Discovery March 2007

Misty Bailey
Editor

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Dr. J.D. Krakhwinkel presented “Problems of endocrine disorders” included physiological and pathophysiological relationships of the adrenal; hyperadrenocorticism in dogs, cats, and ferrets; hyperestrinism, hypoestrogenism, and hypogonadism in dogs; hyperadrenocorticism and diabetes mellitus in dogs and cats; and feline hyperthyroidism.

On Jan. 26, Dr. Patricia Tithof presented “Environmental pollution & health risks: The Chattanooga Creek initiative” as part of the semester-long UT Science Forum.

In addition to computer-generated figures, fluorescent staining may present the color-blind reader with difficulties as well. In “How to make figures and presentations that are friendly to color blind people,” the authors show how a color-blind person may see it differently (Fig. 2).

External funding

The University of Tennessee College of Veterinary Medicine

Three Graduate Students Earn Travel Awards

Amanda Peretich, Mugdha Sukhthankar, and Nichelle Whitlock won travel awards to the Experimental Biology 2007 Annual Meeting in Las Vegas, NV. Amanda and Mugdha won the prestigious American Society of Biochemistry and Molecular Biology (ASBMB) Graduate Research Student Travel Award. Nichelle received the esteemed ASPET/MARC Program Minority Graduate Award. Nichelle was presented a new color vision test to differentiate congenital and acquired color vision defects. The journal recommends using contrasting colors to help color-challenged eyes be able to read graphs and figures. Color information from reference 2.

Tips for Friendly Figures

Communicate with color and shape, when possible.
Avoid using greens and reds together.
Avoid using bright colors.
Avoid using red on a dark background.

In Compliance

To be or not to be

Animal care and use, biosafety, environmental health and safety, human subjects, and radiation safety: If you do research on UT, you are aware of at least one, or perhaps several of these compliance entities. These are the areas of compliance that directly affect most researchers.

Often perceived as nuisances, the committees and compliance professionals supporting these areas keep the university and regulatory agencies that govern our ability to perform research. When there is failure in compliance oversight, breaches may result in unwanted inspections, audits, and fines to the university, as well as loss of accreditation and loss of investigator privilege.

External funding from government agencies, private foundations, and voluntary health organizations is limited. The ability to conduct research is jeopardized current and future funding from external sources may also result from compliance breaches since both federal and private funding sources are placing greater emphasis on education and training to ensure the “responsible conduct of research.”

We are aware that dramatic changes in the past few years have resulted in increased paperwork and accountability for investigators. All these changes have resulted from changes in regulatory guidelines, and all have been necessary. This trend will likely continue as laws and rules governing compliance continue to evolve.

Compliance is not going away, no matter how much we may wish it to. To ensure your work meets committee approval and is performed within the appropriate standards, please take advantage of the expertise provided by compliance professionals and committee chairs. In addition, our office of research at the CVM can be very helpful in directing investigators to proper resources. Contact information is also available through VeNet.

Published four times each year by the UTCVM Office of Research and Graduate Programs. Comments and suggestions may be forwarded to the office in care of Misty Bailey: mrbailey@utk.edu or 865-974-7446.

The Center for Responsible Research is an effort to help researchers and professionals with their ability to perform research.
Fellows Go to Two Veterinary Students

First- and second-year veterinary students Jennifer Bernard and Melissa Mustillo, respectively, will spend the summer engaging in research sponsored by a fellowship from the Morris Animal Foundation.

The foundation chose only 25 students from their international applicant pool. Fellowship recipients are invited (all-expenses-paid) to present a poster at the foundation’s 2008 annual meeting, where they will be eligible to compete for an additional cash award.

Jennifer will be working with Dr. Melissa Kennedy on coronavirus detection in cheetahs, and Melissa will assist Dr. Joseph Bartges in studying calcium oxalate in cats.

Eight Veterinary Students Receive Special Recognition

Eight veterinary students were recognized in January for their outstanding participation in the 2006 Center of Excellence (COE) Student Summer Scholar Program. The following students were honored with awards from the COE Program Committee: Cat Ashe (outstanding abstract), Helen Reaves, Lara Abbott, Sharon Stone, Sandra Bates, Jody Markward, Karie Myers, and Kristi Sowers (abstracts).

The awards were funded by Merck Meriaal, a co-sponsor of the Student Summer Scholar Program.

Millis Honored by World Small Animal Veterinary Association

Dr. Darryl Millis was the recipient of the WSAVA Iams Paasmap Award at the 31st WSAVA Congress in Prague, Czech Republic.

The award honors outstanding scientific achievement in orthopedic medicine and surgery, specifically in the fields of growth and skeletal development in large breed dogs.

Named after the late Prof. Sakai Paasmap, a pioneer in canine orthopedic surgery and WSAVA president from 1977-1979, the award was first given in 2002. Past winners include Dr. Gail Smith, a leader in canine hip dysplasia treatment.

