ANNUAL REPORT
April 2011 – April 2012

DEPARTMENT OF CLINICAL SCIENCES

NORTH CAROLINA STATE UNIVERSITY
COLLEGE OF VETERINARY MEDICINE

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ANNUAL REPORT TO THE UNIVERSITY
DEPARTMENT OF CLINICAL SCIENCES
2011-2012

Mission Statement

We are dedicated to excellence in educating and training veterinarians and comparative biomedical scientists, furthering health care and wellness through discovery and clinical research, providing outstanding and compassionate medical care to a diverse range of animal patients, effectively engaging animal-owning public, government and industry partners, and providing leadership in integrating biomedical sciences to advance One Health.

I. Changes in Environment

The major environmental change for this department has been the improvement in the economic outlook for veterinary medicine. This has been both an opportunity and a concern. The hospital services have recorded increased income, but the faculty have been very stretched providing cutting edge clinical care in a very competitive practice environment.

A. Initiatives

The major clinical initiatives accomplished this year were the move to the Terry Center in May 2011 and the subsequent initiation of the services within the Veterinary Health and Wellness Center, housed in the existing hospital. Transition of the existing services and initiation of new services has required extensive planning efforts over the current year. The move to a much larger hospital created a number of communication issues that had to solved. Within the coming year, we will be opening the Exotic Animal Service. Planning for a cutting edge equine reproductive center program is underway.

The major teaching initiatives for the current year were centralization of academic support functions (learning management system materials support, testing, teaching technician support, teacher evaluation) to the Associate Dean for Academic Affairs, continued training of faculty regarding education, and the curriculum change initiative. DoCS faculty members worked extensively with the new Academic Support Unit to troubleshoot the new system, attended many training sessions and participated in the curriculum change meetings.

The major ongoing research initiative is building a solid clinical trials program within the Center for Comparative Medicine and Translational Research. A new system for charging of clinical trials patients in the hospital was developed to provide encouragement for use of the program. The first benefits from this program have been realized and additional clinical trials are being developed.

B. Diversity

The department has international faculty and visiting scholars from multiple continents and cultures. Of 65 faculty members in the department, 30 are women. There is one Latino and one Asian-American faculty member. One technician is African-American.
We have international graduate students, as well as house officers and research associate postdocs from around the world.

C. Instructional Program

The Clinical Sciences faculty continued to provide key instructional offerings. In addition to acting as course coordinators for the courses in the list below, faculty also provide instruction in a number of other DVM and graduate courses.

<table>
<thead>
<tr>
<th>DIDACTIC COURSES:</th>
<th>SEMESTER</th>
<th>COORDINATOR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1ST YEAR DVM STUDENTS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Careers in Veterinary Medicine (VMC-910)</td>
<td>FALL</td>
<td>FISH</td>
</tr>
<tr>
<td>General Introduction to Companion Animal Behavior (VMC-927)</td>
<td>SPRING</td>
<td>SHERMAN</td>
</tr>
<tr>
<td><strong>2ND YEAR DVM STUDENTS</strong></td>
<td></td>
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</tr>
<tr>
<td>Principles of Surgery (VMC-932)</td>
<td>FALL</td>
<td>MATHEWS</td>
</tr>
<tr>
<td>Introduction to Physical Examination (VMC-937)</td>
<td>FALL</td>
<td>MARKS</td>
</tr>
<tr>
<td>Introduction to Physical Exam Examination-Laboratory Animal and Zoological Species (VMC-931)</td>
<td>SPRING</td>
<td>LEWBART</td>
</tr>
<tr>
<td><strong>3RD YEAR DVM STUDENTS</strong></td>
<td></td>
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<tr>
<td>Companion Animal Medicine and Surgery I (VMC-951)</td>
<td>FALL</td>
<td>VADEN</td>
</tr>
<tr>
<td>Equine Medicine and Surgery (VMC-952)</td>
<td>FALL</td>
<td>BREUHAUS</td>
</tr>
<tr>
<td>Laboratory Animal and Special Species Medicine (VMC-953)</td>
<td>FALL</td>
<td>FISH</td>
</tr>
<tr>
<td>Introduction to Clinical Practice (VMC-957)</td>
<td>FALL/SPRING</td>
<td>HARDIE/MARKS</td>
</tr>
<tr>
<td>Companion Animal Medicine and Surgery II (VMC-961)</td>
<td>SPRING</td>
<td>ROE</td>
</tr>
<tr>
<td>Professional Development for Veterinary Practice (VMC-962)</td>
<td>SPRING</td>
<td>DUNNING</td>
</tr>
<tr>
<td>Advanced Principles of Surgery (VMC-965)</td>
<td>SPRING</td>
<td>TATE</td>
</tr>
<tr>
<td><strong>SELECTIVES:</strong></td>
<td></td>
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</tr>
<tr>
<td>Advanced Ferret Medicine (VMC-991)</td>
<td>FALL (odd years)</td>
<td>STOSKOPF/HARMS</td>
</tr>
<tr>
<td>Companion Avian Medicine (VMC-991)</td>
<td>SPRING</td>
<td>DEGERNES</td>
</tr>
<tr>
<td>Invertebrate Medicine (VMC991)</td>
<td>SPRING</td>
<td>LEWBART</td>
</tr>
<tr>
<td>Equine Medicine (VMC991)</td>
<td>FALL</td>
<td>BREUHAUS</td>
</tr>
<tr>
<td>Advance Carnivore Medicine (VMC991)</td>
<td>SPRING</td>
<td>STOSKOPF</td>
</tr>
<tr>
<td>Animal Behavior and Welfare (VMC-991)</td>
<td>FALL</td>
<td>SHERMAN</td>
</tr>
<tr>
<td>Applied Surgical Anatomy (VMC991)</td>
<td>SPRING</td>
<td>MATHEWS</td>
</tr>
<tr>
<td>Intro to Medical Photography/Digital Imaging (VMC-991)</td>
<td>ALL YEAR</td>
<td>GERARD</td>
</tr>
<tr>
<td>Large Animal Endoscopy (VMC991)</td>
<td>FALL</td>
<td>BRISTOL/SAVAGE</td>
</tr>
<tr>
<td>Extramural Experiences in Laboratory Animal Medicine (VMC-991)</td>
<td>SPRING</td>
<td>WILLIAMS</td>
</tr>
<tr>
<td>Art and Practice of Effective Veterinarian-Client Communications (VMC-991)</td>
<td>FALL</td>
<td>GERARD/WILLIAMS</td>
</tr>
<tr>
<td>Physical Therapy and Rehabilitation (VMC991)</td>
<td>SPRING</td>
<td>MARCELLIN</td>
</tr>
<tr>
<td>Advanced Fish Medicine (VMC991)</td>
<td>FALL</td>
<td>LEWBART</td>
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<tr>
<td>Advanced Herptile Medicine (VMC991)</td>
<td>FALL</td>
<td>STOSKOPF</td>
</tr>
<tr>
<td>Advanced Companion Avian Medicine (VMC991)</td>
<td>SPRING</td>
<td>DEGERNES</td>
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<tr>
<td>Raptor Medicine and Rehabilitation (VMC991)</td>
<td>FALL</td>
<td>DEGERNES</td>
</tr>
<tr>
<td>Primate Medicine (VMC991)</td>
<td>SPRING</td>
<td>STOSKOPF</td>
</tr>
<tr>
<td><strong>Advanced Equine Theriogenology (VMC991)</strong></td>
<td>SPRING</td>
<td>WHITACRE</td>
</tr>
<tr>
<td>Introduction to Equine Orthopedics &amp; Lameness (VMC991)</td>
<td>SPRING</td>
<td>REDDING</td>
</tr>
<tr>
<td>Advanced Horse Handling (VMC991)</td>
<td>SPRING</td>
<td>GERARD/JONES</td>
</tr>
<tr>
<td>Environmental Medicine and Policy (VMC991)</td>
<td>SPRING</td>
<td>KENNEDY-STOSKOPF</td>
</tr>
<tr>
<td>Professional Meeting (VMC991)</td>
<td>FALL/SPRING</td>
<td>FLAMMER</td>
</tr>
<tr>
<td>Equine Dentistry (VMC991)</td>
<td>SPRING</td>
<td>GERARD</td>
</tr>
<tr>
<td>Small Animal Practice Experience (VMC992)</td>
<td>FALL/SPRING</td>
<td>WILLIAMS</td>
</tr>
<tr>
<td>Health/Safety in the Third World (VMC992)</td>
<td>SPRING</td>
<td>LOOMIS</td>
</tr>
<tr>
<td>Active Learning in Companion Animal VTH (VMC992)</td>
<td>FALL/SPRING</td>
<td>HARDIE</td>
</tr>
<tr>
<td>Extramural Experience in Zoo Medicine (VMC991)</td>
<td>FALL/SPRING</td>
<td>LEWBART</td>
</tr>
<tr>
<td>Small Animal Theriogenology (VMC-991)</td>
<td>FALL</td>
<td>BAILEY</td>
</tr>
<tr>
<td>Equine Colic (VMC-991)</td>
<td>FALL</td>
<td>BLIKSLAGER</td>
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### Electives:

<table>
<thead>
<tr>
<th>Topic</th>
<th>Semester</th>
<th>Coordinator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Topics in Wild Avian Medicine (VMC-926)</td>
<td>SPRING</td>
<td>DEGERNES</td>
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<tr>
<td>Chelonian Medicine and Surgery (VMC-928)</td>
<td>SPRING</td>
<td>LEWART</td>
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<tr>
<td>Special Topics in Zoological Medicine (VMC-921)</td>
<td>FALL/SPRING</td>
<td>DEGERNES</td>
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<tr>
<td>Advanced Topics in Equine Medicine &amp; Surgery (VMC 911)</td>
<td>SPRING</td>
<td>DAVIS</td>
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<tr>
<td>Ethics in Fisheries &amp; Wildlife Sciences (FW-730)</td>
<td>FALL</td>
<td>STOSKOPF</td>
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<tr>
<td>One Health – Philosophy to Practice (VMP-986)</td>
<td>SPRING</td>
<td>KENNEDY-STOSKOPF (Co-L)</td>
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### Clinical Rotations:

