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Interdisciplinary Urology Research Center Receives NIH Grant

Puppy Owners Needed for Study

The Center for the Interaction of Animals and Society at the School of Veterinary Medicine is urgently seeking the cooperation of local veterinarians and breeders to help it recruit puppy owners to participate in a major new study of puppy behavioral development.

Previous studies have shown that certain events and experiences occurring early in puppy development — even events as seemingly trivial as a visit to the veterinarian — may have long-term adverse effects on later behavior, such as the development of severe, adult behavior problems. The present study aims to explore this relationship in more detail in order to identify the precise characteristics and timing of these predisposing events and experiences.

For the study, we need the participation of breeders and/or owners of 5-12 week-old puppies (of any breed) who are willing to complete a weekly 'Puppy Diary'. The Puppy Diary simply requests details of each puppy's daily activities, experiences and behaviors until it is 16 weeks of age. When the puppy is one year old, the owners will also be sent a 'Behavioral Assessment Questionnaire' that takes approximately 30 minutes to complete. Although participating owners/breeders are unlikely to derive any direct benefit from the results of this study, its aim is to improve the behavior and welfare of dogs in general, and pilot work suggests that most owners find the topic interesting and enjoy completing both the Puppy Diaries and the Questionnaire. In addition, we hope that the findings will benefit veterinarians by identifying ways in which aspects of veterinary practice can be modified to reduce its potentially negative impact on puppy development.

If you are interested in helping with this study by identifying suitable puppy breeders and owners from among your clients, please contact Dr James A. Serpell, Marie A. Moore Assoc. Prof. of Humane Ethics and Animal Welfare, School of Veterinary Medicine, University of Pennsylvania; Tel. (215) 898-1004, Fax. (215) 573-6050, email: serpell@vet.upenn.edu.

Dr. Michael Kotlikoff, chairman of the Department of Animals Biology and director of the Center for Animal Transgenesis and Germ Cell Research and Dr. David Detweiler, Professor Emeritus of Animal Biology, in the newly renovated Physiology Suite off the Courtyard. Dr. Detweiler, V'42, contributed funds to the Department toward the purchase of two confocal microscopes. These are housed in the suite along with two new laboratories and office space.



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Dr. Samuel Chacko, professor of pathology at the School, and director of Basic Urology Research in the Division of Urology at Penn's Medical School, received the prestigious George M. O'Brien Urology Research Center grant in the amount of \$3.67 million. The award, made by the National Institute of Diabetes, Digestive and Kidney Disease of the NIH, is to establish a Urology Research Center to investigate the remodeling of bladder smooth muscle following outlet obstruction. According to Dr. Alan J. Wein, chair of the Division of Urology at the Medical School, this multidisciplinary research center, under the direction of Dr. Chacko, will provide an environment for investigators to apply state-of-the-art tools in cell and molecular biology to research related to the pathogenesis of urologic disease.

Dr. Chacko will coordinate an extensive investigation of the cell/molecular basis of contractile dysfunctions in smooth muscle cells in the bladder wall following outlet obstruction in an animal model. The structural and functional changes associated with outlet obstruction in the animal model are similar to those seen in men with benign prostatic hyperplasia (BPH). This condition affects more than half of men in their sixties and as many as 90 percent in their seventies and eighties. The urinary bladder obstruction, which causes urinary

dysfunction and incontinence, is a leading cause for institutionalization of elderly men. The clinical relevance of the study to be undertaken by the Urology Research Center is apparent when one considers that the cost of bladder dysfunction and urinary incontinence is estimated at \$10 billion annually.

In addition to smooth muscle researchers at Penn's School of Veterinary Medicine and School of Medicine investigators in the Departments of Physiology at MCP, at Thomas Jefferson University and at Children's Hospital of Philadelphia will participate in this in-depth study of urinary bladder dysfunction in outlet obstruction and return of function after surgical reversal. The Urology Research Center will focus on three major studies: Expression of channel proteins and calcium pump in remodeling bladder smooth muscle following outlet obstruction under the direction of Dr. Michael Kotlikoff, School of Veterinary Medicine; Myosin isoforms and calcium regulation of actomyosin ATPase in detrusor following outlet obstruction and remodeling under the direction of Dr. S.K. Chacko with co-investigators Drs. A.J. Wein and M. DiSanto of the School of Medicine; Mechanism of force generation and maintenance in bladders: effects of outlet obstruction under the direction of Dr. R.S. Moreland, MCP and Dr. R. Barsotti at Thomas Jefferson University. Dr. Stephen Zderic at CHOP will direct a core facility at the Abrahamson Research Laboratory. ■