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## Discovery Winter 2010

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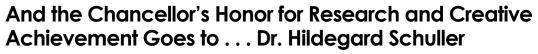
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THE UNIVERSITY OF TENNESSEE UT
INSTITUTE OF AGRICULTURE
COLLEGE OF VETERINARY MEDICINE



**D**r. Hildegard Schuller's phenomenal achievements reached a crescendo over the past year and earned her a spot among only four recipients of a 2010 University of Tennessee Chancellor's Honor for Research and Creative Achievement. This marks the second time Dr. Schuller has won the award; the previous time was in 1991. The honor is given to tenured faculty who have received national and international recognition in their field. Dr. Schuller's NIH Challenge Grant proposal was in the top 4% last year and was the only one of its kind funded from a UT Knoxville investigator. She received two other NIH awards around that same timeframe.

The Chancellor's selection committee had this to say about Dr. Schuller:

Hildegard Schuller, distinguished professor of pathology, has been studying the effects of environmental carcinogens for 35 years. She has developed vast expertise in the mechanisms of how normal cells are transformed into cancer cells by the components of cigarette smoke, in particular nicotine. Schuller made the discovery that lung cancer cells express receptors that bind to nicotine and its derivatives. She hypothesized that the components of tobacco smoke bind to nicotinic acetylcholine receptors, which are now known to be expressed throughout the body and can have profound effects on cell behavior.



# TERA System to Change How Investigators Submit Research Proposals for Review & Approval

The Tennessee Electronic Research Administration (TERA) system will create a paperless process of routing a research proposal for review and approval. Investigators will soon be using the Proposal & Award Management System (PAMS) portion of TERA to submit their routing forms (called an IPF–internal processing form) and proposals to the UTCVM Office of Research. The new IPF will include much of the same requested information as before, and the proposal itself will be uploaded as an attachment. The IPF, which also includes the budget, and attachments will then be routed to Tammy Berry for review and subsequently placed in a workflow for departmental approval. TERA will generate several E-mails throughout the routing process to inform investigators of the progress of their proposal review.

Collaborations with other UT campuses (such as UTK or UTM) will likely be treated as informal subcontracts. The new system will replace the COEUS proposal and award tracking system already in place, and also serve as a way to monitor compliance for research involving human or animal subjects, as well as conflicts of interest. In addition, intellectual property can be managed and traced. Investigators will have access to their own proposals through TERA and will be able to print reports of both proposal submissions and awards, as will department heads and deans.

Instructions and training will be provided before the new system is implemented in spring 2011. For questions about TERA, please contact Tammy Berry at 974-5572 or tberry@utk.edu.&o

#### Chronicle Article Provides Advice on Getting a Grant Rejected

Six biologists who have served on grant panels or as program officers talk about content, format, and relationships with the grant program director in their farcical article "How to Fail in Grant Writing." Although almost a cynical collection of pet peeves, the article does offer some sound advice on opposites.

Below are a few of the better techniques listed for improving the chances of grant rejection:

On content: "Make sure that the feasability of your proposal's second and third objectives depends on a particular result from your first objective."

On format and style: "Reviewers love 10-point, Arial-font, single-spaced type. Preferably there should be no spaces between paragraphs, headings, or subheadings, either. Your goal is to leave no white space on the page."

THE IMMUNE RESPONSE

TO INFECTION

On your grant program director: "Always keep in close communication with the program director managing your proposal, especially in those critical few days right after the panel meets to review the proposals. Multiple e-mails during that period are OK, but telephone calls really get their attention."

Jakob E, Porter A, Podos J, Braun B, Johnson N, Vessey S. How to fail in grant writing. *The Chronicle of Higher Education*. December 5, 2010. Available at: http://chronicle.com/article/How-to-Fail-in-Grant-Writing/125620/. Accessed December 8, 2010.

# Recent Publications Aalbaek B, Bemis DA, Schaerff M, Ilha M

Kania SA, Frank LA, Guardabassi L. Coryneform bacteria associated with canine otitis externa. *Vet Microbiol* 2010;145:292–298.

Belkaid Y, Sehrawat S, **Rouse BT.** Regulation of microbial immunity. In:

The Immune Response to Infection [see Kaufman below]. p. 109–120.

Bryan J, Frank LA. Food allergy in the cat: A diagnosis by elimination. *J Feline Med Surg* 2010;12:861–866.