<table>
<thead>
<tr>
<th>Topic</th>
<th>Offered Year Round</th>
<th>Coordinator</th>
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<tbody>
<tr>
<td>General Limited Small Animal Practice (VMC-939)</td>
<td>YEAR ROUND</td>
<td>STEVENS/FERRIS</td>
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<tr>
<td>Theriogenology (VMC 940)</td>
<td>YEAR ROUND</td>
<td>WHITACRE</td>
</tr>
<tr>
<td>Advanced Topics in Theriogenology (VMC 941)</td>
<td>YEAR ROUND</td>
<td>WHITACRE</td>
</tr>
<tr>
<td>Sea Turtle Medicine &amp; Rehabilitation (VMC 950)</td>
<td>YEAR ROUND</td>
<td>HAMR</td>
</tr>
<tr>
<td>Medicine/Companion Animal For Food Animal/Equine (VMC 954)</td>
<td>YEAR ROUND</td>
<td>HARRELL</td>
</tr>
<tr>
<td>Extramural Experiences/Laboratory Animal (VMC 955)</td>
<td>YEAR ROUND</td>
<td>FISH</td>
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<tr>
<td>Advanced Prosimian Medicine (VMC 958)</td>
<td>FALL/SPRING</td>
<td>STOSKOPF</td>
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<tr>
<td>Advanced Primate Medicine (VMC959)</td>
<td>FALL</td>
<td>STOSKOPF</td>
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<tr>
<td>Small Animal Emergency (VMC 960)</td>
<td>YEAR ROUND</td>
<td>HANEL</td>
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<tr>
<td>Extramural Experiences in Zoological Medicine (VMC 963)</td>
<td>YEAR ROUND</td>
<td>LEWART</td>
</tr>
<tr>
<td>Equine Emergency (VMC-966)</td>
<td>YEAR ROUND</td>
<td>PRANGE</td>
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<tr>
<td>Small Animal Dentistry (VMC 967)</td>
<td>YEAR ROUND</td>
<td>KRUG</td>
</tr>
<tr>
<td>Equine Lameness and Orthopedics (VMC-968)</td>
<td>YEAR ROUND</td>
<td>TATE</td>
</tr>
<tr>
<td>Medicine/Small Animal (VMC 971)</td>
<td>YEAR ROUND</td>
<td>HARRELL</td>
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<tr>
<td>Clinical Small Animal Veterinary Cardiology (VMC 972)</td>
<td>YEAR ROUND</td>
<td>DEFRANCESCO</td>
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<tr>
<td>Small Animal Surgery (VMC 973)</td>
<td>YEAR ROUND</td>
<td>ROE</td>
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<tr>
<td>General and Orthopedic Surgery (VMC 973)</td>
<td>YEAR ROUND</td>
<td>ROE</td>
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<tr>
<td>General Surgery (VMC-973G)</td>
<td>YEAR ROUND</td>
<td>ROE</td>
</tr>
<tr>
<td>Orthopedic Surgery (VMC-973O)</td>
<td>YEAR ROUND</td>
<td>ROE</td>
</tr>
<tr>
<td>Clinical Conference (VMC-995)</td>
<td>FALL</td>
<td>GERARD</td>
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<tr>
<td>Equine Surgery (VMC-975)</td>
<td>YEAR ROUND</td>
<td>TATE</td>
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<tr>
<td>Veterinary Clinical Care (VMC-976)</td>
<td>SPRING</td>
<td>HANSEN</td>
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<tr>
<td>Preventative Health Care (VMC 977)</td>
<td>FALL/SPRING</td>
<td>BREUHAUS</td>
</tr>
<tr>
<td>Equine Lameness (VMC 978)</td>
<td>SPRING</td>
<td>PRANGE</td>
</tr>
<tr>
<td>Equine Medicine (VMC 979)</td>
<td>YEAR ROUND</td>
<td>JONES</td>
</tr>
<tr>
<td>Veterinary Clinical Oncology (VMC 980)</td>
<td>YEAR ROUND</td>
<td>WILLIAMS</td>
</tr>
<tr>
<td>Laboratory Animal Medicine (VMC 981)</td>
<td>FALL/SPRING</td>
<td>FISH</td>
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<tr>
<td>Clinical Veterinary Ophthalmology (VMC 982)</td>
<td>YEAR ROUND</td>
<td>CLODE</td>
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<tr>
<td>Dermatology (VMC 983)</td>
<td>YEAR ROUND</td>
<td>MURPHY</td>
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<tr>
<td>Introduction to Clinical Neurology &amp; Neurosurgery (VMC 984)</td>
<td>YEAR ROUND</td>
<td>MUNANA</td>
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<tr>
<td>Advanced Companion Animal Internal Medicine (VMC 986)</td>
<td>YEAR ROUND</td>
<td>HARRELL</td>
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<tr>
<td>Aquatic Medicine (VMC 987)</td>
<td>FALL</td>
<td>LEWART</td>
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<tr>
<td>Special Species Medicine (VMC 988)</td>
<td>SPRING/FALL</td>
<td>LEWART</td>
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<tr>
<td>Zoological Medicine (VMC 989)</td>
<td>YEAR ROUND</td>
<td>STOSKOPF</td>
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<tr>
<td>Musculoskeletal Ultrasound in the Horse (VMC 990)</td>
<td>SPRING</td>
<td>REDDING</td>
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<tr>
<td>Equine Special Topics (VMC 993)</td>
<td>YEAR ROUND</td>
<td>JONES</td>
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<tr>
<td>Small Animal 4th Year Extramural Experiences (VMC 994)</td>
<td>YEAR ROUND</td>
<td>WILLIAMS</td>
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<tr>
<td>Advanced Avian Clinical Medicine (VMC 996)</td>
<td>SPRING</td>
<td>DEGERNES</td>
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<tr>
<td>Raptor Medicine and Rehabilitation – Clinician Approval (VMC 997)</td>
<td>SPRING/FALL</td>
<td>DEGERNES</td>
</tr>
<tr>
<td>Wildlife Rehabilitation Medicine (VMC 998)</td>
<td>YEAR ROUND</td>
<td>STOSKOPF</td>
</tr>
<tr>
<td>Zoological Husbandry &amp; Nutrition (VMC-964)</td>
<td>YEAR ROUND</td>
<td>STOSKOPF</td>
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### Graduate Courses:

<table>
<thead>
<tr>
<th>Topic</th>
<th>Semester</th>
<th>Coordinator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional Ethics and Conduct of Sciences (CBS-662)</td>
<td>SPRING</td>
<td>FISH</td>
</tr>
<tr>
<td>Advances in Gastrointestinal Pathophysiology (CBS-764)</td>
<td>FALL</td>
<td>BLIKSLAGER</td>
</tr>
<tr>
<td>One Health-Philosophy to Practice (CBS 810)</td>
<td>SPRING</td>
<td>KENNEDY-STOSKOPF</td>
</tr>
<tr>
<td>Advanced Topics in Zoo Medicine I (CBS-817)</td>
<td>FALL</td>
<td>KENNEDY-STOSKOPF</td>
</tr>
</tbody>
</table>
Clinical Sciences Faculty Introduced a Number of Innovations in their courses:

- Cardiology added an assistant technician to free up full-time technicians to assist in teaching and added a 2nd cardiologist on Mondays and Thursday to assist in student teaching
- Birkenheuer introduced case-based in-lab examinations
- Chappell collaborated with coordinator of VMP-992-005 “Success in Practice” course to introduce large and small group activities to illustrate concepts in team and communication skills
- Clode integrated equine-specific ophthalmology service into the clinical ophthalmology rotation
- Ophthalmology group further integrated using Moodle in VMC-961 ophthalmology section of course
- Davis continued to refine and fine tune the neurologic and hepatic lectures in VMC-952
- Davis developed neurologic case studies for VMC-911
- DeFrancesco used new cardiology conference room for clinical teaching. Increased number of student rounds in VMC-972
- DeFrancesco acquired hospital surplus items from Duke and UNC hospitals for teaching
- DeFrancesco updated CPR and Sepsis power point presentations for VMC-976 and incorporated more interactions and questions for students within presentations
- Degernes completed all of the Avian Video Library segments for online viewing (40 segments). These videos supplement teaching efforts in both basic and advanced avian medicine selectives
- Degernes completed all of the techniques videos, which are helpful for teaching the practical skills lab procedures
- Early introduced canine cadaver surgical laboratories and atlantoaxial stabilization (interface pins and PMMA) training
- Ferris participated as team member in the design and implementation of the General Limited Small Animal Practice as new fourth year clinical rotation with focus on communication skills, preventative medicine, and general soft tissue surgery
- Ferris participated as team member in developing small animal sterilization practices review for Theriogenology Selective
• Fish increased use of Moodle to post PPts, notes, assignments, and other links (VMC-953, 910 and CBS-662)
• Fogle received funds from NCHC and teaching funds for VMP-956 castration labs and an offsite castration clinic in Greenville, NC
• Fogle received funds from the Unwanted Horse Council for additional castration clinics in spring
• Fogle prepared lecture on equine sinusitis and delivered to SCACVIM Club
• Fogle initiated soft tissue surgery clinical compensation plan to be used to visit referring veterinary practices, enhancing student exposure to cases and improving rapport with RDVMs
• Fogle initiated rectal palpation lab using cadaver positioned as live horse with hoist, and real-time laparoscopic visualization of structures palpated
• Gerard modified equine dentistry selective lecture schedule based on feedback
• Gerard developed Moodle course website for LA practice experience selective
• Gerard expanded communication selective to double the class size to 24 students and incorporated two additional trained faculty into the curriculum
• Gilger introduced Moodle into VMC-982
• Gookin created five QUIA exercises into VMC-951
• Gookin incorporated the use of instant polling into VMC-951 lectures
• Gookin revised the oral abstract critique/judging form for Veterinary Scholars Program and CVM Research Forum
• Gruen incorporated behavioral examinations into teaching and allowed students at the shelter to perform evaluations on dogs and cats
• Gruen has made lectures more case-based to encourage students to think through how they would handle cases in practice
• Hanel and colleagues initiated dialysis unit for the ICU and small animal medicine service
• Hanel recommend use of Moodle of Quia to Small Animal Medicine/ECC combined initiative for students while on clinical rotations
• Hanel demonstrated EZ-IO catheter placement to students and technicians
• Hanel taught usage of thromboelastography in the clinics to students and house officers
• Hansen introduced an automated fluid therapy calculator that helps guide clinical decision making
• Hansen worked with medical illustrations to create animated graphics that demonstrate the principles of water distribution in the body
• Harms incorporated selective student participation into a study of ferret meloxicam pharmacokinetics
• Harms offered marine mammal medicine selective at CMAST (VMC-991-026); taught behavioral restraint techniques for ferrets in VMC-931
• Harrell integrated triage/ER students into the medicine rounds rotations and medicine students into the triage/ER afternoon rounds
• Harrell is working with Gigi Davidson to incorporate pharmacy students in to morning medicine rounds
• Hauck incorporated power point slides into oncology morning rounds
• Hawkins provided workplace show/career opportunity for animal science minority student who is interested in veterinary medicine
• Hess served as content organizer for IMM-816 (Autoimmune Diseases-fall and Non-classical MHC Molecules-spring)
• Hess organized the Cancer Class for spring and fall
• Jones developed a case-based slide set for clinical teaching
• Keene instituted Quia exercises for VMC-951 to increase their exposure to and practice with electrocardiography; Reviewed and updated (with colleagues) the student information package for clinical cardiology rotation
• Kennedy-Stoskopf revised CBS-817 and 818 to incorporate more presentations from faculty and house officers from other services
• Kennedy-Stoskopf and the Wild Carnivore Team reorganized and increased from 12 veterinary students to 40
• Krug – new spaces in the Wellness Center has allowed a complete transformation of the service’s teaching ability
• Lewbart implemented the modified and required VMC-953 aquatic medicine laboratory that focuses on anesthesia, diagnostics, and applied clinical techniques using koi
• Lewbart implemented an optional reptile telemetry lab for VMC-953
• Marcellin-Little introduced mobile-bearing total knee replacement in a cat; Introduced free-form porous scaffold in cobalt-chromium; Introduced offset hinges for circular external fixation frames used for juxta-articular angular deformities; Introduced hinged socket prostheses for mid-antibrachial forelimb amputees; Introduced injection molded modular foot for patients wearing transdermal osseointegrated implants
• Mariani developed neurology course (VMC-961) content for Moodle
• Mariani redesigned laboratory for VMC-961 to utilize turning point audience response tools
• Marks added CPR training to First Responders Program (coordinated by Dunning)
• Marks offered critical are techniques laboratory for off shore students while on Triage Service
• McMullen successfully implemented split ophthalmology service (separate equine and small animal ophthalmology rotations)
• Munana developed Moodle self-assessment for VMC-984
• Olivry coordinated the addition of online flash cards and exam questions for VMC-951 dermatology
• Roe developed clinical rotation course site in Moodle – forelimb lameness module
• Sherman initiated new 4th year clinical rotation – VMB-978, Behavior and Nutrition
• Stevens developed General Practice rotation integrating medical and surgical cases
• Stevens integrated Behavioral Medicine and Nutritional Medicine within general practice
• Stevens integrated wellness clinic with 3rd year students in general practice
• Stevens developed and integrated effective veterinary communication practices with the 4th year veterinary students
• Stevens incorporated humane handling techniques in the exam room training of students and technicians
• Stoskopf mentored Hitchings Scholar (Emily Wayne) and Teaching Innovation Grant student (Brad Waffa) in summer research project
• Suter received funding to develop “Interactive web-based hematology/oncology case presentations” with NCSU Teaching Innovation Grant
• Tate continued to develop presentations involving equine surgery and refining by adding and updated presentations with videos
• Vaden used spicynodes for concept mapping of management of CRF in cats and dogs
• Williams expanded provision of relevant journal article for each new case to the attending students
• Williams initiated project as PI for inter-disciplinary teaching innovation (Interactive web-based hematology/oncology case presentations)

D. Research

Volume of Activity

• Extramural Grants as Primary Investigator and/or Co-Investigator – $3,401,106
• CVM/NCSU Grant Funding - $33,338
• DoCS Firestone Canine Research – $3,000
• DoCS Veterinary Practice Plan Research – $3,000

