Recent Presentations

Back SJ. Green tea and anti-carcinogenesis. At: The Royal Golden Jubilee PhD Program, Mahidol University; October 14, 2009; Bangkok, Thailand.

Craig LE, Krimmer PM, Cooley AJ. Canine synovial myxoma: 39 cases. Poster presented at: 60th Annual Meeting of the American College of Veterinary Pathologists; December 5–9, 2009; Monterey, CA.


Cui M-Z. Lysophosphatidic acid in vascular disease. Invited talk at: Louisiana State University Health Sciences Center, Shreveport, Department of Up to 3 proteins and Cellular Physiology seminar series; September 30, 2009; Shreveport, LA.

Ditmyer H. Mycotic mastitis in three dogs due to Blastomyces dermatitidis. Poster presented at: American College of Veterinary Pathologists Annual Meeting; December 5–9, 2009; Monterey, CA.

Frank N. Laminitis research: University of Tennessee; Hormones and metabolism: What role do these factors play?: Workshop: Endocrine disease and laminitis. Oral presentations at the: Fifth International Equine Conference on Laminitis; November 2009; West Palm Beach, FL.

Frank N. Table topic: Equine endocrine disorders. Oral presentation at: 50th Annual American Association of Equine Practitioners Convention; December 2009; Las Vegas, NV.

Frank N. Synopsis of vascular and endothelial dysfunction abstracts. Oral presentation at: 2nd American Association of Equine Practitioners Foundation Equine Laminitis Research Workshop; November 2009; West Palm Beach, FL.

Gomez de Witte F, Frank N. Effects and applications of levodopa EURO xim. Poster presented at: Fifth International Equine Conference on Laminitis; November 2009; West Palm Beach, FL.


Hurst S, Gorman S, Agarwal S, Dhar M. In vitro alterations of a putative phospholipid translocase suggest a role in glucose uptake for C2C12 muscle cells. At: International Mamnnalians Genome Conference; November 1–4, 2009; La Jolla, CA.


Plummer HK II. Potassium channels in cancer. Invited seminar at: Department of Biological Sciences, Bowling Green State University; November 18, 2009; Bowling Green, OH.

Plummer HK II, Hance M. Estrogen activates G-protein inwardly rectifying potassium channels (GIRK) in MCF-7 breast cancer cells. Poster presented at: Annual Meeting of the American Society for Cell Biology; December 6, 2009; San Diego, CA; Dhar M, Hurst S acknowledged for training in immunofluorescence.

Souza MJ. Rabies surveillance and prevention in Tennessee. Tennessee Animal Care & Control Conference; October 8–9, 2009; Nashville, TN.

Tadros L, Frank N, Horohov DW. Inflammatory cytokine messenger RNA expression during the development of oligofructose-induced laminitis in horses. At: 2nd American Association of Equine Practitioners Foundation Equine Laminitis Research Workshop; November 2009; West Palm Beach, FL.

Tobias KM. Treatment of methicillin-resistant Staphylococcus infections in small animals. At: American College of Veterinary Surgeons Veterinary Symposium; October 2009; Washington, DC.

Wang H-CR. Veterinary education in the USA; Graduate research education in the USA; Oncogenes and cell signaling; Target therapies on oncogene-activated cells. Invited presentations at: Northwest Agricultural and Forestry University, College of Animal Science and Veterinary Medicine; October 19–23, 2009; Yanglin City, China.

Whitlock B. Birth defects in cattle. Invited talk at: Coby Veterinary Services 21st Annual Client Meeting; October 2009; Dandridge, TN.

Comparative Medicine vs. Comparative and Experimental Medicine

What’s in a Name?

In January 1980, the College of Veterinary Medicine (CVM) and the Graduate School of Medicine at the local University of Tennessee Medical Center (the then-Center for Health Sciences) joined forces to create a new master of science and doctor of philosophy degree program, with the goal of using both animal and human biology and medicine to provide a comparative animal orientation for students to understand disease. The Comparative and Experimental Medicine (CEM) program, as it was called, was envisioned by Dr. Hyram Kitchen when the college was established, and Dr. Leon Potgieter mentored the program’s first student. Shortly after the program’s initiation, Dr. Potgieter took over as director, a position he held until Dr. Robert Moore became director in 2001.

