



AAVPT NEWSLETTER

The American Academy of Veterinary
Pharmacology and Therapeutics

Volume 15, Number 3

November 1996

From The President



To most AAVPT members, it may not seem that the world of veterinary pharmacology has changed much since the last newsletter, but inside the Beltway there has been activity of unprecedented magnitude which led to the passage of the Animal Drug Availability Act in the final hours of the 104th Congress (See Dick Teske's article in this edition for details). The new law, which amends the Federal Food Drug and Cosmetic Act, will profoundly alter the regulatory requirements for FDA approval of animal drugs without affecting human food safety standards. Perhaps even more important, however, was the collaborative process which brought together disparate professional and trade organizations all seeking a common goal. These included the Animal Health Institute, the American Feed Industry Association, the National Turkey Federation, the National Pork Producers Association, the National Cattlemen's Beef Association, the National Feed and Grain Association, the American Association of Feed Control Officials, the American Association of Swine Practitioners, the American Association of Bovine Practitioners, the American Veterinary Medicine Association, and other allied organizations. Among other things, the new law should increase the incentive for pharmaceutical firms to invest in research and development of animal drugs, and thereby increase the veterinarian's therapeutic armamentarium. It also creates a new category of therapeutic drugs for use in feeds which requires a veterinarian's order (veterinary feed directive drugs) thus enhancing the ability to practice population medicine.

Outside of the Beltway there is plenty of activity as well. A newly discovered strain of bacteria, *Streptococcus iniae* has been associated with aquacultured tilapia and hybrid striped bass. The organism has caused sickness and possible mortality in food handlers through percutaneous infections. *Campylobacter* is now considered to be the number one organism responsible for food-borne illness in the U.S. In addition, there appears to be a strong correlation between campylobacteriosis and the subsequent development of Guillain-Barré syndrome. A strain of *Salmonella typhimurium* (DT104) which is resistant to several antibiotics has caused numerous outbreaks of food poisoning in Europe, and has recently been isolated from humans and animals in the U.S. raising the possibility of new food-borne epidemics that may

prove difficult to treat. Finally, a recent study has shown that the glycopeptide sequence of the bovine spongiform encephalopathy (BSE) prion is similar to the prion associated with the variant strain of Creutzfeldt Jacob Disease (CJD) prion, but different from classical CJD. The results appear to strengthen the hypothetical link between BSE and the newly discovered variant strain of CJD in humans. At press time, there are indications that the Clinton administration is poised to announce a major initiative to reduce food-borne illnesses in the U.S.

- Stephen Sundlof

* * * * *

Secretary-Treasurer's Report

AAVPT is in good shape financially at this time. We have \$10,026.63 in our checking account. This includes the proceeds from the recent Wildlife Symposium (Wildlife Contraceptives: The Regulatory Challenge Workshop), which netted AAVPT approximately \$387.

Thank you to everyone who has paid their 1996 dues. We have 113 Fellows, 22 Associate Fellows, 6 Student Members, 8 Distinguished Fellows, and 8 Emeritus Fellows who are current in their membership. It's time now to request 1997 dues. There hasn't been a dues increase, so annual dues are the same as in 1996: \$35 for Fellows, \$20 for Associate Fellows, and \$10 for Student Members. If you still owe your 1996 dues (and about 42 people do!), please submit them with your 1997 payment.

Please renew or start your subscription to the Journal of Veterinary Pharmacology and Therapeutics. The 1997 subscription price has been held to the 1996 level of only \$55.00 for AAVPT members. This is a special price, so I encourage everyone to subscribe.

Contributions to the AAVPT awards fund (used for student awards and service awards) may be made at any time and may be included with your dues or subscription.

Please Note: Ballots for election of 9 new members are being mailed with your dues notice. Please respond promptly - ballots are due back to me by December 1, 1996. If you wish

to upgrade your membership status from Student Member or Associate Fellow to Fellow, you will need to fill out another application form. Please phone (860-441-7361), fax (860-441-4786), or e-mail (jernia@pfizer.com) a request, and I will try to send one to you promptly. Please encourage other people to join AAVPT, as well.

