vaccine against leishmaniasis. This disease, caused by a parasite, affects man and animals in Central and South America, Africa, southern Europe and the Middle East. If not treated it can cause severe disfigurement and even death.

Dr. Scott's research focuses on studying the immune responses associated with the parasite, *Leishmania*. The foundation for the studies are Dr. Scott's observations that the stimulation of different types of immune cells determine whether the parasite is eliminated, or whether the infection is eventually fatal. These findings are useful not only in understanding leishmaniasis but also in understanding immunity in several other diseases, since these different cell types are important in controlling many infectious diseases, including parasitic, bacterial and viral infections, as well as allergies and autoimmune disease. Thus advances made in the leishmanial model may be widely applicable.

In the past, vaccine development has been, for the most part, done empirically. Dr. Scott's research will involve



identification of molecules that act to stimulate the development of particular types of immune cells. With this knowledge, it is thought that researchers may be able to design vaccines of the future more rationally.

The Molecular Parasitology Award Program is offered annually by The Burroughs Wellcome Fund to recognize the pioneering contributions of Sir Henry Wellcome to the study of tropical medicine, and to support the application of modern developments in biology and

chemistry to the understanding, control and prevention of parasitic diseases.

Dr. Scott is the first researcher associated with a veterinary school to receive the award. Two other 1993 New Investigator awards were presented to scientists at other institutions.

The Burroughs Wellcome Fund is a private, non-profit foundation established in 1955 "To provide financial aid for the advancement of medical knowledge by research, and for other scientific, scholarly and educational purposes."