Feline Lentivirus Work Earns Adams Esteemed Award

Dr. Hayley Adams received a Student Award from the American College of Veterinary Microbiologists for her oral presentation of “Feline Lentivirus: Molecular Analysis and Epidemiology in Southern African Lions” at the Conference of Research Workers in Animal Diseases, an international meeting held in Chicago in December.

Only 3 students each year receive this prestigious awards which is based on the quality of the research paper and the quality of the presentation.

Dr. Adams is a PhD student working with Dr. Melissa Kennedy. As part of her program, she spent six months in South Africa working with researchers at the University of Pretoria. Dr. Adams is also a 2001 graduate of the CVM.

Comparative & Experimental Medicine Graduate Program to Host Research Day

Graduate students will be showcasing their research efforts this summer at the First Annual Comparative and Experimental Medicine (CEM) Graduate Student Research Symposium. Students have been invited to submit abstracts for both posters and oral presentations. Prizes will be awarded to students with the best oral presentations.

The goal of this symposium is to foster networks within the program by giving students an opportunity to share research results, exchange ideas, and network with scientists in a variety of disciplines.

The CEM program is interdisci- plinary, with students studying in a wide variety of areas in both human and animal health. All faculty, staff, and students are invited to attend the free event, which will take place on Friday, June 22, from 9 am until 4 pm.

Funding Deadlines Drawing Near

Deadline Sponsor Program $ Amount URL
Cont. Elsa U. Pardee Foundation Start-up funds for new cancer investi- gators Up to 225,000 www.pardeefoundation.org
Apr. 1 American Cancer Society Basic, clinical, epide- miology 200,000 www.cancer.org
Apr. 1 National Canine Cancer Foundation Basic & clinical, high-impact, innovative cancer research in dogs 250,000 www.wearethecare.org
Apr. 1 Alpaca Research Foundation Health, husbandry, genetics, or fiber ~6,000 to 35,000 www.alpacaresarchfounda- tion.org
May 31 American Associa- tion of Bovine Practitioners 2nd-year veterinary student scholarships 1,500 www.aabp.org
Apr. 2 & 16 Morris Animal Foundation If full proposals requested 7,500 to 30,000 www.morrisanimalfoundation.org
May 15 AKC Canine Health Foundation If full proposals requested 12,000 + www.akchf.org

Funding for the current year is being awarded to new and current projects at the CVM.

Windows Vista Statistical Software Incompatibility

Users of Microsoft’s new, updated operating system, Windows Vista, may encounter compatibility problems with some research software, including some versions of SAS and SPSS.

The newest SAS software, version 9.1.3, is not compatible with Vista, and SAS does not have a definitive scheduled release date. Even with 9.2, SAS will not run on most computers marketed to consumers (that is, home computers). However, the newer version of SAS should support business editions of Vista.

SPSS version 15.0 also lacks compa- tibility with Vista, and since a newer ver- sion has not been announced, software developers for SPSS plan to offer a free patch once the issues are resolved.

CVM Receives Nearly $466,000 for Sponsored Projects Since December

Title Date PI Agency Start date Type $ Amount
The evaluation of SIS for surgical repair of heterotopy incisions at the time of cesarean delivery 2/15/07 HS Adair Cook Biotech Inc. Year 1 of 1 22,366
Validation of the use of the SmartPill capsule for measurement of transit time, pH, temperature, and luminal pressure in the gastrointestinal tract of horses 2/1/07 FM Andrews SeaBuck Equine, LCC 1/7 1/7 10,725
Improved diagnosis and monitoring of equine endocrine disorders 2/15/07 N-Frank ACVIM 1/7 1/7 15,000
Molecular pathways that mediate genetic susceptibility to low dose ionizing radiation 2/1/07 SA Kania UT-Dallas/ ORNL 2/15/07 1/7 22,206
Screening for antibodies to the 7b protein of feline coronavirus in cats for detection of persistent infection 2/1/07 MA Kennedy Winn Feline Foundation 12/1/06 1/6 14,750
Characterize the hormone adiponectin in felids by determining cDNA sequence, mRNA expression, and molecular weight composition 2/1/07 A. Lusby, C. Kirk 1/7 1/7 5,938
Expansion of the shelter population index for cats: Phase 2 of a multi- institutional study 2/1/07 JC New Winn Feline Foundation & George Sydney and Phyllis Red- mond Miller Trust 12/1/06 1/2 21,300*
T Regulatory Cells in HSV Immunity and Immunopathology 2/1/07 BT Rousse NIH 2/1/07 2/5 287,228
Hemostatic dressing 2/1/07 KM Tobias DeRoyal Industries 2/12/07 1/7 7,105
Ivermectin levels in blood and cerebrospinal fluid from healthy llamas 2/9/07 SR Van Amstel Merial Limited, LLC 2/9/07 1/7 13,260
* Total project funding

Windows Vista is not compatible with some statistical software packages such as SAS and SPSS. Although CVM computers will not make the Windows Vista transition anytime soon, researchers could be using the updated operating system on their own comput- ers, and any new PCs will include Vista as the standard. Users of SAS or SPSS software may want to hold onto those 2003 and XP operating systems a bit longer.
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**CVM Receives Nearly $466,000 for Sponsored Projects Since December**