Cordner AP, Armstrong PJ, **Newman SJ**, Novo R, Sharkey LC, Jessen CE. Effect of pancreatic tissue sampling on serum pancreatic

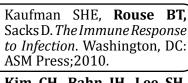
enzyme levels in clinically healthy dogs. *J Vet Diagn Invest* 2010;22:702–707.

**Craig LE**, Krimer PM, Cooley AJ. Canine synovial myxoma: 39 cases. *Vet Pathol* 2010;47:931–936.

Dierenfeld AD, **McEntee MF**, Vogler CA, et al. Replacing the enzyme  $\alpha$ -l-Iduronidase at birth ameliorates symptoms in the brain and periphery of dogs with mucopolysaccharidosis type I. *Sci Transl Med* 2010;60:60ra89.

Green AL, Carpenter LR, Edmisson DE, Lane CD, **Welborn MG, Hopkins FM, Bemis DA**, Dunn JR. Producer attitudes and practices related to antimicrobial use in beef cattle in Tennessee. *J Am Vet Med Assoc* 2010;237:1292–1298.

Ilha MRS, Newman Van **Amstel** SI. S, Fecteau KA. Rohrbach BW. Uterine lesions in 32 miniature pet Vet Pathol pigs. 2010;47:1071–1075.

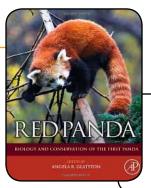


Kim CH, Bahn JH, Lee SH, Kim GY, Jun SI, Lee KH, Baek SJ. Induction of cell growth arrest by atmospheric nonthermal plasma in colorectal cancer cells. *J Biotechnol* 2010;150:530–538.

Lee SH, Bahn JH, Whitlock NC, Baek SJ. Activating transcription factor 2 (ATF2) controls tolfenamic acid-induced ATF3 expression via MAP kinase pathways. *Oncogene* 2010;29:5182–5192.

Munson L, **Craig LE**, Miller MA, Kock ND, Simpson RM, Wellman ML, Sharkey LC, Birkebak TA. Elements of good training in anatomic pathology. *Vet Pathol* 2010;47:995–1002.

**Pedigo AS, Odoi A.** Investigation of disparities in geographic accessibility to emergency stroke and myocardial infarction care in East Tennessee using Geographic Information Systems and network analysis. *Ann Epidemiol* 2010; 20:924–930.



Phillipa J, **Ramsay EC**. Veterinary care of the red panda. In: Glatson A, ed. *Red Panda: Biology and Conservation of the First Panda*. Netherlands: William Andrew; 2010:271–286.

**Phipps JE**, Kestler DP, Foster JS, Kennel SJ, **Donnell R**, Weiss DT, Solomon A, Wall JS. Inhibition of pathologic immunoglobulin-free light chain production by small interfering RNA molecules. *Exp Hematol* 2010;38:1006–1013.

Roach WE, **Krahwinkel DJ**. Obstructive and traumatic lesions of the canine and feline trachea. *Tierarztl Prax* 2010;38:147–154.

**Rouse BT**, Lukacher AE. Some unmet challenges in the immunology of viral infections. *Discov Med* 2010;10:363–370.

**Souza MJ, Cox S**. Tramadol use in zoologic medicine. *Vet Clinics N Am Exot Anim Pract* 2011;14:117–130.

Zhong Y, Krisanapun C, **Lee SH**, **Nualsanit T**, Sams C, Peungvicha P, **Baek SJ.** Molecular targets of apigenin in colorectal cancer cells: Involvement of p21, NAG-1 and p53. *Eur J Cancer* 46:3365–3374.

### Research Resource Spotlight

#### Community of Science: Grant-finding Tool

All faculty, staff, and students at the university have access to one of the best grant-finding tools available: Community of Science (COS). Its "Search Funding Opportunities" feature provides information about federal, private, and industry grants for research, graduate studies, and travel.

The COS interface allows the user to perform an advanced search and save not only the results but also the search itself for use later on. By choosing to receive weekly e-mail alerts based on a saved search, users can feel certain they are not missing out on opportunities that might cater to their needs.

The key to getting the best results from COS is to develop a carefully-crafted list of **broad keywords** and

perform an *advanced* search. The best searches are those that use general terms. For example, a search using "*Staphylococcus aureus*" yields only three results, but a search for "bacteria" gives 23.