The CEM program remains a jointly-administered program between the Graduate School of Medicine and the CVM, where the administrative office is located. The interdisciplinary nature of the CEM program means that its 30 current students are all over the Knoxville campuses—at the medical center and in the UT departments of Microbiology, Pathobiology, Small Animal Clinical Sciences, Nutrition, Large Animal Clinical Sciences, and yes, Comparative Medicine.

When the CVM was founded, the Comparative Medicine Department was called Environmental Practice. That changed sometime around 1994, when the college’s executive committee recognized the need for a more public-friendly name that was also more encompassing of the wide variety of disciplines within the department, which included, at the time, exotic animal medicine and laboratory animal medicine.

Although no sign on a door marks the existence of the CEM program, the “graduate studies” portion of the Office of Research and Graduate Studies refers to CEM. In the three-person office, Kim Rutherford and Misty Bailey coordinate day-to-day operations of the program, with Kim handling admissions and the timetable.

Farewell, Dr. Buddy Moore

Since 2001, Dr. Robert “Buddy” Moore has administered the research and graduate programs at the CVM. By 2002, overall research expenditures for the college had increased by 29%, up over half a million dollars from the previous year. This climb continued until the national economic downturn began to surface in 2006, and by then, expenditures had grown by nearly 100% since Moore’s first year.

These expenditures are considered, in the research world, to be the best measure of a program’s research success, since expenditures measure actual funds spent out of active research accounts. Therefore, by the most reliable measure, Moore will be leaving a heavy-handed stamp on the CVM when he leaves us to join the UT Space Institute in Tullahoma, TN, as its executive director. There, he will oversee the research program and graduate education.

Please wish Dr. Moore well in his new position, which he begins after the holiday break. He has certainly lived up to his nickname (Buddy) with many people throughout the college and UT Knoxville.
Hurst Earns Travel Award

Jacqui Whittmore saw the need for a better way to train veterinary students to perform canine endoscopy; this recognition led to the creation of FRED: Flexible and Rigid Endoscopic Device.

Whittmore and former student Dr. Katie Cook Kottkamp used off-the-shelf products on the road to creating FRED, and after several bumps in that road, they discovered a working combination of materials and epoxy. Whittmore has submitted a provisional patent application for FRED and, with the UT Research Foundation, is working to find the right developer for production and marketing.

FRED’s major benefits are that it is much less expensive to produce than most endoscopic simulators, its use reduces the need for research animals in teaching endoscopic technique, and its materials will not damage sensitive endoscopic equipment.

FRED’s gastrointestinal endoscopic images are virtually indistinguishable from images acquired in live patients, and Whittmore plans to develop both respiratory and urinary modules in the future. These modules are interchangeable, replaceable after wear, and washable. 35

Hurst's travel award is the result of a travel grant awarded by the International Mammalian Genome Society to present her research results at the International Mammalian Genome Conference (details in Presentations).

This travel award is Hurst's second one this year. She is mentored by Dr. Madhu Dhar and is a second-year PhD student. 36

Research Resource Spotlight

UTRF Offers Patent-Filing Assistance

Two stories in this issue of Discovery focus on UTCVM faculty members who have filed patents. Both of these faculty members assisted the support of the UT Research Foundation (UTRF) in achieving this feat.

The UTRF is available to help faculty members in evaluating on novelty and commercial potential, as well as in funding and managing the patent process, marketing an invention to potential licensees, and negotiating licensing agreements.

Utchvcn Investigators Earn Over $3.7 Million for Recent Sponsored Projects

<table>
<thead>
<tr>
<th>Title</th>
<th>PI</th>
<th>Agency</th>
<th>Start date</th>
<th>Type</th>
<th>$ Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight reduction in severely obese dogs</td>
<td>CA Kirk</td>
<td>Private industry</td>
<td>10/7/09</td>
<td>Yr 2/3</td>
<td>10,206</td>
</tr>
<tr>
<td>Effect of alternative and complementary treatment on dogs with osteoarthritis of the hip or stifl</td>
<td>DL Mills</td>
<td>Morris Animal Foundation</td>
<td>11/1/09</td>
<td>2/2</td>
<td>41,904</td>
</tr>
<tr>
<td>Effect of alternative and complementary treatment on dogs with osteoarthritis</td>
<td>DL Mills</td>
<td>Morris Animal Foundation</td>
<td>5/1/09</td>
<td>1/1</td>
<td>2,500</td>
</tr>
<tr>
<td>Training to enhance regional collaboration and utilize the national credentialing standards for animal emergency responders</td>
<td>SR Thompson</td>
<td>DHS</td>
<td>10/1/09</td>
<td>2/3</td>
<td>1,771,837</td>
</tr>
<tr>
<td>Training to enhance effective and timely sharing of information and intelligence on the importation and transportation of food</td>
<td>SR Thompson</td>
<td>DHS</td>
<td>10/1/09</td>
<td>2/3</td>
<td>1,760,298</td>
</tr>
<tr>
<td>Green tea catechins in precancerous prevention</td>
<td>H-CH Wang</td>
<td>NIH</td>
<td>9/1/09</td>
<td>2/2</td>
<td>190,598</td>
</tr>
</tbody>
</table>