Specific achievements of significance

• Cardiology group validated and used the aldosterone:creatinine ratio in urine to make evaluation of the Renin-Antiotensin-Aldosterone System much easier and less expensive
• Cardiology group documented that Aldosterone Breakthrough occurs in experimental RAAS activation
• Cardiology group demonstrated that Aldosterone Breakthrough occurs in Natural Heart Failure in Dogs
• Blikslager determined the way in which a novel protein called CIC-2 helps heal injured intestine
• Blikslager discovered that the protein allied CIC-2 is genetically involved in Inflammatory Bowel Disease in animals and humans
• Blikslager determined the scientific relevance of novel anti-inflammatory drugs in both animals and humans
• Chappell introduced use of community veterinary practitioners as a clinical study collaborators for collection of study data and samples
• Clode introduced refinement of an ex-vivo model for perfusion of canine eyes, which enables evaluation of ocular disposition of drugs following various routes of administration
• DeFrancesco continues to explore our understanding of cardiac biomarkers in the diagnosis and management of heart disease
• Fogle introduced examination of the COX selectivity of NSAIDs commonly given to horses for pain and inflammation is the first step in determining whether newer, COX selective NSAIDs will increase survival and reduce complications in clinical equine patient undergoing surgery
• Gookin set up a unique collaboration with UNC pediatric gastroenterologists and surgeons to obtain clinical samples from babies with necrotizing enterocolitis. Obtained funding and Institutional Review Board approval to collect the samples for metabolomics investigation that is hoped to provide great preliminary data for an R01 level grant proposal
• Gookin’s laboratory identified Enterococcus hirae as a likely endogenous probiotic of kittens that may be superior than enterrococci currently marketed for use in cats
• Gruen worked to increase the behavioral component of assessment of cats with DJD – both in their initial assessment and in monitoring of therapeutic success
• Gruen worked with research team to modify the feline General Test Apparatus to allow for cats to perform more natural behaviors
• Gruen, along with members of research team have constructed an arena for standardization of the test used to select dogs for IED detection work
Hansen is currently studying the effect of valvular heart disease in dogs not yet in overt congestive heart failure by comparing their daily activity against the activity of similar dogs without heart disease.

Hansen obtained funding for a device that continuously measures central venous hemoglobin saturation (Scv02 monitor).

Hansen and colleagues are performing the first-ever comprehensive assessment of the canine cytokine response to overwhelming infection and blood transfusions.

Hauck identified a gene expression signature in metastatic soft tissue sarcomas. This gene expression signature should be more accurate at determining if a sarcoma will metastasize than the current methodology, histologic grade.

Hauck demonstrated that one of the mechanisms by which hyposia results in a more malignant phenotype is down regulation of apoptosis in tumor cells.

Hauck’s research team is performing the first ever clinical trial of treatment of lymphosarcoma with a targeted therapeutic agent.

Hawkins and research group have successfully performed tidal-breathing spirometry and respiratory inductance plethysmography in unsedated dogs and either affected or genetic carriers for Golden Retriever muscular dystrophy, a model for Duchene’s muscular dystrophy.

Hess’ research group is the first to have characterized the classical MHC class I genes that control the development and function of CD8+ T cells in the cat.

Hess’ research group is first to have described the peptides bound by a classical MHC class I molecule in the dog.

Jones developed a novel therapy to inhibit neutrophil function to treat pulmonary inflammation.

Keene finished a clinical trial evaluating the safety and efficacy of a beta blocker in a large, multicenter, prospective, randomized clinical trial (which he designed).

Lascelles developed the first insights into what parameters are likely to be valid measures of feline DJD-associated pain.

Lascelles developed first data suggesting central sensitization occurs in association with canine OA.

Marcellin-Little expanded research in freeform custom implants. Now able to design limb-sparing implants to replace a wide range of missing bones and joints.

Mariani’s laboratory demonstrated for first time the persistence of multipotent neural progenitor cells within the brains of mature dogs.

Mariani’s laboratory group continued work on matrix metalloproteinases (MMPs); Also continued work on inflammatory brain disease in dogs and discovered that immune cells continue to proliferate and divide after they have invaded the central nervous system.

McMullen developed equine goggles with interchangeable corrective lenses to evaluate naturally occurring refractive errors in the horse.

McMullen increased in number and types of standing ocular surgical procedures being performed in horses under sedation (e.g. conjunctival and amniotic membrane grafting procedures, cyclosporine implant placement, lamellar corneal transplant procedures).

Monteiro created in vitro cell models for canine liver, kidney and intestines to be used as alternative models for food ingredient screening for safety evaluation.

Monteiro’s research investigates the toxic and penetration effect of nanomaterials with skin and the biodistribution of nanomaterials with ADME studies.

Munana’s research focuses on methods to more effectively treat epilepsy in dogs. Recent studies evaluated novel treatment strategies for seizures as well as exploring why some dogs respond poorly to medical therapy.

Olby’s research laboratory has started a clinical trial looking a cellular transplantation as a therapy of chronic paralysis – currently recruiting 30 paralyzed dogs into the trial.
Olby’s research has discovered a novel mutation causing canine cerebellar degeneration in 2 different breeds of dog.

Olivry is working to identify and test the ability of novel pharmacological agents to prevent the development of skin lesions in dogs with atopic dermatitis, a common allergic skin disease in dogs.

Olivry, in clinics, is testing the efficacy of novel treatment modalities for skin lesions in dogs with atopic dermatitis and autoimmune skin diseases.

Olivry is developing a model of itch in dogs to test novel antipruritic interventions in a pre-clinical study.

Olivry is developing new diagnostic tests to diagnose autoimmune blistering skin diseases in dogs.

Sherman has brought expertise in the field of fear/stress responses and canine behavior to a number of projects. One is supported by the Office of Naval Research in collaboration with other faculty at the CVM and a private IDD dog supplied in N.C. Another project is in collaboration with colleagues in NCSU Computer Science and Electrical Engineering Departments.

Williams, with colleagues, continues to learn and publish innovations in the area of lymphoma, the most common hematopoietic cancer in dogs and cats and osteosarcoma, most common bone cancer in dogs.

E. Extension

Extension and Public Service

Clinical Sciences faculty average nearly 40% FTE teaching in the Veterinary Teaching Hospital. The majority of the patients are referred from veterinarians in North Carolina and the surrounding 5-state area (in excess of 25,500 accessions/year). Faculty and clinical residents provide expert advice on a multitude of medical and surgical problems (roughly 600 phone calls per week).

Selected Innovations in Clinical Service in the VTH

Atkins and colleagues are working on a beta-blocker trial, feline HCM trial, biomarker trial, and consulting with a company on another drug trial using a novel compound to treat congestive heart failure.

Bailey is developing canine trans-cervical insemination; canine pregnancy management; canine trans-cervical uterine lavage; equine late-term twin reduction; and gamete harvest of terminally ill animals.

Chappell developed owner compliance materials, pharmacy management documents, SOPs, and screening aids for clinical trials.

Chappell established Clinical Studies Core capability to perform clinical trials according to Good Clinical Practice.

Chappell developed system of clinical study registration to assist with tracking clinical research financial and productivity metrics for the CVM.

Chappell developed materials and systems to support clinical study collaborations with local community veterinary practices and engaged in several projects utilizing the collaborating practices and practitioners.

Davis is developing an equine specific formulary for use in the hospital.

Cardiology service has identified an offsite service that can receive ECG signals from our external event records (King of Hearts).
• Cardiology expanded the use of TEE and angiographic CT for diagnosis of coronary artery anomaly in Bulldogs with pulmonic stenosis
• DeFrancesco continued her work on 3 trials – EPIC trial (evaluation of pimobendan in dogs with preclinical MVD disease), Aqua Cat trial (evaluation of a betablocker in cats with preclinical HCM), and Canine BNP studies
• Ferris participated as a team member in implementation of the General Limited Small Animal Practice including focus on communication skills, primary care, preventative care, and general medicine and soft tissue surgery
• Fogle assisted with renovation of CVM equine website, which is the first contact site for many clients
• Fogle submitted proposal to modify equine CT room to accommodate standing equine CT scans
• Fogle and Gerard received approval for expansion of Equine Soft Tissue Field Consultancy Services
• Gerard purchased new dental equipment to improve dental examinations and extraction techniques
• Gruen incorporated behavioral evaluations into clinical trials protocols (feline osteoarthritis/DJD, canine fears and phobias, canine aggression, feline aggression, feline inappropriate elimination)
• Hanel and colleagues implemented plasmapheresis service, which is only offered at one other veterinary institution in the world
• Hansen designed and directed installation of wall mounting equipment for mechanical ventilators
• Harrell supervised I131 therapy, balloon enteroscopy, laser lithotripsy, esophageal bougienage, tracheal stenting, nasal stenosis repair
• Oncology is running the first lymphosarcoma clinical trial with a targeted therapeutic agent
• Hawkins formalized protocol within medicine and surgery services for dilation of nasopharyngeal stenosis
• Hess' laboratory worked on techniques (primers and cycling conditions) for high-resolution genotyping of dogs for the MHC genes DLA-8 (class I) and DRBI (class II)
• Jermyn determined serum cardiac troponin I levels in patient undergoing splenectomy: to determine whether serum cardiac troponin I levels are elevated in patient undergoing splenic surgery for naturally occurring disease
• Jermyn introduced a surgical safety checklist to determine if introduction of a surgical safety checklist would impact major complication rates in veterinary population
Lascelles introduced evaluation of a low dose NSAID for DJD pain relief in cats; evaluation of a supplement for alleviation of feline DJD pain; evaluation of central sensitization associated with OA pain.

Mathews began coiling intrahepatic portosystemic shunts.

Dunning established the new Rehabilitation Service (with input from Olby, Lascelles, Marcellin).


Redding known for arthroscopy, ultrasound, MRI and CT in the treatment and diagnosis of lameness and orthopedic diseases of the horse.

Redding developing specific uses of ultrasound for interventional techniques (joint injection) and is adapting sonographic techniques used in humans, but not currently utilized in horses.

Roe introduced the MMP technique for management of CCL injury.

Roe and Marcellin performed total knee replacement in a cat.

Roe performed the first liner exchange for the cup to accommodate a custom prosthetic head in a dog with recurrent luxation following THR.

Sherman established the Behavioral Medicine Service.

Vaden is working with the international group Renal Pathology Standardization Project, studying and describing the clinical associations with the different diseases.

Williams and research technician (Julie Osborne) developed Cancer Care fund and associated website (http://www.cvm.ncsu.edu/cancercare/cc.html) providing resources to clients, animal database for future clinical trial efforts, and additional publicizing of clinical trials.

Williams led an initiative to develop partnership with VCA, whereby VCA funds a 3-year residency position with the successful candidate completing a training program.

Wood collaborated with Oncology and has established an apheresis team at NCSU. Primary interest in this team is therapeutic plasma exchange for the treatment of immune mediated disorders such as IMHA and myasthenia gravis.

Managed a clinical practice that provided effective and efficient service (Information provided for 2010-2011 fiscal year through March 2011):

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<tr>
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<tbody>
<tr>
<td>99.1%</td>
<td>of hospital revenue collected at discharge</td>
</tr>
<tr>
<td>$1,591,996</td>
<td>Total VPP Revenue Generated by Department</td>
</tr>
<tr>
<td>$6,798,437</td>
<td>Total Hospital Revenue Generated by Department</td>
</tr>
</tbody>
</table>

Continuing Education (Extension)

Clinical Sciences faculty gave numerous state, national, and international research and continuing education (extension) presentations to scientists, veterinarians, and lay persons (e.g., pet owners, civic groups, public schools, etc.). Numerous Veterinarians participated in 1 to 12 week clinical experiences in the Veterinary Teaching Hospital under supervision of CS faculty.

See Visitor Link on College Website at URL - http://cvm.ncsu.edu/rop/ (click on Approved Visitors – CVM & VTH visitors FY 2011-2012)
Provide leadership role in the Department, CVM, VTH, and NCSU.

