

Contact: Diana Gonzalez

**RESEARCH FACULTY PRESENTATION AT IOWA STATE UNIVERSITY:
“EVEN A WORM WILL TURN: DISCOVERY OF DRUGS THAT PARALYZE IMPORTANT
WORM PARASITES OF HUMANS AND ANIMALS”**

Action Requested: Receive the presentation.

Executive Summary: Richard J. Martin will provide an overview of his work on the discovery of drugs that selectively inhibit the neuro-muscular systems of roundworm parasite, paralyzing them to produce a cure. The work has global relevance for both human and animal health – more than two billion people in the poorest countries worldwide, and most domestic animals, are infected with nematode parasites which degrade health, affect animal production, and increase poverty.

Distinguished Professor Richard Martin is director of graduate education of both the Toxicology and Biomedical Sciences graduate programs in ISU's College of Veterinary Medicine. He earned a veterinary degree from Liverpool University, Membership of the Royal College Veterinary Surgeons (MRCVS), Ph.D. (Liverpool), D.Sc. (University of Edinburgh), and is a diplomate of the European College of Veterinary Pharmacology and Toxicology (Dip. ECVPT).

Martin, who joined ISU in 1999, has served as chair of Biomedical Sciences, as a National Institutes of Health study section member, and as chair of the Education and Residency Committee of the European College of Veterinary Pharmacology.

His research uses advanced electrophysiological, pharmacological, molecular, and parasitology techniques to discover and study the mechanism of action of new drugs used to paralyze and treat roundworm parasites. Worldwide, these parasites are a major global health problem, found in over 2 billion people of the world's poorest populations, and universally in domestic animals. In the absence of adequate sanitation and vaccination, these drugs are used for the control and prevention of both human and animal parasites. The economic returns for anthelmintic drugs favor development for animal health in western countries initially, and subsequent application for human health in developing countries. Ivermectin, one of these anthelmintic drugs studied, was developed for animal use, and is now used in Africa for control of the parasites that cause river blindness and elephantiasis in humans.