If at any time you have not received JVPT issues that you believe you should have received, please notify me as soon as possible. Blackwell (the publisher) is quite good about sending back issues and rectifying problems, but I won't know if there is a problem unless you contact me.

AAVPT currently distributes 19 subscriptions of JVPT to people in underdeveloped countries. We will use this same list for distribution of old AAVPT proceedings. If you would like a copy of any of the proceedings, please send a check for \$5.00 for each proceedings made out to AAVPT to me (Ann Jernigan, Pfizer, Eastern Point Road, Groton, CT 06340) to cover shipment costs. The following proceedings are available:

Special Symposia

Determination of Doses of Veterinary Pharmaceuticals, 1984

Clinical Trials with Therapeutic Drugs in Animals, 1986

Does the Animal Drug Prescription and Over-the-Counter Issue Impact Human and Animal Health?, 1988

Biotechnology in the Animal Health Sector: Scientific, Regulatory and Ethical Implications, 1990

Use of FDA-Approved Drugs in Veterinary Medicine, 1993, JAVMA, May 15, Vol. 202, No. 10

Proceedings of Biennial Symposia Meetings, Topics in Veterinary Pharmacology, 1982, (Third Symposium)

Fourth Symposium on Veterinary Pharmacology and Therapeutics, 1984, Texas A & M, College Station, Texas

New Perspectives in Veterinary Pharmacology and Therapeutics, 1986, Univ. of Missouri, Columbia, Missouri (Fifth Biennial)

Animal Drugs and Food Safety, 1988, Blacksburg, Virginia (Sixth Biennial)

Educational Perspectives In Preparation for the 21st Century, 1990, Raleigh, NC (Seventh Biennial)

New Frontiers in Pharmacology, 1992, Guelph, Ontario, Canada (Eighth Biennial).

Veterinary Pharmacology in the Pharmaceutical Industry, 1994, Kalamazoo, MI (Ninth Biennial)

- Ann Jernigan

* * * * *

AAVPT/ACVCP Program Updates

Past Events

The Tenth Biennial Symposium of the AAVPT was held at the University of Maryland at College Park on June 17-19, 1996. Special thanks go to Drs. Peter Eyre, Marion Ehrlich, and Jeff Wilcke for their organizational efforts in providing an interesting program concerning the dissemination of therapeutic information from governmental, corporate, and academic sources.

On July 21, 1996, members of the AAVPT/ACVCP presented a one day session on regulatory pharmacology, especially within the horse racing, greyhound racing, and show animal industries.

Future Events

The AAVPT/ACVCP are jointly sponsoring a one day program addressing anti-inflammatory and analgesic drug therapy to be held on May 22, 1997 in Orlando, Florida in conjunction with the 15th Annual Veterinary Medical Forum of the American College of Veterinary Internal Medicine. Professor Peter Lees of the London Royal Veterinary College will provide the opening "state of the art" presentation on "Inflammation and the Pharmacology of Anti-inflammatory Drugs." A program synopsis follows below:

Inflammation and Pain

Morning Moderator: Dr. Charles R. Short (LSU)

Session	Title	Speaker
1.	Inflammation and the Pharmacology of Anti-inflammatory Drugs	Prof. Peter Lees (U. of London)
2.	Continuation	Prof. Peter Lees (U. of London)
3.	Newer Approaches to	Dr. Steven Kamerling (LSU)

4.	Pharmacology and Use of Opiates & Alpha-2 Antagonists	Dr. William Tranquilli (U. of IL)	NSAIDS	Kamerling
			3:45-5:15	Nitric Oxide: The Good, the Bad, and the Ugly
				Dr. Rustin Moore

Afternoon Moderator: Dr. Ted Whittem (U. of IL)

5.	Pain Management in Equine Colic and Acute Laminitis	Dr. James Moore (U. of GA)
6.	Assessment and Management of Acute pain	Dr. Bernie Hansen (NCSU)
7.	Management of Chronic Pain	Dr. Elizabeth Hardie (NCSU)
8.	Practical Use of Analgesics	Dr. Mark Papich (NCSU)

Furthermore, the FDA Center for Veterinary Medicine and the AAVPT/ACVCP Program Committees are considering the formation of a half-day program on May 23 or 24 at the Forum addressing dose determination for four different drugs (other than antimicrobial drugs) as concepts concerning professional veterinary drug labeling continue to evolve.