To learn more about COS, visit www.cos.com, or talk to Tammy Berry about funding opportunities (tberry@utk.edu; 974-5572). №

# Solyman Takes Best Oral Presentation Award

Comparative and Experimental Medicine graduate student Samar Solyman received first place for her oral presentation in the microbiology division of the graduate student competition at the Kentucky Academy of Science/Kentucky Tennessee Branch of the American Society of Microbiology meeting.

She was the only non-Kentucky graduate student to win an award. Solyman is a PhD candidate working with **Dr. Stephen Kania**, who was a co-author, along with **Dr. David Bemis**, on the presentation entitled "Study of population genetic structure in *Staphylococcus pseudintermedius*." 🔊

#### College Research Committee Established

The newly-formed Research Committee at the UTCVM is charged with promotion of quality research programs within the college. Established last summer, the committee will serve as an advisory group to the associate dean for research and graduate studies and to the dean on the following matters: college research policies, promoting and funding a diverse research program, awards given by the research office, UTCVM core research facilities, compilation of a list of research opportunities, and the Comparative & Experimental Medicine and Public Health Research Symposium.

The Research Committee has 10 members: two from each UTCVM department, one from the Animal Science Department, and the associate dean for research and graduate studies. Current committee members include Drs. Joe Bartges (chairperson), Seung Baek, David Brian, Madhu Dhar, Nicholas

Frank, Stephen Kania, Amy LeBlanc, Stephen Oliver, and Hwa-Chain Robert Wang, in addition to Dr. Leon Potgieter. Term limits are in place for all departmental representatives, all members have voting rights, and the committee reports to the Executive Committee of the college.

#### UTCVM Investigators Bring in \$254,554 for Recent Sponsored Projects

Title	PI	Agency	Start	Туре	\$ Amount
Evaluation of cranberry-derived proanthocyanidins for prevention and treatment of induced <i>Escherichia coli</i> urinary tract infection in dogs	J Bartges	Nutramax Laboratories	10/1/10	Yr 1/1	39,649
Pilot efficacy study: Field efficacy evaluation of Spinosad paste formulations for clinical improvement in wound healing	M Bohling	Eli Lilly and Co.	12/1/10	1/1	133,125
Safety and efficacy of a novel anthracycline, AD198, in dogs with refractory lymphoma	A Legendre	Morris Animal Foundation	10/1/10	1/1	54,000
The use of Webinar technology for conducting study sessions	M Sims	UT Office of Information Technology	1/1/11	1/1	3,000
Evaluation of topical delivery methods for the introduction of siRNA into feline corneal cells in vivo	R Wilkes	Winn Feline Foundation	12/1/10	1/1	24,780

#### **Recent Presentations**

Booker S, Moustaid-Moussa N, Kojima C, **Gouffon J, Newman S**, Minkin S, Kattesh H, Biggerstaff J. Regional differences in adipose tissue in the Sinclair minipig. Oral presentation at: 28th Annual Obesity Scientific Meeting; October 2010; San Diego, CA.

Busingye D, Pedigo A, Odoi A. Does where you live affect your access to stroke and heart attack care? The Middle Tennessee Case. Presented at: The Ninth Annual Middle Tennessee Forum on Geographic Information Systems; November 2010; Murfreesboro, TN.

**Craig L.** Potomac horse fever abortion: Placenta and fetus mystery slide seminar; Lecturing for the short attention span. Presented at: 61th Annual Meeting of the American College of Veterinary Pathologists; November 2010; Baltimore, MD.

**Frank L.** Alopecia – Is it hormonal?; Alopecia X. Invited presentations at: International Congress of Veterinary Endocrinology; November 2010; Buzios, Brazil.

Harris BJ, Lumley RJ, **Cekanova M,** Dalhaimer P. Micron-length cylinders that wrap-up malignant B-lymphocytes from lymphomic BALB/c mice. Presented at: Biomedical Engineering Society Annual Meeting; October 2010; Austin, TX.

Kabalka GW, Nichols TL, Yao M-L, **Cekanova M.** Boronation of the tissue stain, eosin-Y, for boron neutron capture therapy. Presented at: 14th International Congress on Neutron Capture Therapy; October 2010; Buenos Aires, Argentina.

McCain S, Ramsay EC, Kirk C. Endocrine function in American black bears. Presented at: American Association of Zoo Veterinarians' & American Association of Wildlife Veterinarians' Joint Conference; October 2010; South Padre Island, TX.

**Narak J.** Gene therapy for glioma. Presented at: South Eastern Veterinary Neurology Group Meeting; September 2010; Athens, GA.