Gomez de Witte Honored for Best Poster

Dr. Fiamma Gomez de Witte was awarded for best poster in the category of “best case made for an industry product improving equine health” at the November International Equine Conference on Laminitis. Her poster, “Effects and applications of levethoxyshion sodium,” will allow her to attend the 2010 laminitis conference (in Montreal, CA) on scholarship from a private sponsor.

Dr. Nick Frank was also an author on the poster. 37

Happy Holidays!
Whittmore's FRED Eases Small Animal Endoscopy Training

Discoveries: Research at the University of Tennessee College of Veterinary Medicine (2009) 4.3

UTVCVM Investigators Earn Over $3.7 Million for Recent Sponsored Projects

Title | PI | Agency | Start date | Type | $ Amount
--- | --- | --- | --- | --- | ---
Weight reduction in severely obese dogs | CA Kirk | Private industry | 10/7/09 | Yr 2/3 | 10,206
Effect of alternative and complementary treatment on dogs with osteoarthritis of the hip or stifle | DL Mills | Morris Animal Foundation | 11/1/09 | 1/2 | 41,664
Effect of alternative and complementary treatments on dogs with osteoarthritis | DL Mills | Morris Animal Foundation | 5/1/09 | 1/1 | 2,500
Training to enhance regional collaboration and utilize the national networking standards for animal emergency responders | SR Thompson | DHS | 10/1/09 | 2/3 | 1,771,837
Training to enhance effective and timely sharing of information and intelligence on the importation and transportation of food | SR Thompson | DHS | 10/1/09 | 2/3 | 1,760,298
Green tea catechins in precancerous prevention | H-CR Wang | NIH | 9/1/09 | 2/2 | 190,598

Gomez de Witte Honored for Best Poster

Drs. Flamma Gomez de Witte was awarded for best poster in the category of “best case made for an industry product improving equine health” at the November International Equine Conference on Laminitis. Her poster, “Effects and applications of levothyrinone sodium,” will allow her to attend the 2010 laminitis conference in (Monte Carlo, CA) on scholarship from a private sponsor.

Dr. Nick Frank was also an author on the poster.

Hurst Earns Travel Award

The journey to La Jolla, California, was a bit easier for Comparative and Experimental Medicine graduate student Sarah Hurst as a result of a travel award. She received $2,000 for her poster presentation at the American Mammalian Genome Society to present her research results at the International Mammalian Genome Conference (details in Presentations).

This travel award is Hurst's second one this year. She is mentored by Dr. Madhu Dhar and is a second-year PhD student.

Research Resource Spotlight

UTRF Offers Patent-Filing Assistance

Staff at UTRF also have the know-how to manage licensees and government compliance issues, and they are skilled in the process of registering copyrights and trademarks. With several attorneys and marketing experts on hand, the entire innovation process comes together seamlessly.

For more information about UTRF’s services, see their Web site at http://utrf.tennessee.edu.

Mendis-Handagama Receives Patent for Testosterone Studies

A patent filed in 2003 by Dr. Charmi Mendis-Handagama was awarded September 29, 2009. “Methods of rejuvenating Leydig cells and enhancing testosterone production in a male subject,” as it is titled, was assigned patent number US 7,595,056 B1. The enhanced testosterone production is accomplished by co-administering luteinizing hormone and thyroxin. Mendis-Handagama’s work on Leydig cells as they relate to testosterone has been the subject of many published articles, and she is currently seeking funding based on her studies.

Recent Publications


Djacci Whittmore saw the need for a better way to train veterinary students to perform canine endoscopy; this recognition led to the creation of FRED: Flexible and Rigid Endoscopic Dog Trainer.