The AVMA has invited AAVPT/ACVCP to provide a one-day program on "Advances in Veterinary Pharmacology" on July 22, 1997 at the national AVMA meeting in Reno, Nevada. Antimicrobial therapy and bacterial resistance, sedatives and reversal agents, newer nonsteroidal anti-inflammatory drugs, and nitric oxide will be addressed. A program synopsis follows below:

Advances in Veterinary Pharmacology

Moderator: Dr Dawn Boothe

Time	Topic	Speaker
8:30-10:00	Antimicrobial Resistance: Origins and Trends	Dr. Patricia Dowling
10:15-10:45	Clinical Application of Sensitivity Data	Dr. Patricia Dowling
10:45-11:15	Rational Antimicrobial Therapy	Dr. Patricia Dowling
11:15-12:15	Sedatives and Their Reversal	Dr. Steven Kamerling
1:30-3:00	Inflammation and New	Dr. Steven

Dr. Rick Vulliet is continuing to plan for the 11th Biennial Symposium of the AAVPT which will be held in California at a time yet to be specified during 1998. He welcomes suggestions from the membership

- Gary Koritz (AAVPT)
- Charles R. Short (ACVCP)

* * * * *

News From Washington



Animal Drug Availability Legislation Passed by Congress

The Animal Drug Availability Act (ADAA) was passed by the House on Tuesday, September 24 and by the Senate on Wednesday, September 25. President Clinton signed it into law on October 9.

The new law modifies several existing sections of FFD&C Act and inserts a new section pertaining to Veterinary Feed Directive drugs. These amendments will alter substantially the way we regulate animal drugs and medicated feeds by granting FDA/CVM the authority to exercise considerable flexibility in regulatory decision making. The ADAA allows CVM to redefine the requirements necessary to meet the standard of "substantial evidence" for efficacy in field investigations. It draws distinctions between combination drugs and concurrent drug therapies which share a common vehicle. It supports the concepts of flexible labeling and pre-submission conferences, and requires CVM to propose more practical approaches in approving drugs for use in minor species. It creates a new category of drugs for use in feeds which requires a veterinarian's order, and it eliminates the need for medicated feed applications by licensing the feed mill. Finally, the law allows FDA/CVM to establish tolerances for drugs which are not approved in the United States (import tolerances).

Three New Members Appointed to FDA's

Veterinary Medicine Advisory Committee (VMAC)

The new members of FDA's Veterinary Medicine Advisory Committee are: Steven A. Barker, Ph.D., Colonel Nancy K. Jaax, D.V.M., and Ling-Jung Koong, Ph.D. They replace retiring members Dr. Debra Aaron, Col. Anthony Johnson, and Dr. Gaylord Paulson.

Dr. Barker is a Full Professor in the Department of Physiology, Pharmacology and Toxicology of the Louisiana State University School of Veterinary Medicine. He also serves as the Director of the Analytical Systems Laboratory, a central analytical facility for the School; the Laboratory for Residue Studies, a drug metabolism research facility operated under GLP regulations; and the Equine Medication Surveillance Laboratory, an analytical facility for the monitoring of drug use in equine athletes. Dr. Barker also serves as the State Chemist to the Louisiana State Racing Commission. Dr. Barker represents the chemistry specialty in VMAC.

Colonel Jaax received her D.V.M. degree from Kansas State University. With over 17 years of experience in veterinary pathology, Colonel Jaax is highly qualified to represent the pathology specialty for VMAC. She completed her residency training at the United States Army Medical Research Institute of Infectious Diseases (USAMRIID), and has been board certified with the American College of Veterinary Pathology since 1983. She has been the consultant for veterinary pathology to the U.S. Army Surgeon General since 1991. Her major research area is the pathogenesis of Ebola virus infection in animal models.