**Newman SJ.** Neuropathology Mystery Slide Session – Degenerative myelopathy in a black bear. Oral presentation at: American College of Veterinary Pathologists Annual Meeting; October 2010; Baltimore, MD.

Newman SJ, Jankovsky J, Rohrbach BW, LeBlanc AK. Ckit in canine mucocutaneous melanosarcomas. Poster presented at: American Association of Veterinary Diagnosticians Annual Meeting; November 2010; Minneapolis, MN.

Newman SJ, Jankovsky J, Rohrbach BW, LeBlanc AK. Ckit in canine mucocutaneous melanomosarcomas. Oral presentation at: American College of Veterinary Pathologists Annual Meeting; October 2010; Baltimore, MD.

Novak JM, McQueen TD, Moore JD, Saputo J, Uzal FA, Craig LE. Histologic characterization of *Clostridium perfringens* A-induced canine hemorrhagic gastroenteritis. Presented at: American College of Veterinary Pathologists Annual Meeting; October 2010; Baltimore, MD.

**Perez R, Narak J.** Intravenous safety of brilliant blue G in the normal dog. Presented at: South Eastern Veterinary Neurology Group Meeting; September 2010; Athens, GA.

Ramsay EC, Craig L, Henry G. Not all radiolucency is osteomyelitis: A case report of an African elephant (*Loxondonta africana*) with a P3 lesion. Presented at: American Association of Zoo Veterinarians' & American Association of Wildlife Veterinarians' Joint Conference; October 2010; South Padre Island, TX.

**Roberson J.** Mastitis treatment efficacy: Are we making progress?; Mastitis control: Do the old ways still work?; Small ruminant parasite control; Food animal neurology: Parts I and II; Farm animal problem solving. Presentations at: Central Veterinary Conference (CVC) San Diego; October 2010; San Diego, CA.

Roberson J, Gomez de Witte F. Sick cria management: The Tennessee method. Presentation at: Central Veterinary Conference (CVC) San Diego; October 2010; San Diego, CA.

**Solyman S, Kania S, Bemis D.** Study of population genetic structure in *Staphylococcus pseudintermedius*. Oral presentation at: Kentucky Academy of Science/Kentucky Tennessee Branch of the American Society of Microbiology meeting; November 2010; Bowling Green, KY.

Tobias K. Gastrointestinal surgery and

portosystemic shunts. Lecture presented at: Memphis/Tunica Veterinary Medical Association Annual Meeting; November 2010; Tunica, MS.

**Tobias K.** Veterinary expert for "Modern Marvels: Dogs." *The History Channel;* November 2010. http://www.history.com/shows/modern-marvels/videos/modern-marvels-dogs#modern-marvels-dogs.

**Wang H-CR.** Reactive oxygen speciesmediated selective apoptosis of oncogenic Ras-expressing cancer cells. Invited oral presentation at: China Medical University; October 29, 2010; Taichung City, Taiwan.

Wang H-CR. Reactive oxygen speciesmediated selective apoptosis of oncogenic Ras-expressing cancer cells. Invited oral presentation at: National Institute of Cancer Research/National Institutes of Health Research; October 28, 2010; Tainan City, Taiwan.

Wang H-CR. Reactive oxygen speciesmediated selective apoptosis of oncogenic Ras-expressing cancer cells. Invited oral presentation at: Veteran General Hospital Medical Research Center; November 1, 2010; Taipei City, Taiwan.

**Wang H-CR.** ROS-mediated selective apoptosis of oncogenic Ras-expressing cancer cells. Invited oral presentation at: BIT's 8th Annual Congress of International Drug Discovery and Technology; October, 2010; Beijing, China.

Wang H-CR. Veterinary education in the USA; Reactive oxygen species-mediated selective apoptosis of oncogenic Rasexpressing cancer cells. Invited oral presentations at: Xinjiang Agricultural University College of Veterinary Medicine; October 20, 2010; Urumqi City, Xinjiang Province, China.

**Wang H-CR.** Veterinary education in the USA and UTCVM. Invited oral presentation: Hanoi University of Agricultural Faculty of Veterinary Medicine and the US CDC Office in Vietnam; November 4, 2010; Hanoi City, Vietnam.

**Welborn M.** Update on zoonotic and foreign animal diseases; Die-ning on these plants could be hazardous to your patient's health. Presented at: Tennessee Veterinary Technicians Association Fall Conference; October 2010; Pigeon Forge, TN.&>

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