**Bailey**
Theriogenology Representative, Planning Committee for Companion Animal Health and Wellness Outpatient Center
Equine Health Center – spearheaded effort to achieve certification
Organizer of Annual Open House and CE Seminar at Equine Health Center
CVM Library Committee
CVM Course Coordinators Committee

**Birkenheuer**
Infectious Disease Control Committee
Small Animal Intern Selection Committee
Co-Director of Vector Borne Disease Diagnostic Laboratory
Co-Director of Small Animal Internal Medicine/Clinician Investigator Program

**Blikslager**
Institutional Animal Care and Use Committee (IACUC)
Chair, Search Committee for Clinical Laboratory Animal Veterinarian

**Breitschwerdt**
Director, NCSU-CVM Biosafety Laboratory
Executive Committee on One Health Consortium, RTP
One Health Course-Organization and Attendance – Co-listed graduate course at UNC, NCSU and Duke

**Breuhaus**
Course Coordinators Group
Equine Service Chief
Equine Focus Area Leader

**Chappell**
Director, Clinical Studies Core
Member and Meeting Coordinator, Clinical Studies Core Steering Committee
Executive Committee of Center for Comparative Medicine and Translational Research
Member, Companion Animal Health and Wellness Outpatient Center Planning Committee
Animal Models of Disease Writing Workgroup
Faculty Advisor, Student Chapter of Veterinary Business Management Association
Assisted VBMA with planning and organization of 4th Annual Wolfpack Leadership Conference

**Clode**
Small Animal Rotating Internship Selection Committee
MBS Clinical Faculty Reappointment Committee (ad hoc DoCS Representative)

**Davis**
CVM FCHOP Committee, Chair 2011
Faculty Advisor, Equine Emergency and Foal Team
Resident Program Director, Medicine
PICO Committee (Electronic Medical Records)
Phi Zeta Veterinary Honor Society
**DeFrancesco**
Service Chief, Specialty Services
Hospital Board
NCVC Small Animal Program Committee, Assistant Chair & Chairperson (2013)
Small Animal Rotating Intern Oversight and Selection Committee
CVM Open House Committee
NC Veterinary Medical Foundation

**Degernes**
Assistant Head, for Multi-Species Medicine Section
Program Director, NCSU Study Abroad Program
CVM International Programs Committee
CVM Diversity Committee
Faculty Advisor, WAAZM

**Early**
CVM Diversity Committee
Small Animal Rotating Intern Selection Committee
Neurology Residency Selection Committee
CVM Open House Committee

**Ferris**
Chair, CVM Faculty Committee on Academic Performance and Student Conduct
Advisor, CVM Student Small Animal Medicine Club
Advisor, CVM Student Surgery Club

**Fish**
NCSU Responsible Conduct of Research Advisory Committee
ASLAP Veterinary Student Liaison and Advisor
Faculty Committee on Laboratory Animal Resources
Course Coordinators Group
Assist the NCSU University Attending Veterinarian in execution of institutional program of veterinary care at CVM
Assist in
IACUC Committee
AAALAC Accreditation Process

**Flammer**
Acting Associate Dean and Director of Academic Affairs

**Fogle**
Electronic Medical Records Committee
PICO – Electronic Medical Records Committee
Active participant in Equine Group Meetings
Faculty Committee for House Officer Programs (FCHOP)

**Gerard**
Hospital Board
Equine Veterinary Service Chief
Equine Focus Curriculum Coordinator and Committee Chair
Chair, Equine Medicine and Surgery Internship Selection Committee
Coordinator, Equine Medicine and Surgery Internship
Chair, Equine Surgery Internship
Equine Surgery Resident Selection Committee
International Programs Committee Member and Coordinator for Australia/NZ
Awards Committee, Equine Representative
Ad Hoc Communications Training Committee
Markel Scholarship Internal Candidate Review Committee
Participate in New House Officer Orientation Program
Participate in New DVM Class Orientation Program

**Gookin**
Nomination Committee for Dean of CVM
DoCS Peer Evaluation of Teaching Committee
Faculty Mentor, Dr. Michael Wood
Faculty Advisor, Student Chapter of the American College of Veterinary Internal Medicine
Co-Director of Merck-Merial Summer Research Scholar Program
NIH/NCSU Comparative Medicine and Translational Research Training Program
Executive Committee – Interdisciplinary Biomedical Research Training Program

**Hanel**
Co-Chair Open House Committee
Developed and Maintain CE Series for ER Technicians
Director of Small Animal Emergency and Triage Services
Liaison for SAETS
Liaison for Small Animal ICU to Staff Supervisor
Electronic Medical Records Committee
VFPP Committee
Blood Bank Committee
Intern Oversight Committee
Search Committee, SA Emergency and Triage Technician Supervisor
Search Committee, SA Intermediate Care Technician Supervisor
Search Committee, SA Intensive Care Unit Technician Supervisor

**Hansen**
Blood Bank Committee
Computer Committee for Terry Center
VTH PICO Committee
FCHOP Committee

**Hardie**
Department Head, DoCS
Terry Center Building Committee
Terry Center Grand Opening Committee
Curriculum Committee
Course Coordinator’s Committee
NCSU Moodle Steering Committee
NCSU Department Head Steering Committee
NCSU Task Force on Review of Academic Programs
NCSU 125th Anniversary Planning Committee
AAVMC Program Committee, Chair
AAVMC Veterinary Educator’s Committee, Chair
Harms
CMAST Resident Faculty Facilities Committee
NCSU Marine Science Council
Multispecies Medicine Section
Environmental Medicine Consortium Advisory Committee

Harrell
Program Director of Intern Selection Committee
Head, Intern Program Improvement Committee
Faculty Advisor, Ward Technicians
NCVC Committee
Financial Committee
Search Committee, two SA Medicine Technician positions
Infectious Disease Committee
Headed, Combined Medicine and Surgery Group to discuss laparoscopy procedures

Hauck
Peer Teaching Evaluation Committee

Hawkins
Leader, Small Animal Medicine Section
Electronic Medical Record Committee
Section Coordinator, Small Animal Internal Medicine
Selection Committee for Herbert Benjamin Distinguished Professorship
Reviewer, DoCS and Firestone Grants

Hess
VTH Case Review Committee
Faculty Committee on Research
CVM Annual Research Forum, Abstract Reviewer
Immunology Program Admissions Committee

Jermyn
DVM Admissions Committee
Product Evaluation Committee
Internal Case Review Committee
Search Committee, Tenure Track Veterinary Radiation Oncologist

Jones
Assistant Department Head
Director, Combined DVM/PhD Program
Director, Comparative Biomedical Sciences Graduate Program
Co-director, Summer Research Internship Program
Director, Comparative Medicine and Translational Research Training Program
CBS Program
Co-Director, Veterinary Scholars Program
CCMTR Executive Committee
University Strategic Planning Committee
Diversity Strategic Planning Committee
CVM Strategic Planning Committee
DoCS Post-Tenure Review Committee
Search Committee, CVM Dean
Search Committee, CVM Associate Dean of Research and Graduate Studies

**Keene**
Building Planning Committee
Chair, University Dining Committee

**Kennedy-Stoskopf**
CVM Strategic Planning Committee, Co-Chair
CVM Students hosting the World Rabies Symposium, Faculty Advisor
NCSU Fisheries, Wildlife and Conservation Biology Faculty
NCSU Environmental Sciences Faculty
Conservation Genomics Working Group, CCMTR
Co-PI and Faculty to the NCSU S.E. Regional Clinical Science Center

**Krug**
AVDC Credentialing Committee

**Lascelles**
CVM Research Space Policy Committee
CVM Research Committee
Faculty Advisor, Student Chapter of the International Veterinary Academy of Pain Management
Associate Director, CCMTR
Assistant Head, DoCS

**Maggi**
Co-Director, Molecular Diagnostic Coordinator, Vector-Borne Diseases Diagnostic Laboratory
Research Committee

**Marcellin-Little**
University-wide Research Committee
Ad Hoc Member, CVM Research Committee
Advisor, NCSU-CVM Surgery Club

**Mariani**
CVM Research Space Allocation and Management Committee

**Marks**
Communications Committee
Hospital Board
Blood Bank Committee
Intern Selection Committee
Intern Committee Chair
Admissions Committee
CVM Awards and Scholarship Committee
Course Coordinator Committee
Cadaver Use Committee
Search Committee Marketing Specialist
Search Committee ER/ICU Nurses
Search Committee, Technical Clinical Supervisor
Search Committee, Pharmacy Resident
Search Committee, Nutrition Faculty
Search Committee, Pathology Faculty

**Mathews**
Intern Selection Committee
Chair, CVM Admissions Committee
Chair, Hospital SA Surgery Residency Program
University Cluster Hire Search Committee – Regenerative Medicine
CALS Speed Networking Event Participant

**Monteiro**
EPA-NCSU Collaboration on Research and Educational Opportunities
NCSU Chancellors Nanotechnology/Leadership Committee
Sigma Xi Liaison Officer
CVM Safety Committee
Chair, DoCS Post Tenure Review Committee

**Munana**
Electronic Medical Records Committee
Intern Oversight Committee

**Olby**
Search Committee, CCMTR Director
Clinical Genomics Core Leader for CCMTR
DoCS Peer Teaching Evaluation Committee

**Olivry**
Assistant Department Head
CCMTR Executive Board
Leader, CCMTR Allergy and Clinical Immunology Core
CVM Reappointment, Promotion and Tenure Committee
Search Committee, CCMTR Director

**Redding**
Program Committee for NCVConference

**Roe**
Assistant Department Head, DoCS
Infectious Disease Committee
UVIS Medical Records Committee
VFPP Committee
Chair, Hospital Board Committee
PICO Development Team, Team Leader
Course Coordinators Curriculum Committee
CVM Strategic Planning Committee

**Sherman**
Director, Animal Behavior Service
Chief, Animal Behavior Section
Course Coordinators Group
Health and Wellness Center Operations Committee
Animal Welfare, Ethics, and Public Policy Program
**Stevens**  
University Grievance Committee  
NCVC Animal Welfare Track Chair  
Service Chief, Health and Wellness Center  
Hospital Board Member  
Product Evaluation Committee  
Communication Committee  
Search Committee, Avian and Exotics Clinical Instructor  
Staff Excellence Awards Committee

**Stoskopf**  
Director, Environmental Medicine Consortium  
Chair, NCSU Fisheries and Wildlife PhD Committee  
NCSU Biotechnology Faculty  
NCSU Forestry Faculty  
NCSU Biomedical Engineering Faculty  
NCSU Toxicology Faculty  
NCSU Environmental Sciences Faculty  
NCSU Marine Sciences Council  
NCSU Friends of the Library Committee  
Development of CMASST Dormitory and Animal Holding Facilities, Morehead City  
Coordinate, Zoological Medicine Focus  
Conservation Genomics Working Group, CCMTR  
Co-PI on NCSU S.E> Regional Climate Science Center

**Suter**  
Member, CCMTR  
DoCS Peer Teaching Evaluation Committee

**Tate**  
FCCCE and Course Coordinators Committee

**Vaden**  
Clinical Studies Core Committee  
Course Coordinators Group Committee  
Faculty Committee on Curriculum and Course Evaluation

**Williams**  
Intern Oversight Committee  
Senator, NCSU Faculty Senate  
President, Phi Zeta, Secretary  
Proposals to Increase RDVM and Client Responsiveness in VTH Committee  
Improving Staff/Veterinarian Interactions and Morale in the VTH Committee  
Center for Comparative Medicine and Translational Research  
Terry Center for Companion Animals Building Committee  
Faculty Committee on Curriculum and Course Evaluation  
SCAAHA, Faculty Advisor