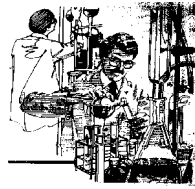
Dr. Koong received both his M.S. and Ph.D. degrees from North Carolina State University. He currently serves as Associate Dean in the College of Agricultural Sciences at Oregon State University. Representing the biometrics specialty for VMAC, Dr. Koong is an outstanding mathematician with experience in application of statistical procedures for assessing research derived from animal production experiments.

Dr. Donald Lein remains the chairman of VMAC, and other members include Dr. Bernard Curran, Dr. George Cooper, Sue Hudson Duran, Dr. Diane Gerken, Dr. Stanley Kleven, Dr. Gary Koritz, and Dr. Alice Wolf. VMAC members normally serve four-year terms.

- Richard H. Teske

* * * * *

News From the Pharmaceutical Industry



The French company Heliosynthese is developing a manganese-containing superoxide dismutase (Mn-SOD) as adjuvant therapy in AIDS. The product is derived from microalgae, and is considered preferable to bovine SOD because of the latter's risk of viral contamination with animal materials. SOD scavenges free radicals which, in HIV infection, stimulate cytokine production and subsequent virus multiplication. In addition, SOD provides additional benefit by preventing some radiotherapy side effects.

Ingenex, a subsidiary of Titan Pharmaceutical, has been awarded a research grant from the NIH to continue development of a genetic approach to the treatment of AIDS. Specifically, its program is devoted to discover and characterize protective gene fragments capable of interfering with the replication of HIV molecules. Ingenex uses a proprietary system to select specific therapeutic gene elements from libraries of random fragments of the HIV genome.

Ribozyme Pharmaceuticals has developed a retroviral vector containing two ribozymes for use in HIV disease. Each ribozyme is targeted against a different site in the HIV genome. By selectively binding to and then cleaving their target mRNA, they block synthesis of proteins thought to be linked to the disease.

- Elliot Piperno

* * * * *

Awards Committee Update

The Awards Committee is pleased to announce that the AAVPT Council has awarded two "**Hoechst-Roussel Agrivet Company Graduate Student Awards.**" **Timothy Dyke** of the Department of Clinical Sciences at Ohio State University and **Robert Hunter** of the Department of Veterinary Physiology, Pharmacology, and Toxicology at Louisiana State University are the recipients. Each has received the \$500.00 award for 1996. The Academy offers its congratulations to these outstanding young scientists for their contributions to the profession, and wishes them good luck in their careers.

The Academy also wishes to thank the Hoeschst-Roussel Agrivet Company for its continued generous support of this award which significantly assists young professionals in the pursuit of their research careers.

The AAVPT Council has established three new awards: (1) **AAVPT Service Award**; (2) **AAVPT Teaching Award**; (3) **AAVPT Research Award**. These distinguished awards are intended to recognize mid-career scientists who are making

exceptional contributions in the important areas of **Service**,

Teaching, and Research, and they will consist of a diploma and a monetary award. Please watch future issues of the newsletter for further details and calls for nominations. It is intended that awards will be made in these categories at the 11th Biennial Symposium to be held in 1998. Calls for names will be made during 1997.

Any inquiries or suggestions regarding the activities of the Awards Committee should be conveyed to Peter Eyre at (540) 231-7910.

- Peter Eyre

* * * * *

Employment and Educational Opportunities Presently Available

Neuropharmacologist - Kansas State University

The Department of Anatomy and Physiology, College of Veterinary Medicine invites applications for a tenure track faculty position, at the Assistant Professor level (80% research, 20% teaching). Candidates should hold a Ph.D. in pharmacology or a related discipline, and have at least two years of postdoctoral research training. Preference will be given to applicants with research experience in neuroscience and interests that complement existing programs in the department. The successful candidate will have an extramurally-funded research program, or an established research program with considerable potential for securing extramural funding. The appointee will be expected to develop a graduate-level course related to his/her research interests, and contribute to a team-taught pharmacology course for veterinary students. The position is available August 1, 1997. D.V.M. (or equivalent) and/or Ph.D. required.

