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Cats Too Can Have Heartworm

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HEARTWORM infection, a disease commonly affecting dogs, is also seen in cats. "Cats are not equally at risk with dogs," explained Dr. David Knight, Chief of the Section of Cardiology at the University of Pennsylvania's School of Veterinary Medicine. "But heartworm disease in cats is probably more prevalent than we think, particularly in animals which live outdoors."

Unlike dogs, cats are not regularly tested for heartworm disease, nor are they maintained on preventive drugs. The presence of heartworm is difficult to detect in felines. "In infected cats microfilariae are generally found in low numbers or are absent entirely," said Dr. James B. Lok of the Laboratory of Parasitology at the School. "Cats are relatively inefficient hosts for Dirofilaria immitis. Infective larvae may mature but in many cases they do not reproduce well in the cat." Laboratory studies found that heartworm can reproduce in felines but that production of microfilariae is frequently suppressed by the cat's immune system.

Heartworm is spread by mosquitoes, an intermediate host necessary for the development of the parasite. Adult heartworms live in the pulmonary arteries and the right ventricle of the host animal, and can cause severe interference with the pulmonary circulation and function of the heart. Female worms give birth to live motile embryos called microfilariae which are released into the circulatory system of the host. They are carried to the capillaries close to the surface of the skin. From here they are ingested by a mosquito taking a bloodmeal. The microfilariae develop through three larval stages in the mosquito's body before they are capable of entering a mammalian host through the bite wound the mosquito makes upon taking another bloodmeal. The larvae undergo two more molts before reaching a juvenile stage when they take up residence in the cardiovascular system. There they mature and begin to reproduce.

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According to Dr. Lok, 15 to 25 percent of infected dogs can be expected to develop an occult infection in which microfilariae produced by the adult heartworms do not reach detectable levels in the blood. In the cat the rate of occult infection is much higher, making diagnosis difficult by the commonly used tests to detect microfilariae. The veterinarian may detect the disease in cats by alternative methods using the ELISA (enzyme linked immunosorbent assay) or by radiographing the chest. The
ELISA detects antibodies against *D. immitis* and radiographs are useful for identifying signs of pulmonary vascular disease which are characteristic of the infection. "Cats can be treated for heartworm," said Dr. Knight. "The disease is managed the same way as in dogs." According to Dr. Knight there is no reason why cats cannot be placed on preventive, though it must be kept in mind that the animal has to be free of microfilariae before the drug can be given.

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Helma Weeks

**CENTENNIAL YEAR AFFAIRS**

Since October 2, 1884, marks the founding date of the School of Veterinary Medicine, it follows that a number of affairs are scheduled for the month of October 1984. Here is a list of major events for this exciting month.

**Monday, October 1.** **AWARDING OF CENTENNIAL MEDALS.** The Veterinary School will award Centennial Medals to eighteen individuals in recognition of their outstanding contributions to veterinary medicine. The ceremony will take place at 5:15 P.M. in the Rainey Auditorium of The University Museum of the University of Pennsylvania and will be followed by a reception.

**Tuesday, October 16.** **BIRTHDAY PARTY.** This will be the fun event of the year. The Party, held at the First Troop Cavalry Armory, 3rd and Chestnut Streets, Philadelphia, will be strictly informal and will feature on Old Philadelphia theme, with Philadelphia-style food, drinks, and dancing. Everyone is invited. Tickets ($30 each) are now available in the Centennial Office of the Veterinary School. Watch for more detailed information.

**Wednesday, October 17.** **A 100-YEAR JOURNEY—AN EVENING WHEN THE PAST MEETS THE PRESENT.** The organization of Minority Veterinary Medical Students will sponsor a cocktail-dinner to honor Dr. Jane Hinton (V’49), the first black woman graduate of the Veterinary School, and Dr. John B. Taylor (V’08) the first black graduate. Time and place to be announced. For information call the Centennial Office 896-1475.

**Sunday, October 21 through October 23.** **ANNUAL MEETING OF THE AMERICAN COLLEGE OF VETERINARY RADIOLOGY.** See announcement under Rosettes and Ribbons.

**INTERNATIONAL CLUB**

Many of us have chosen veterinary medicine for careers because we care about the quality of lives. Those of us who are also adventurous would like to work abroad. In the interest of these pursuits, University of Pennsylvania Veterinary Students have formed the International Club. So far, we have been very successful at building a substantial membership, forming a network with International Clubs at other veterinary schools and providing information, through lectures and newsletters, about the worldwide situation of veterinary medicine. Students' interests in international veterinary medicine has surfaced since the inception of our club. In light of this newly discovered enthusiasm, I am sure there are other students and faculty members who could contribute to the fulfillment of our club’s goals. We would greatly appreciate you sharing your experiences with us.

Barbara Flickinger
Senior Student

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