**Wood**  
Intern Selection Committee
F. Faculty

Honors, Awards and Recognitions

- Atkins served as Program Chair (Co) for American Heartworm Triennial Symposium
- Blikslager awarded the Applied Equine Research Award, World Equestrian Veterinary Association in Hyderabad, India
- Breitschwerdt was awarded an NCSU Alumni Association Outstanding Research Award
- Gerard appointed to American College of Veterinary Surgeons Examination Committee
- Gilger appointed President, American College of Veterinary Ophthalmologists
- Gilger, Associate Editor, Veterinary Ophthalmology Textbook
- Gookin received American Veterinary Medical Foundation/Winn Feline Foundation Research Award for contributions to advancing feline research (AVMA Conference 2011)
- Harms received Stange Award for Meritorious Service by the Iowa State University, CVM, October 2011
- Harms completed 2-year term as President of the American College of Zoological Medicine
- Harms served on AVMA Panel on Euthanasia (Aquatics Working Group, and Reptile/Zoo & Wildlife Working Group)
- Hauck invited to become Permanent Member of NCI-F Training Review Committee
- Hawkins served as Chair of the Board of Regents of the American College of Veterinary Internal Medicine
- Jermyn received Diplomate status in the American College of Veterinary Surgery
- Jones was named the first recipient of the Herbert Benjamin Distinguished Professorship
- Jones assumed Directorship of the Comparative Medicine and Translational Research Training Program
- Lascelles received Pfizer Animal Heath Award for Research Excellence
- Lewbart received the William Medway Award for Excellence in Teaching at the 43rd Annual Meeting of the International Association for Aquatic Animal Medicine in Atlanta, Georgia
- Marks received Class of 2013 Bayer Faculty Award
- Marks is President of the American College of Veterinary Internal Medicine, Specialty Small Animal Internal Medicine
- Monteiro-Riviere Regents Distinguished Professor and University Distinguished Professor and Director of the Nanotechnology Innovation Center of Kansas State and Chief Technical Officer of NanoScale Corporation
- Monteiro-Riviere elected to Board of Directors, The Academy of Toxicological Sciences
- Monteiro-Riviere is on Editorial Board for Research and Reports in Transdermal Drug Delivery
- Murphy – Money to build pharmacy waiting area was bequeathed by co-owner of my long-time patient (Bear Callis/BC Weinstein) upon her passing (Sarah Callis) – Picture of Bear hangs on the wall in the pharmacy waiting area
- Olby became Leader of the Clinical Genomics Core, CCMTR
- Olby on Board of Regents of American College of Veterinary Internal Medicine and International Relations Committee Chair
- Redding serves on Symposium Committee of the American College of Veterinary Surgery and is Chair of the Scientific Session and Committee
- Risselada received Diplomate Status in the American College of Veterinary Surgery
• Stoskopf is Co-PI on Department of Interior Establishment of Southeastern Climate Science Center at NCSU
• Tate appointed to Board of Directors of the American Museum of Art in Winston-Salem, North Carolina
• Vaden, President-Elect of the American Society of Nephrology and Urology
• Wood and Gookin received a Morris Animal Foundation First Award

Publications and other professional activities

<table>
<thead>
<tr>
<th>Dept.</th>
<th>Original works in peer-reviewed journals</th>
<th>Case Reports in peer-reviewed journals</th>
<th>Review articles in peer-reviewed journals</th>
<th>Books</th>
<th>Book Chapters</th>
<th>Abstracts from scientific &amp; professional veterinary conferences</th>
<th>Electronic Media</th>
<th>Invited Research presentations, professional audience</th>
<th>Continuing Education presentations</th>
<th>Bulletins, Booklets, etc.</th>
<th>Copyrights</th>
<th>Patents</th>
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<td>DOCS</td>
<td>98</td>
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<td>334</td>
<td>17</td>
<td>1</td>
<td>6</td>
<td>5</td>
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</tbody>
</table>

Faculty served as officers for their specialty colleges, which are the national certifying organizations for clinical disciplines, and for other national and international organizations. Many faculty members served as reviewers for national and international journals.

Faculty appointments and promotions:
• Promotions made effective July 1, 2011: Dr. Jody Gookin, Associate Professor of Small Animal Internal Medicine; Dr. Duncan Lascelles, Professor of Small Animal Surgery; Dr. Karen Munana, Professor of Neurology; Dr. Natasha Olby, Professor of Neurology
• Reappointments to be effective July 2011: Dr. Allison Clode, Assistant Professor of Ophthalmology; 2nd Term; Dr. Paul Hess, Assistant Professor of Oncology 2nd Term; Dr. Chris Mariani, Assistant Professor of Neurology 2nd Term

New appointments:
• EPA: Dr. Margaret Gruen, Research Assistant Professor; Dr. Marije Risselada, Clinical Assistant Professor in Small Animal Surgery

Faculty Departures: Dr. Michael Schramme, Equine Surgery

G. Students

Student Activities

Graduate Students:
20 # Graduate students receiving CVM graduate student stipends (based on all CVM graduate students)
11 # Graduate students supported from extramural funds
28 # Graduate students in progress
4  # Graduate students completing degrees
0  # graduate students discontinuing their programs (on leave of absence)
>100 % of previous graduate students employed in related fields
House Officers:

Faculty supervised the training of 44 residents and 13 interns in 11 specialty areas.

100% Residents accepted this year were in top 10% of applicant pool
533 # of applications for DoCS residency programs
351 # of applications for DoCS Small Animal internship program
>95% previous residents passing certification exams w/in 4 years
>56% previous residents employed in specialty area or graduate program
66 # of applications for DoCS equine intern

Honors and other measures of quality (students, graduate students, house officers with whom faculty have advised, mentored and or served on committees)

- DoCS Bedside Manner Award – Rae Hutchins & Julie Walker
- DoCS Outstanding Small Animal Intern – Andrew Woolcock
- Graduate Student of the Month – Katie Tolbert (Gookin/Jones) for October 2011
- Graduate Student of the Month – Meghali Nighot (Blikslager) for March 2012
- Graduate Student of the Month – Petra Bizikova (Olivry) for April 2012

Atkins:

- Josh Stern – July 2012 – Transfer resident, expected progress in program
- Tim Hodge – July 2013 – expected progress in program
- Sandra Tou – July 2010 – Clinical Veterinarian, NCSU
- Amanda Erickson – July 2011 – University of Georgia, Part-time faculty
- Marisa Ames – July 2012 – expected progress in program
- Jonathon Abbott Board-certified, ACVIM, cardiology, Faculty, Virginia Tech
- Claudia Baldwin – Board-certified, ACVIM, internal medicine, Faculty, Iowa State University
- David Panciera - Board-certified, ACVIM, internal medicine, Faculty, VA Tech
- Patti Snyder - Board-certified, ACVIM, internal medicine, Faculty (ret) U of Florida
- Susan Longhofer - Board-certified, ACVIM, internal medicine, Research Director, private industry
- Kevin Monce - Board-certified, ACVIM, internal medicine, Internist, Specialty Private Practice
- Allison Adams - Board-certified, ACVIM, cardiology, Cardiologist, Specialty Private Practice; Now IDEXX Laboratories and CSU Faculty – shared appt.
- Teresa DeFrancesco – Board-certified, ACVIM, cardiology, Faculty, NCSU
- Will Rausch - Board-certified, ACVIM, cardiology, Cardiologist, Specialty Private Practice
- Jennifer Sidley - Board-certified, ACVIM, cardiology, Cardiologist, Specialty Private Practice
- Merrilee Small - Board-certified, ACVIM, cardiology, Cardiologist, Specialty Private Practice
- Peggy (Booth) Sayer - Board-certified, ACVIM, cardiology, Cardiologist, Specialty Private Practice
- Yoko Fujii - Board-certified, ACVIM, cardiology, Azabu University, Tokyo, Japan

Bailey:

- Renan B Sper was accepted into a PhD program with Dr. Jorge Piedrahita
Birkenheuer:
- James Hummel and Adhley Cruse achieved ACVIM Diplomate Status

Blikslager:
- Karin Kruger, Board Certified by the ACVIM, 2012
- Liara Gonzalez. Selected to present her CVM and Research Experience to the Board of Trustees, 2012
- Liara Gonzalez. Awarded an NIH CCMTR T32 Fellowship, 2012-2014
- Prashant Nighot. Publication image on the cover of AJP-Cell (http://ajpcell.physiology.org/content/302/1)
- Raphael Labens. Awarded the Leroy Coggins Graduate Fellowship for Excellence in Equine Research, College of Veterinary Medicine, North Carolina State University, 2011

Breitschwerdt:
- Natalie Cherry, third place recognition for oral presentations among NCSU-CVM Graduate students
- Mrudula Varanat Postdoc position SONY, New York, Plague research.

Breuhaus:
- Amanda Curling passed the last section of her ACVIM board exam.
- Karin Kruger passed the certifying portion of the ACVIM board exams.
- Amy Edwards was chosen to be our next equine medicine resident.

Clode:
- Diana Pate, achieved board certification in the American College of Veterinary Ophthalmologists, August 2011
- Jay Harrington, Cynthia Wheeler Memorial Grant, award by American College of Veterinary Ophthalmologists for overall best resident presentation, October 2011

Davis:
- Amanda Curling achieved Diplomate status in the ACVIM (LA)
- Karin Kruger won the young investigator’s award at ACVIM for a poster presentation on which I was the corresponding author
- Natalie Cherry successfully defended her dissertation March 2012

DeFrancesco:
- Dr. Mandy Erickson, achieved Diplomate status (ACVIM Cardiology) in 2011 first attempt. Joined the University of Georgia College of Veterinary Medicine at 75% faculty appointment.
- Dr. Bobbi Conner, achieved Diplomate Status (ACVECC) in 2011 first attempt and is currently a visiting faculty scholar at Veterinary School at the University of Pretoria, South Africa.
- Dr. Marisa Ames and Josh Stern, passed ACVIM General exam and credentials for ACVIM Cardiology certifier exam were accepted. Dr. Ames was awarded an ACVIM resident research grant.
- Dr. Nicole Leblanc, started her Cardiology Residency position at the University of Oregon.
Fogle:
- Weston Davis, House Officer of the month
- Liara Gonzalez, Graduate Committee member, 2014 - Awarded NCHC grant for “Does large colon resection and anastomosis affect survival in horses with large colon volvulus?” 4304$ 

Gerard:
- Drs. Ankrom and Hale, Class of 2011 Large Animal Intern of the Year Award
- Dr. Stacie Boswell – Residency, Large Animal Surgery, UT, 2011-2014
- Dr. Andrew Smith – Residency, Large Animal Surgery, UF, 2011-2014

Gilger:
- Dr. Diana Pate: 2008-2011 (ACVO Dipl. 2011)
- Dr. Jay Harrington: 2009-present
- Dr. Heather Berkshire: 2010-present
- Dr. Julie Hempstead: 2010-present
- Dr. Nelson Pinto: 2011-present

Gookin:
- Meghali Nighot defended PhD degree in 2012 (committee member)
- Derek M. Foster – NIH-Merial-AAVMC Young Investigator Award. 
- Katie Tolbert – Travel grant to DDW from the Comparative Gastroenterology Society
  1st place oral abstract CVM Research Forum 2011
  Was awarded a research grant from the Waltham Foundation 2011
  Was graduate student of the month Oct 2011
- Allison Mazepa – T32 NIH-CCMTRTP Training Grant

Hanel:
- Bobbi Conner achieved Diplomate Status (ACVECC)
- Bobbi Conner accepted a faculty position at the University of Florida CVM
- Julie Walker accepted a faculty position at the University of Wisconsin
- Julie Walker received the Bedside manner award as well as the resident of the year award from the class of 2012
- Stephanie Istvan successfully obtained 2 grants to fund her project

Hansen:
- Bobbi Connor achieved Diplomate status in the American College of Veterinary Emergency and Critical Care, then accepted an appointment in a clinical locum at the Faculty of Veterinary Science, Pretoria, South Africa

Harms:
- Sathya Chinnadurai (zoological medicine resident 2009, anesthesia resident 2011), faculty position UC Davis
- Karen Wolf (zoological medicine resident 2008), ACZM Diplomate status
- James Morris (PhD 2009, committee member), Presidential Early Career Award for Scientists and Engineers for his work on invasive lionfish at NOAA Beaufort Laboratory

Harrell:
- Jim Hummel-Diplomate ACVIM, first author publication
- Katie Tolbert-Diplomate ACVIM, abstract at ACVIM 2011
- Jason Reeder-Diplomate ACVIM
• Ashley Cruse-Diplomate ACVIM
• Elizabeth Lennon-manuscript submitted to JVIM
• Rae Hutchins-abstract accepted for ACVIM presentation, passed general board examination
• Allie Mazepa-passed general board examination
• Michael DiCicco-Coat of Honor
• Cristina Perez-obtained faculty position in Leipzeig, Germany
• Seven of nine interns interested in pursuing further training were successful in obtaining residencies/specialty internships—including internal medicine, radiology, and nutrition.
• The majority of students for whom I wrote letters matched to internships.
• Successful continuation of medicine journal club for resident training.