Applications should include a *curriculum vitae*, a statement of research and teaching interest, addresses of three references, and reprints of three representative publications. Applications will be received until November 15 1996, or until the position is filled. Please send applications to: Dr. Jon D. Dunn, Department Head, Department of Anatomy and Physiology; VMS 228; Kansas State University; 1600 Dennison Avenue; Manhattan, KS 66506. Kansas State University is EOE/AAE.

* * *

Graduate Assistantships - Louisiana State University

The Department of Veterinary Physiology, Pharmacology, and Toxicology that three (3) **Graduate Assistantships** available for new or recent graduates. These stipened positions are for doctoral studies in the following areas:

1. Pathophysiology of equine colonic degeneration associated with colic. D.V.M. (or equivalent) degree required.
2. Open to selection of an area of nutrition, physiology, pharmacology, or toxicology. D.V.M. (or equivalent) degree required.
3. Open to selection of an area of nutrition, physiology, pharmacology, or toxicology. B.S or B.A. (or equivalent) degree required.

Faculty interests and expertise focus on nutrition, endocrinology of companion animals, analytical chemistry and toxicology, ecological chemistry of wetlands, toxicology and nutagenesis of xenobiotics in aquatic species, second messengers, trophic transfer in aquatic systems, signal transduction in pulmonary and gastrointestinal tissue, the physiology of inflammation, the pharmacology of anti-inflammatory agents in horses, the physiology and pharmacology of pain and analgesia in the horse, and the diagnosis and genetics of deafness in dogs.

These stipends are available in January of 1997. Applicants should send a letter of interest, transcripts, and GRE scores to: **Dr. Leonard C. Kappel**, Departmental Graduate Coordinator, Department of Veterinary Physiology, Pharmacology, and Toxicology, School of Veterinary Medicine, Louisiana State University, Baton Rouge, LA 70803 **or** contact **Dr. Charles R. Short**, Head, Department of Veterinary Physiology, Pharmacology, and Toxicology. Telephone: (504) 346-3202. Fax: (504) 346-3736.

* * *

Residency/Graduate Study in Clinical Pharmacology - University of Illinois

The Department of Veterinary Biosciences, College of Veterinary Medicine, University of Illinois, and the Animal Health Division of Pharmacia and Upjohn Company, jointly announce an opening for a veterinarian interested in clinical training and graduate study in veterinary clinical pharmacology. This unique residency/M.S. program will be of three (3) years duration. An option to extend this to a Ph.D. program is available.

The first 12 months will be spent with case-care responsibility in the Veterinary Teaching Hospital at the University of Illinois, primarily with the major species of interest to the candidate. Subsequently, two years will be devoted to research in clinical pharmacology, pharmacokinetics, drug metabolism, analytical methods, or other related field of study. One of these two years will be spent at the Animal Health Division facility of Pharmacia and Upjohn Company in Kalamazoo, Michigan. Prescribed and elective graduate course work will be completed during the first two years of the program. This program will satisfy the credential requirements to be

admitted to candidacy for examination by the American College of Veterinary Clinical Pharmacology (ACVCP). A stipend is available beginning from \$18,250 to \$20,500, depending upon experience, with step-wise salary increases. Additional benefits include: Tuition and fee waiver, University Staff benefits, assistance to attend one major scientific meeting per year, and assistance with expenses of relocation from Champaign/Urbana, IL to Kalamazoo, MI during the program.

Qualified applicants will: Have a D.V.M. or equivalent degree, and be licensed to practice in their own state or country, have completed a 12-month rotating internship or equivalent practice experience, satisfy the requirements for entry to the Graduate School of the University of Illinois and the requirements for graduate students in the Department of Veterinary Biosciences, and demonstrate a desire for a career in veterinary clinical pharmacology. The position is available for January 1, 1997. For further information or application forms, please contact: **Dr. Ted Whittem**, Department of Veterinary Biosciences, LAC210,1008 W. Hazelwood Dr., Urbana, IL, 61801. Telephone: (217) 333-4246. Internet E-mail: <whittem@uiuc.edu>. (Editors Note: This notice had an application deadline of 30 August 1996 specified, but I am including it in the possible event that the position may not have been filled as this issue goes to press.)