<table>
<thead>
<tr>
<th>Title</th>
<th>PI</th>
<th>Agency</th>
<th>Start date</th>
<th>Type</th>
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<tr>
<td>The evaluation of SIS for surgical repair of hysteroscopy incisions at the time of cesarean delivery</td>
<td>HS Adair</td>
<td>Cook Biotech Inc.</td>
<td>2/15/07</td>
<td>Year 1 of 1</td>
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<td>Validation of the use of the SmartPill capsule for measurement of transit time, pH, temperature, and luminal pressure in the gastrointestinal tract of horses</td>
<td>FM Andrews</td>
<td>Private industry</td>
<td>1/1/07</td>
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<td>The efficacy of Seabuckthorn Liquid Supplement in prevention of gastric ulcers in horses</td>
<td>FM Andrews</td>
<td>Seabuck Equine, LLC</td>
<td>2/1/07</td>
<td>10,725</td>
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<td>Improved diagnosis and monitoring of equine endocrine disorders</td>
<td>N Frank</td>
<td>ACVIM</td>
<td>1/1/07</td>
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<td>Molecular pathways that mediate genetic susceptibility to low dose ionizing radiation</td>
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<td>Nestle Purina</td>
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<td>Expansion of the shelter population index for cats: Phase 2 of a multi-institutional study</td>
<td>JC New</td>
<td>Winn Feline Foundation &amp; George Sydney and Phyllis Reddington Miller Trust</td>
<td>12/1/07</td>
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<td>T Regulatory Cells in HSV Immunity and Immunopathology</td>
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<td>NIH</td>
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<td>Ivermectin levels in blood and cerebrospinal fluid from healthy lambs</td>
<td>SR Van Amstel</td>
<td>Merial Limited, LLC</td>
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*Total project funding

**Discovery: Research at the University of Tennessee College of Veterinary Medicine (2007) 2.1**

**Free EndNote Web Now Available**

A limited version of EndNote referencing software is now available on the Web. With it, users may import up to 10,000 editable reference records in over 2,300 reference styles, including the Journal of the American Veterinary Medical Association, BMC Cancer, and the Journal of Comparative Pathology.

Not only does the program format and formulate references in the designated style, it also inserts in-text references into Word while you write. Although some journals do not allow reference-creating software because the codes it creates interfere with publishing software, EndNote Web has a feature to remove those codes once the manuscript is finished. To delete field codes before submitting a manuscript, go to Tools, EndNote Web, and Remove Field Codes. Be sure to save a coded copy of the document before removing codes and that codes will be removed from the entire document, not just references.

The free version of EndNote has limitations compared to the full version, such as the inability to create and save advanced searches, or cite figures, tables, or equations. The full version costs around $200 for faculty/staff and $100 for students at the university.

To learn to use EndNote, see the tutorial on www.endnoteweb.com. The entire tutorial takes about an hour to complete, or individual components may be completed at different times (on average, about 4 minutes for each component).

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In Compliance

Vol. 2, Issue 1
Mar. 2007

By Robert Moore

Tips for Friendly Figures

Communicate with color and shape, when possible.

Avoid using green and red together.

Use bright colors.

Avoid using red on a dark background.

Fig. 1. Fused cell figure as normal eyes see it (altered from JAVMA 2004; 220:263-65).

Fig. 2. Fused cell figure as color-blind eyes see it (altered from JAVMA 2004; 220:263-65).

An estimated 8% to 10% of the male population (less than 1% of females) have problems distinguishing between red and green. These problems can prevent some peer reviewers and editors in general from understanding the information being presented on the page.

In addition to computer-generated figures, fluorescent staining may present the color-blind reader with difficulties as well. “How to make figures and presentations that are friendly to color-blind people,” the author shows how a color-blind person would see a figure similar to the one below (Fig. 1) to explain the cloning process. Although eyes that can see normal color ranges easily see how these two types of cells fuse, a color-blind person sees it differently (Fig. 2).

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Amanda is an M.S. student working with Dr. Madhu Dhar. Mugdha Dhar and Nichelle are both working on PhDs with Dr. Sean Back.

They will all be presenting posters of their work during the Apr. 28-May 2 meeting.

In this issue

p2 Student & faculty awards
Research day
Funding deadlines

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Jeopardized current and future funding from the Department of Health and Human Services and federal agencies.

In Compliance

Do you see the same green figure as in the figure below? It may look the same to you, but a color-blind reader may not. Color blindness affects about 8% of the male population, but younger individuals are more likely to be affected. Color blindness is a genetic condition that can run in families and can affect both males and females. People with color blindness may have difficulty distinguishing between red and green colors. This can make it difficult to read graphs and figures, especially those that require the use of red and green colors. Students, researchers, and everyone in the scientific community are encouraged to consider the needs of color-blind readers when creating and interpreting figures and graphs. This article will provide tips for communicating with color and shape, using bright colors, and avoiding red on a dark background.

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