Hauck:
• Dr. Vivianna LaDonne will be entering a clinical pathology residency at Louisiana State University – July 2012

Hawkins:
• Jason Reeder earned Board-certification from the ACVIM (SAIM). I was Dr. Reeder's residency advisor.
• Elizabeth Lennon and Cristina Perez earned Board-certification from the ACVIM (SAIM).
• Justin DeVanna has completed data collection for his study of respiratory function abnormalities in Golden Retriever muscular dystrophy, a model for Duchenne's muscular dystrophy in people.

Hess:
• Jason Kidd (completed Medical Oncology residency July 2011) passed the ACVIM Oncology certifying exam, and accepted a position in private oncology practice in California.
• Lindsay Thalheim passed the ACVIM General Exam in June 2011.
• Lindsay Thalheim won a first place award for her oral presentation on lineage & clonality diagnostics in canine lymphoma at the annual Veterinary Cancer Society meeting in Albuquerque, NM in 2011.
• Greg Gojanovich passed his Preliminary Exam in December 2011.
• Farah Alayli won first-place honors for her poster in the Life Sciences category at the 2012 NCSU Graduate Student Research Symposium.
• Both of my PhD graduate students were visible in the NCSU research community:
  o Peter and Greg each presented an hour-long seminar in the Immunology Program series, Research in Progress, this year.
  o Both presented abstracts of their work: Peter, an oral talk at the CVM Annual Research Forum, January 20, 2012; and Greg, a poster at the Molecular Biotechnology Symposium(McKimmon Center), November 10, 2011

Jermyn:
Jones:
- Amanda Curling passed boards and is board certified
- Karin Kruger passed the specialty board exam and only needs to complete the residency to be board certified.
- Emily Medlin awarded a Molecular Biotechnology GAANN fellowship, NC State

Kennedy-Stoskopf:
- Charles-Smith LE, McClusky D, Fornaro R, Kennedy-Stoskopf S. Novel Application of Wireless Sensor Networks to Monitor Wildlife Interactions with Their Environment. Wildlife Disease Association 60th Annual International Conference, Quebec City, Quebec, Canada, August 14-19, 2011. (Oral Presentation; travel award from SE Climate Science Center)

Lascelles:
- Mentored Research Fellow Javier Benito and Research Intern Anna Charlton achieved Certificate of Achievement, NCSU College of Veterinary Medicine Annual Research Forum, Raleigh, NC, USA, 'Evaluation of Meloxicam and Tepoxalin in Cats'

Maggi:
- 2012- 21st Annual NC State Undergraduate Research Symposium Award. Kristy M Casper, Animal Science (CALS student)
- 3rd place award for oral presentation at the 2011 CVM Research Forum – Natalie Cherry: Bartonella infection in healthy and sick horses in the southeastern United States

Marcellin-Little:
- Jim Taylor – Surgery resident – Private Practice (Research Advisor) – Joined ACVS
- Kathryn Fitzwater – Surgery resident – Ohio State University (Research Advisor) – Joined ACVS

Mariani:
- Dr. Zachary Niman achieved ACVIM Diplomate status, accepted position in private specialty practice
- Dr. Stacy Dillard achieved ACVIM Diplomate status, accepted position in private specialty practice
- Dr. Lindsay Boozer (previous Neurology Fellow in my laboratory) obtained neurology residency at University of Georgia

Marks:
- Bobbi Connor DACVECC-Faculty University of Ondesport
- Andrew Woolcock-IM residency-University of Georgia
- Claire Hyatt-ECC residency-Cornell University
- Julie Walker-Faculty University of Wisconsin

Mathews:
- Dr. Stephanie Szabo – 2nd place resident research publication at ACVS. Kieri Jermyn and Akiko Mitsui achieved Diplomate status in ACVS

McMullen:
- Diana Pate, achieved Diplomate status, American College of Veterinary Ophthalmologists
- Jay Harrington, Dr. Cindy Wheeler Memorial Grant for Research award. 42nd Annual Conference of the American College of Veterinary Ophthalmologists, Hilton Head, South Carolina

Monteiro:  
- Meghan Samberg, Ph.D. student (present), Biomedical Engineering. Thesis Entitled, “Biological Interactions with Silver Nanoparticles”. December, 16, 2011,  
- Philip Miller (present), Biomedical Engineering  
- Alexcia Linthicum (present), CBS Pharmacology  
- Daniela Karadzovska (present), CBS Pharmacology  
- Huadong Xu (present), Biomedical Engineering  
- Tim Martin (present), Biomedical Engineering  
- Xiang-Jun Shen, Ph.D., Postdoctoral Fellow, (2011–present)  
- Meghan Samberg, Ph.D., Postdoctoral Fellow, (2011–present)  
- Natalia Makhanova, Ph.D. Postdoctoral Fellow, (2011–present)

Munana:  
- Dr. Stacy Dillard, ACVIM (Neurology) Diplomate, 2012  
- Dr. Zachary Niman, ACVIM (Neurology) Diplomate, 2012

Murphy/Olivry:  
- Dr. Ursula Oberkirchner (former dermatology resident) achieved Diplomate status (ACVD and ECVD) and currently clinical faculty member at the CVM of Florida State University  
- Dr. Mike Rossi (former dermatology intern) began dermatology residency at Veterinary Skin and Allergy Specialists Referral Center of Colorado, in Englewood, Colorado. He continues to attend journal club and histopathology rounds electronically with NCSU dermatology group.

Olby:  
- Dr. Stacy Dillard awarded DACVIM (Neurology), June 2011  
- Dr. Zach Niman awarded DACVIM (Neurology), June 2011  
- Dr. James Campbell won the top resident poster presentation at ACVIM, June 2011. The project was titled: Assessment of Cord Dorsum Potentials from Caudal Nerves in Clinically Normal Adult Dogs and was completed under my supervision.  
- Dr. Urkasemsin completed and was awarded her PhD.

Roe:  
- Kieri Jermyn, passed ACVS Board exams  
- Akiko Mitsui, passed ACVS Board exams

Sherman:  
- Margaret Gruen received Diplomate status in ACVB and was hired on at NCSU-CVM in DoCS as a research faculty member

Stoskopf:  
- Sathya Chinnadurai – Faculty position at U. C. Davis

Suter:  
- Lindsay Thalheim: VCS Resident Research Award
Tate:
- Michael Schramme in February passed ACVS boards
- Liara Gonzales recognized as: NIH Initiative for Maximizing Student Diversity Outstanding Mentor Award NCSU second year of recognition 2011. Also accepted into CCMTR training program (NIH T32).

Vaden:
- Christina Perez became Board Certified by the ACVIM
- Elizabeth Lennon became Board Certified by the ACVIM
- Rachel Cianciolo completed PhD program.

Williams:
- Lindsay Thalheim, recipient of Outstanding Clinical Research Presentation Award at annual Veterinary Cancer Society Conference

2012 CVM Research Forum Awards (DoCS mentorship in italics):

**POSTER PRESENTATIONS**

<table>
<thead>
<tr>
<th>Award</th>
<th>Name</th>
<th>Title</th>
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<tbody>
<tr>
<td>Excellence</td>
<td>Jennifer Hendricks</td>
<td>T Regulatory cells have a higher productive viral load than T helper cells during both a chronic and acute FIV infection in cats.</td>
</tr>
<tr>
<td>Excellence</td>
<td>Brett Gulledge</td>
<td>Comparison of selected stretch positions of the piriformis muscle using computerized tomography and biomodeling</td>
</tr>
<tr>
<td>Recognition</td>
<td>Shannon Duke Becker</td>
<td>Exploration of wild canid genomes using chromosome-specific probes show they share evolutionary breakpoints</td>
</tr>
<tr>
<td>Recognition</td>
<td>Javier Benito &amp; Anna Nika Charlton</td>
<td>Evaluation of Meloxicam and Tepoxalin in Cats</td>
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**ORAL PRESENTATIONS**

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<thead>
<tr>
<th>Award</th>
<th>Name</th>
<th>Title</th>
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<tbody>
<tr>
<td>Excellence</td>
<td>Laura Riggs</td>
<td>CRF-mediated mast cell activation and intestinal barrier injury is mediated by the enteric nervous system</td>
</tr>
<tr>
<td>Excellence</td>
<td>Megan Downey</td>
<td>Mitochondrial genome sequences result in improved understanding of the phylogenetic relationships of piroplasma that infect companion animals</td>
</tr>
<tr>
<td>Recognition</td>
<td>Sehwon Koh</td>
<td>Generation of putative induced pluripotent stem cells (iPS) from adult canine fibroblast</td>
</tr>
<tr>
<td>Recognition</td>
<td>Rachael Stebbing</td>
<td>Protecting the heart: Hsp25 as an innate response to viral infection</td>
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CVM Awards Banquet 2012 (DoCS presenter in italics):

Phi Zeta Awards
Presenter: Dr. Laurel Williams

Martin Litwack Award for Excellence
Presenter: Dr. Bristol
Recipient: Christine Luke

Simmons & Associates Scholarship
Presenter: Dr. Bristol
Recipient: Brett Gulledge

N. C. Veterinary Medical Association
Academic Achievement Award
Presenter: Dr. Chessie Green Class of 1996
Recipient: Theresa Beachler

Joseph L. Grimes Leadership Award
Presenter: Dr. Chessie Green
Recipient: Kate Archibald

Friends of NCVMA Foundation Scholarship
Presenter: Dr. Chessie Green
Recipient: Daria DiGiovanni

Friends of NCVMA Advocate Award
Presenter: Dr. Chessie Green
Recipient: Taylor Godleski

The Industry Council Award
Presenter: Kelly Bullock
Recipient: Greg Whitener, Class of 2014

Elanco Student Award for Excellence
In Veterinary Behavior
Presenter: Dr. Margaret Gruen
Recipient: Regina Lawson

ACVIM Clinical Excellence Awards
Presenters: small – Dr. Marks
Recipient: small animal: Vincent Ziglioli & Kristina Bowles
Large animal: Christina Howard

ACVS Small Animal Surgery Award
Presenter: Dr. Mathews
Recipient: Sara Watson Brown
ACVS Large Animal Surgery Award
Presenter: Dr. Blikslager
Recipient: C. J. Caniglia

Donald R. Howard Surgery Award
Presenter: Dr. Mathews
Recipient: Lara Anderson

Ethicon Surgical Excellence Awards
Presenter: Dr. Hardie
Recipient: Nicole Schnell & Brett Gulledge

Excellence in Anesthesia Clinical Proficiency Award
Presenter: Dr. Swanson
Recipient: C. J. Caniglia

American College of Veterinary Anesthesiologists
Presenter: Dr. Swanson
Recipient: Tara Fetzer

Clinical Proficiency in Wildlife, Aquatic, Avian & Zoological Medicine
Presenters: Dr. Michael Stoskopf & Dr. Suzanne Kennedy Stoskopf

Photo of the Year Award: Harrison Dudley

DVM Pharmaceuticals Dermatology Award
Presenter: Dr. Marcy Murphy
Recipient: Melanie Jarrett

R. C. Dillman Award for Excellence in Anatomical & Clinical Pathology
Presenter: Dr. Linder
Recipient: Travis Meuten & Vivian Chen
Dr. Monica Menard Award for Excellence in Veterinary Pathobiological Research
Presenter: Dr. Phil Sannes
Recipient: Dr. Arnaud Van Wettere

NCSU Excellence in Radiology Clinical Proficiency Award
Presenter: Dr. Ian Robertson
Recipient: Lara Anderson

ACVR Excellence in Clinical Radiology Award
Presenter: Dr. Ian Robertson
Recipient: Laura Greene
ASLAP Student Award
Presenter: Dr. Rick Fish
Recipient: Jack Dutton