* * * * *

Seventh EAVPT International Congress

You are cordially invited to come to Madrid, Spain, July 6-10, 1997 to take part in the Seventh EAVPT International Congress. The meeting will include five plenary lectures and 14 keynote lectures, oral and poster communications, and an exhibition (products, instruments, and publications). The aim of the Congress is to bring together people interested in the field of Veterinary Pharmacology and Toxicology and to spread knowledge which ultimately promotes improved scientific practices in these areas. The meeting will be held at the Palacio de Congresos, which is located on the Castellana Avenue in the heart of Madrid. We hope to be able to offer a number of attractive events in the social program.

The Scientific Sessions will present information on the following research topics: **(1) Biopharmaceutics and pharmacokinetics** (Delivery and disposition of drugs; Pharmacokinetic pharmacodynamic models; Bioavailability bioequivalence studies; and Drug pharmacokinetic interactions); **(2) Drug Metabolism** (Drug -induced changes in metabolism; Drug metabolizing enzymes; Peroxisome proliferation; Drug metabolism is safety evaluation; In vitro alternative models in drug metabolism studies); **(3) Clinical pharmacology and therapeutics** (Clinical trial design, Efficacy testing for minor species, Age-related pharmacology, Antimicrobial agents, Endo- and ectoparasiticide agents, Inflammatory mediators and anti-inflammatory agents, Anesthetic agents, Topical products, Bioengineered products, Production-growth enhancement agents, Probiotics); **(4) Pharmacology and therapeutics in various species** (Fish, Birds, Zoological and Wild

Life species, Minor ruminant species, Laboratory animals); **(5) Systemic pharmacology** (ANS and CNS, Cardiovascular, Respiratory, GI, Urinary, and Reproductive); **(6) Toxicology** (Toxicokinetics, Cytokinetics, Drugs, Pesticides, Mycotoxins, Marine & other toxins, Metals, Ectotoxicity); **(7) Regulatory matters** (Veterinary medicines, Marketing, Food additives in animal nutrition, Drug residues, Environmental risk assessment, Bioengineered products, Pharmacovigilance, Toxicovigilance)

For further information please contact the **Scientific Secretariat: Prof. Dr. Arturo Anadon**, Seventh EAVPT International Congress, Department of Toxicology, Faculty of Veterinary Medicine, Universidad Complutense de Madrid, 28040 Madrid, Spain (Telephone: 34-1-3943834; Fax: 34-1-3943840; E-mail: <anadon@eucmax.sim.ucm.es>), or the **Congress Secretariat (Registration and Accommodation): Mrs Marta Cazorla**, Viajes Iberia Congresos, Seventh EAVPT International Congress, San Bernardo 20, 28015 Madrid, Spain (Telephone: 34-1-5328137; Fax: 34-1-5223418).

* * * * *



A.A.V.P.T. NEWSLETTER STAFF

Editor: Carl E. Aronson

Correspondents

Industry: Elliot Piperno

Washington: Richard H. Teske

J.V.P.T.: Arthur L. Aronson

Education: Gordon Coppoc

The **Newsletter** is published three times a year by the **American Academy of Veterinary Pharmacology and Therapeutics**, at the University of Pennsylvania School of Veterinary Medicine. Please address all correspondence to: Dr. Carl E. Aronson, Laboratories of Pharmacology & Toxicology, School of Veterinary Medicine, University of Pennsylvania, 3800 Spruce St., Philadelphia, PA 19104-6046, [Telephone (215) 898-5894, E-mail: aronsonc@pobox.upenn.edu, FAX: (215) 898-9923].

* * * * *

If you have not already paid your dues, please consider sending your check to the Secretary-Treasurer today.