Whittmore and former student Dr. Katie Cook Kottkamp used off-the-shelf products on the road to creating FRED, and after several bumps in that road, they discovered a working combination of materials and epoxy. Whittmore has submitted a provisional patent application for FRED and, with the UT Research Foundation, is working to find the right developer for production and marketing.

FRED's major benefits are that it is much less expensive to produce than most endoscopic simulators, its use reduces the need for research animals in teaching endoscopic technique, and its materials will not damage sensitive endoscopic equipment. FRED's gastrointestinal endoscopic images are virtually indistinguishable from images acquired in live patients, and Whittmore plans to develop both respiratory and urinary modules in the future. These modules are interchangeable, replaceable after wear, and washable.

Hurst's travel award was FRED's second one this year. She is mentored by Dr. Madhu Dhar and is a second-year PhD student.

The enhanced testosterone production is accomplished by co-administering luteinizing hormone and thyroxin. Mendis-Handagama’s work on Leydig cells as they relate to testosterone has been the subject of many published articles, and she is currently seeking funding based on her studies.


Whittemore’s FRED Eases Small Animal Endoscopy Training

The need for research animals in teaching endoscopic technique, and its materials will not damage sensitive endoscopic equipment. FRED’s gastrointestinal endoscopic images are virtually indistinguishable from images acquired in live patients, and Whittemore plans to develop both respiratory and urinary modules in the future. These modules are interchangeable, replaceable after wear, and washable. Whittenmore received a travel award this year, which will allow her to present her research at the International Mammalian Genome Conference (details in Presentations).

First author on the poster.

Second one this year. She is mentored by Dr. Madhu Dhar and is a second-year PhD student.
Comparative Medicine vs. Comparative and Experimental Medicine

What's in a Name?

In January 1980, the College of Veterinary Medicine (CVM) and the Graduate School of Medicine at the local University of Tennessee Medical Center (the then-Center for Health Sciences) joined forces to create a new master of science and doctor of philosophy degree program, with the goal of using both animal and human biology and medicine to provide a comparative animal orientation for students to understand disease. The Comparative and Experimental Medicine (CEM) program, as it was called, was envisioned by Dr. Hyram Kitchen when the college was established, and Dr. Leon Potgieter mentored the program’s first student. Shortly after the program’s initiation, Dr. Potgieter took over as director, a position he held until Dr. Robert Moore became director in 2001.

The CEM program remains a jointly-administered graduate program between the Graduate School of Medicine and the CVM, where the administrative office is located. The interdisciplinary nature of the CEM program means that its 30 current students are all over the Knoxville campuses—at the medical center and in the UT departments of Microbiology, Pathobiology, Small Animal Clinical Sciences, Nutrition, Large Animal Clinical Sciences, and yes, Comparative Medicine.

When the CVM was founded, the Comparative Medicine Department was called Environmental Practice. That changed sometime around 1994, when the college’s executive committee recognized the need for a more public-friendly name that was also more encompassing of the wide variety of disciplines within the department, which included, at the time, exotic animal medicine and laboratory animal medicine.

Although no sign on a door marks the existence of the CEM program, the “graduate studies” portion of the Office of Research and Graduate Studies refers to CEM. In the three-person office, Kim Rutherford and Misty Bailey coordinate day-to-day operations of the program, with Kim handling admissions and the timetable.

Farewell, Dr. Buddy Moore

Since 2001, Dr. Robert “Buddy” Moore has administered the research and graduate programs at the CVM. By 2002, overall research expenditures for the college had increased by 29%, up over half a million dollars from the previous year. This climb continued until the national economic downturn began to surface in 2006, and by then, expenditures had grown by nearly 100% since Moore’s first year.

These expenditures are considered, in the research world, to be the best measure of a program’s research success, since expenditures measure actual funds spent out of active research accounts. Therefore, by the most reliable measure, Moore will be leaving a heavy-handed stamp on the CVM when he leaves us to join the UT Space Institute in Tullahoma, TN, as its executive director. There, he will oversee the research program and graduate education.

Please wish Dr. Moore well in his new position, which he begins after the holiday break. He has certainly lived up to his nickname (Buddy) with many people throughout the college and UT Knoxville.

Moore as catcher for a CEM pick-up game of cricket in 2007.