BIVI Cardiology Award
Presenter: Dr. Terri DeFrancesco & Dr. Rachel Abrams
Recipient: Jordan Sauer

Ophthalmology Senior Student Award
Presenter: Dr. Brian Gilger
Recipient: Rita Sabadish

Oncology Senior Student Award
Presenter: Dr. Laurel Williams
Recipient: Abby Mulchi

The Veterinary Neurology Award
Presenter: Dr. Natasha Olby
Recipient: Makenna Cash

Association of Feline Practitioners Senior Student Award
Presenter: Dr. Natasha Olby
Recipient: Emily Ansel

Banfield Client Communication Award
Presenters: Dr. Williams and Dr. Gerard
Recipient: Sara Watson Brown

DOCS Bedside Manner Award
Presenter: Dr. Steve Marks
Recipient: Dr. Rae Hutchins & Dr. Julie Walker

DOCS Outstanding Small Animal Intern Award
Presenter: Dr. Karyn Harrell
Recipient: Dr. Andrew Woolcock

Award for Proficiency in Emergency & Critical Care
Presenter: Dr. Steve Marks
Recipient: Joseph D’Abbraccio

Novartis Small Animal Clinical Proficiency Award
Presenter: Dr. Lizette Hardie
Recipient: Laura Greene

Companion Animal Faculty Clinical Proficiency Awards
Presenter: small animal – Dr. Lizette Hardie
Recipients: Sirima Yaemsiri, Melanie Jarrett, Lindsey Bullen, Susan Britt, Travis Meuten, Tara Fetzer

Presenter: large animal – Dr. Babetta Breuhaus
Recipient: Erin Slaughter & Daria DiGiovanni
Theriogenology Clinical Proficiency Award
Presenter: Dr. Mike Whitacre
Recipient: Theresa Beachler

Population Health & Pathobiology Faculty
Clinical Proficiency Awards
 Presenter: Dr. Derek Foster
Recipient: Large ruminant: Harrison Dudley
Recipient: Small ruminant: Rachel Getgen

Population Health & Pathobiology Faculty
Poultry Proficiency Award
Presenter: Dr. Malcolm Roberts
Recipient: Melissa Leaf

Pfizer Swine Proficiency Award
Presenter: Dr. Almond & Victoria Boulden
Recipient: Lisa Thompson

BIVI Swine Proficiency Award
Presenter: Dr. Almond
Recipient: Lisa Thompson

10th Annual Ben Harrington Award
Presenter: Dr. Malcolm Roberts
Recipient: Dr. Jeremy Pittman, Class of 2004

W. C. Brownie Investigative Diagnostic Medicine Awards
Presenter: Food Animal – Dr. Derek Foster
Recipient: Kimberly Pescosolido

Presenter: Equine – Dr. Babetta Breuhaus
Recipient: Claire McPhee

Merck Animal Health Award for Pain Management
Presenter: Dr. Duncan Lascelles
Recipient: Angelina “Mimi” Schultz

DVM Students:
Faculty provide classroom, laboratory, and clinical instruction to students in the DVM program. Fifty faculty were involved in advising DVM students. Faculty had numerous visiting students work with them in the VTH from throughout the United States and the world. Faculty also mentored veterinary students in research efforts.

Didactic Instructor Evaluations – Evaluation by students of overall teaching effectiveness (Departmental Benchmark 80% A’s and B’s): All faculty evaluated are above benchmark.

# Peer Evaluations Conducted:
Twenty-one Assistant Professors and tenured Associate and Full Professors were evaluated in classroom teaching by tenured faculty.
Clinical Instructor Evaluations – Evaluation by students of overall teaching effectiveness: These evaluations are accomplished through the web. Departmental averages are as follows – Spring 2011 and Fall 2011 – At least 95% 3’s & 4’s.

H. Fundraising

See College Annual Report – Development and College Relations

I. Administration

The DoCS department worked closely with the central CVM administration to ensure that centralization proceeded as smoothly as possible. The DoCS department has gone from having 4 administrative assistants to having 2, and 1.5 accountants to 1. Faculty members have had to adjust to using centralized services for teaching support, travel, processing invoices and some HR matters. The department is still first contact for faculty on many administrative matters, so good communication with central services is critical. The exact roles of the department personnel vs. the central personnel continue to be developed.

New SPA Appointments
- Beth Barlow, Research Specialist working with Dr. Jennifer Davis

Awards and Recognitions
- Gail Druley and Fonda Martin awarded the Phyllis Edwards Service Award for 2012
- Gail Druley received the CVM Award for Excellence, 2012
- Henry Marr nominated for the CVM Award for Excellence, 2012

J. Recommendations and concerns for the future

We are committed to graduating veterinarians who will add value to their business or institution and strengthen their communities. We want our graduates to merit higher salaries than graduates from other veterinary colleges. As a college, we need to restructure our curriculum to maximize relevant learning opportunities, use our resources efficiently, and enable our students to become the best possible veterinarians.

We are fortunate that our faculty members are at the forefront of teaching, research, and clinical service. Recruitment and retention of clinical faculty is an ever-increasing challenge, particularly given multiple years of no salary increases, and we have had to do a number of retentions this year. We lost a valued research-intensive faculty member because another university was able to offer her a package that we could not match. As other universities establish endowed professorships in colleges of veterinary medicine, they have increasingly been recruiting our faculty members to fill these positions. We very much need to establish our own endowed professorships in order to be able to retain our most talented faculty members. In addition to this challenge, private specialty practices offer ever more enhanced opportunities and salaries. Continued support for the research and teaching endeavors of the faculty is essential so that they can accomplish their goals and remain enthused about academic careers.

The move to the new specialty services medical center (Terry Center) occurred early in the summer of 2011. The development of the Health and Wellness Center began as soon as the specialty services were moved. The concern for the future will be the development of a coherent vision for the Health and Wellness Center that capitalizes on its unique position as a training
ground for primary care veterinarians. The special pricing for the Clinical Trials program began this year and we must monitor how this affects our ability to attract trials. The next growth areas for the clinical services are 1) the opening of the Exotic Animal Medicine Services this coming summer, 2) the development of a plan for primary care training in equine medicine at the Equine Health Center in Southern Pines, and 3) development of a plan (with CALS) for a cutting edge reproductive technology and foaling center at Reedy Creek. The long term plan for a comprehensive equine center at Lake Wheeler must be developed with CALS.

To improve the health of companion, performance, and wild animals, research in the department emphasizes the discovery and implementation of new procedures and methods to understand, prevent, diagnose, and treat diseases. The Center for Comparative Medicine and Translational Research is aiding in moving research innovations from the laboratory bench to the clinics. Conversely, clinical problems will be investigated in the laboratory through close collaboration between basic scientists and clinicians. Faculty members in the department work in collaborative teams as a necessity and providing training to maximize their effectiveness remains an ongoing concern. While some funding for this department’s research comes from federal grants, significant sources of support include animal charities, industry partners and development gifts. We must be strategic in determining the best strategies to help faculty maximize their effort and minimize the time spent in garnering funding.

II. Examples relating to Draft Strategic Plan

A. Enhance the success of our students through educational innovation.
   - DVM program: Continued development of case based learning scenarios using Moodle and Quia has exposed the students to increasing amounts of self-paced on-line problem solving.
   - Graduate Program: The Comparative Biomedical Sciences graduate program continues to be a model for interdisciplinary training, producing graduates who are uniquely qualified to participate in collaborative projects.
   - Post Doctoral Program: Academic training for residents was enhanced by the development of monthly “writing clubs” in the residency programs, in which each resident brings a portion of a paper he/she is writing. There is peer and instructor feedback and coaching, as well as accountability for bringing a new section each meeting.

B. Enhance scholarship and research by investing in faculty infrastructure
   - Retained key faculty members in neurology and gastroenterology.
   - One endowed professorship (Herbert Benjamin Distinguished Professor)
   - Hired new faculty member in dermatology.
   - Currently hiring in radiation oncology, emergency/critical care, ophthalmology, equine surgery, avian/exotic animal, cardiology.

C. Enhance interdisciplinary scholarship to address the grand challenges of society
   - Suzanne Kennedy-Stoskopf continued to play a key role in the One Health Intellectual Exchange Group and the development of an associated multi-institutional course (NCSU, UNC, Duke)
• Dr. Breitschwerdt and Vector Borne Disease Laboratory collaborate with human medicine partners to educate the animal and human world of the dangers of tick disease and how these worlds can learn from each other
• Research collaborations between faculty at the CVM and faculty at UNC Medical School or Duke School of Medicine continue to grow.
• DoCs faculty members continue to provide leadership regarding clinical trials for the CCMTR
• DoCS faculty members provide support for the Southeast Climate Science Center.
• DoCS faculty members have been active participants in the development of citizen outreach programs at the Museum of Natural Sciences.

D. Enhance organizational excellence by creating a culture of constant improvement
• The department retreat was used to provide training in feedback, with the aim of fostering a climate of continuous feedback in the department.
• A current initiative involves developing a behavioral feedback instrument for use in hospital.

E. Enhance local and global engagement through focused strategic partnerships
• The Mobile Surgery Hospital continues to provide low cost spay/neuter and vaccine clinics for low income counties in North Carolina.
• Trained investigators participate in animal cruelty investigations in the state.
• An online Euthanasia Technician Training Program provides training for shelter personnel for this very difficult and sensitive task.
• The Multi-Species Medicine group provides veterinary care and consultation for animal collections across the state (NC Aquariums, NC Museum of Natural Sciences, NC Zoo, Sylvan Heights Waterfowl Park, Carolina Raptor Center, Karen Beasley Sea Turtle Rescue and Rehabilitation Center, Bass Pro Shops)
• Dr. Degernes provides a leadership role in organizing and hosting the Wildlife Rehabilitators of North Carolina Symposium
• Dr. Dunning coordinates the Credentialed Responder training program, which prepares every student graduating from the CVM to be an emergency responder in the event of a biosecurity emergency.
• Dr. Degernes continued the partnership with China Agricultural University, Beijing, China. The current arrangement provides for students from NCSU to travel to China for the Veterinary Acupuncture Course and discussions are underway for an intellectual exchange.
III. Departmental Listing as of April 30, 2012

Professor
Atkins, C.E., DVM, Professor, Internal Medicine, Cardiology
Blikslager, A.T., DVM, PhD, Professor, Equine Surgery
Breitschwerdt, E.B., DVM, Professor, Small Animal Internal Medicine
Bristol, D.G., DVM, Professor & Dean of Academic Services, Large Animal Surgery
Davidson, M.G., DVM, Professor, Ophthalmology
Flammer, K., DVM, Professor, Non-domestic Avian Medicine
Gilger, B.C., DVM, MS, Professor, Ophthalmology
Hardie, E.M., DVM, PhD, Professor & Department Head, Small Animal Surgery
Hawkins, E.C., DVM, Professor, Small Animal Internal Medicine
Jones, S., DVM, PhD, Professor, Equine Medicine
Keene, B.W., DVM, MS, Professor, Cardiology
Lascelles, B.D., BVSc, PhD, BS, Associate Professor, Small Animal Surgery
Lewbart, G.A., VMD, MS, Professor, Aquatics, Wildlife & Zoo Medicine
Lunn, D.P., BVSc, MS, PhDMRCVS, Professor of Equine Medicine and Dean of CVM
Marcellin, D.J., DEDV, Professor, Small Animal Surgery
Mathews, K.G., DVM, MS, DACVS, Professor, Small Animal Surgery
Monteiro-Riviere, N.A., PhD, MS, BS, Professor, Investigative Dermatology and Toxicology
Munana, K.R., DVM, MS, Professor, Neurology
Olby, N.J., VetMB, PhD, Professor, Neurology
Olivry, T.J., DVM, PhD, Professor, Immunodermatology
Roe, S.C., PhD, BVSc, MVSt, MS, Professor, Small Animal Surgery
Stoskopf, M.K., DVM, PhD, Professor, Aquatics, Wildlife & Zoo Medicine
Tate, L.P., VMD, Professor, Equine Surgery
Vaden, S.L., DVM, PhD, BSA, Professor, Small Animal Internal Medicine

Associate Professor
Birkenheuer, A.J., PhD, DVM, BS, Associate Professor, Small Animal Internal Medicine
Breuhaus, B.A., DVM, PhD, Associate Professor, Equine Medicine
DeFrancesco, T.C., DVM, BS, Associate Professor, Cardiology/Critical Care
DeGernies, L.A., DVM, MPH, BS, BA, Associate Professor, Avian Medicine and Epidemiology
Fish, R.E., DVM, PhD, MS, BS, Assoc. Prof. & Director of University Animal Resources
Gookin, J., DVM, PhD, Associate Professor, Small Animal Internal Medicine
Hansen, B.D., DVM, Associate Professor, Critical Care/Emergency Medicine
Harms, C.A., DVM, Associate Professor, Aquatics, Wildlife & Zoo Medicine
Hauck, M.L., DVM, PhD, Associate Professor, Oncology
Lunn, K., BVMS, MS, PhD, Associate Professor, Small Animal Internal Medicine
Whitacre, M., DVM, Equine Theriogenology
Williams, L.E., DVM, Associate Professor, Oncology

Assistant Professor
Bailey, S., DVM, Assistant Professor, Theriogenology
Clode, A., DVM, Assistant Professor, Ophthalmology
Davis, J., DVM, Assistant Professor, Equine Medicine
Hess, P.R., DVM, Assistant Professor, Oncology
Jermyn, K., DVM, Assistant Professor, Small Animal Surgery
Mariani, C.L., DVM, Assistant Professor, Neurology
McMullen, R., DVM, Assistant Professor, Ophthalmology
Suter, S.E., VMD, MS, BS, Assistant Professor, Oncology
Clinical Assistant, Clinical Associate, Clinical Professor
Chappell, K., DVM, Clinical Assistant Professor, Clinical Studies Core
Early, P., DVM, Clinical Assistant Professor, Neurology
Ferris, K.K., DVM, BS, Clinical Assistant Professor, General Practice
Fogle, C., DVM, Clinical Assistant Professor, Equine Surgery
Gerard, M.P., DVM, Clinical Associate Professor, Equine Surgery
Gruen, M., DVM, Clinical Assistant Professor, Behavior Medicine
Hanel, R., DVM, Clinical Assistant Professor, Emergency Medicine
Harrell, K.A., DVM, Clinical Assistant Professor, Small Animal Internal Medicine
Krug, W.V., DVM, BS, Clinical Assistant Professor, Dentistry
Marks, S.L., BVSc, MS, Clinical Associate Professor, Small Animal Internal Medicine
Murphy, K. M., DVM, Clinical Assistant Professor, Dermatology
Pruitt, A.F., DVM, PhD, BA, Clinical Assistant Professor, Radiation Oncology
Redding, W.R., DVM, MS, Clinical Associate Professor, Equine Surgery
Risselada, M., DVM, Clinical Assistant Professor, Small Animal Surgery
Sherman B.S., PhD, DVM, MS, Clinical Associate Professor, Animal Behavior
Stevens, B., DVM, Clinical Assistant Professor, General Practice
Wood, M., Clinical Assistant Professor, Small Animal Internal Medicine

Research Assistant, Professor
Maggi, R.G., Research Assistant Professor, Small Animal Internal Medicine
Kennedy-Stoskopf, S., Research Professor, Aquatics, Wildlife & Zoo Medicine

Visiting Assistant Professor, Clinical Veterinarian, Visiting Clinical Instructor, Research Associate Postdoc, and EPA Professional
Aslett, D., Research Associate Postdoc, SA Medicine (Breitschwerdt)
Benito-Vibora, J., Research Associate Postdoc, SA Surgery (Lascelles)
Breen, T., Research Assistant, Oncology (Olby)
Grunkemeyer, V., Clinical Veterinarian, Avian Medicine (Degernes/Flammer)
Harden, L., Research Assistant, Clinical Studies Core (Chappell)
Hamilton, A., Research Assistant, Clinical Studies Core (Olby)
Hegarty, B., Research Associate, Small Animal Internal Medicine (Breitschwerdt)
Inman, A., Laboratory Supervisor, Center for Chemical Toxicology, Research & Pharmokinetics (Monteiro-Riviere)
Lee, Seunggon, Research Associate Postdoc, Cardiology (Atkins)
Lim, Ji-Hey, Research Associate Postdoc, Neurology (Olby)
Linnehan, R.M., Visiting Asst. Professor, Aquatics, Wildlife & Zoo Medicine
Mascarelli, P., Research Associate, SA Medicine (Breitschwerdt)
Nighot, M., Research Associate Postdoc, Equine Surgery (Blikslager)
Qurollo, B., Research Associate Postdoc, Small Animal Internal Medicine (Breitschwerdt)
Shroff, V., Research Assistant, Oncology (Suter)
Urkasemsin, G., Research Associate Postdoc, Neurology (Olby)

Adjunct Professor, Associate Professor, Assistant Professor
Abrams, C.F., MS, PhD, Assoc Status, Professor Emeritus Bio & Ag Engineering, Ortho Surgery
Adams, A., DVM, Adjunct Assistant Professor, Cardiology
Atlee, B.A., DVM, MS, BS, Adjunct Assistant Professor, Dermatology
Baden, D.G., PhD, BA, Adjunct Professor, Aquatics, Wildlife & Zoo Medicine
Bergyl, R., PhD, Adjunct Lecturer, Aquatics, Wildlife and Zoo Medicine
Bowman, K., DVM, Associate Professor, Emeritus, Equine Surgery
Brown, V.A., DVM, Adjunct Associate Professor, Special Species Medicine
Burkett, R.G., DVM, Adjunct Assistant Professor, Avian Medicine

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Chanoit, G., DEDV, MSC, PhD, Adjunct Assistant Professor, Small Animal Surgery
Coffer, N.J., DVM, Adjunct Assistant Professor, Aquatics, Wildlife & Zoo Medicine
Deresinski, D.T., VMD, BS, Adjunct Asst Professor, Aquatics, Wildlife & Zoo Medicine
DeYoung, D., DVM, Adjunct Professor, Small Animal Surgery
Dombrowski, D., DVM, MS, Adjunct Lecturer, Aquatics, Wildlife & Zoo Medicine
Dye, J.A., DVM, PhD, MS, Adjunct Associate Professor, Internal Medicine
Dukowicz, J., MS, Adjunct Assistant Professor, Aquatics, Wildlife & Zoo Medicine
Edling, T., DVM, MS, Adjunct Assistant Professor, Aquatics, Wildlife & Zoo Medicine
Einige, D., DVM, Adjunct Assistant Professor, Small Animal Surgery
Eckerman-Ross, C., DVM, BS, Adjunct Assistant Professor, Nondomestic Avian Medicine
Edling, T., DVM, MS, Adjunct Assistant Professor, Aquatics, Wildlife & Zoo Medicine
Falk, R.J., MD, Adjunct Professor, Small Animal Internal Medicine
Flanagan, G., DVM, MS, Adjunct Assistant Professor, Behavior Medicine
Ford, R.B., DVM, MS Professor, Emeritus, Small Animal Internal Medicine
Gee, M., DVM, Adjunct Assistant Professor, Aquatics, Wildlife & Zoo Medicine
Gregg, S., DVM, Associate Status, Critical Care
Hammer, D.I., MD, Adjunct Associate Professor, Occupa. Health/Zoonotic Disease
Harling, D.E., DVM, Adjunct Assistant Professor, Ophthalmology
Haulena, M., DVM, MS, Adjunct Assistant Professor, Aquatics, Wildlife & Zoo Medicine
Hennessy, C., DVM, Adjunct Assistant Professor, Equine Medicine and Surgery
Hinshaw, J., MS, PhD, Adjunct Status, Associate Professor, Zoology and Aquatic Medicine
Howard, J.F., Jr, MD, Adjunct Professor, Neurology
Johnson, D.H., DVM, Adjunct Assistant Professor, Aquatics, Wildlife & Zoo Medicine
Kornegay, J.N., DVM, Adjunct Professor, Neurology
Levine, D.F., MPT, PhD, OCS, Adjunct Professor, Small Animal Surgery
Loeffler, I.K., DVM, PhD, Adjunct Assistant Professor, Avian Medicine
Loomis, M.R., DVM, MS, Adjunct Associate Professor, Zoological Medicine
Mansmann, R., DVM, Professor Emeritus, Equine Surgery
McCashin, F.B., Adjunct Clinical Professor, Equine Medicine and Surgery
Mozzachio, K., DVM, Adjunct Assistant Professor, Aquatics, Wildlife & Zoo Medicine
Mulcahey, D.M., PhD, DVM, Adjunct Associate Professor, Aquatics, Wildlife & Zoo Medicine
Norton, J., DVM, PhD, Adjunct Associate Professor, Laboratory Animal Medicine
Norton, T.M., DVM, MS, Adjunct Assistant Professor, Zoological Medicine
Powers, L., DVM, Adjunct Assistant Professor, Avian Medicine
Preston, G.A., Ph.D., BS, Adjunct Associate Professor, Small Animal Internal Medicine
Ruslander, D., DVM, Adjunct Assistant Professor, Oncology
Sabin, L.P., DVM, BS, Adjunct Assistant Professor, Cardiology
Schopler, R.L., DVM, PhD, Adjunct Assistant Professor, Avian Medicine
Scott, D.E., DVM, Adjunct Assistant Professor, Avian Medicine
Sharp, N.J.H., VetMB, Adjunct Associate Professor, Neurology
Shuler, J., DVM, Adjunct Assistant Professor, Equine Health Program
Sifers, T.L., Adjunct Assistant Professor, Internal Medicine, Intensive Care Unit
Sigmon, B., DVM, Adjunct Assistant Professor, Internal Medicine
Simpson, W., DVM, Adjunct Assistant Professor, Equine Surgery
Sontakke, S., PhD, MS, BS, Adjunct Assistant Professor, Internal Medicine/Microbiology
Spodnick, G.J., DVM, Adjunct Assistant Professor, Surgery
Stroud, C., DVM, PhD, Adjunct Assistant Professor, Aquatics, Wildlife & Zoo Medicine
Taylor, B.E., DVM, Adjunct Assistant Professor, Equine Surgery
Taylor, K., Adjunct Assistant Professor, Aquatics, Wildlife & Zoo Medicine
Trumpatori, B., DVM, Adjunct Assistant Professor, Small Animal Surgery
Tuttle, A.D., DVM, Adjunct Assistant Professor, Aquatics, Wildlife & Zoo Medicine
Vasbinder, M.A., DVM, Adjunct Assistant Professor, Laboratory Animal Medicine
Ward, C.L., DVM, Adjunct Associate Professor, Special Species Medicine
Wheeler, S.J., BVSc, PhD, Adjunct Professor, Small Animal Surgery
Support Staff
Beth Barlow, Research Specialist
Janet Barnett, Executive Assistant
Joy Beaston, Department Accountant
Julie Bradley, Research Technician
Heather Broadhurst, Research Technician
Gail Druley, Research Technician
Stan Dunston, Research Specialist
Patricia Faw, Research Specialist
Alexandra (Xandi) Hamilton, Research Professional
Tonya Harris, Research Specialist
Jon Hash, Research Specialist
Jennifer Holmes, Research Specialist
Allison Klein, Research Specialist
Tonya Lee, Processing Assistant V
Henry Marr, Research Specialist
Fonda Martin, Research Specialist
Caroline Meek, Research Specialist
Julie Nettifee-Osborne, Research Specialist
Judy Paps, Research Technician
Beth Salmon, Research Specialist
Jennifer Sollinger, Research Technician
Steven Stauffer, Research Specialist
Andrea Thomson, Research Specialist
Kimberly Williams, Laboratory Supervisor
Jackie York, Administrative Support Associate – VBDD Laboratory
Karen Young, Research Specialist

Residents – House Officers
Marisa Ames, Cardiology
Lauren Askin, Radiation Oncology
Frane Banovic, Dermatology
Lisa Bazzle, Small Animal Emergency & Critical Care
Elizabeth Bradshaw, Laboratory Animal Medicine
James Campbell, Neurology
Emily Christiansen, Zoological Medicine
Elsburgh Clarke, Zoological Medicine
Katherine Crook, NCSU/VCA Neurology
Amy Davenport, Small Animal Medicine
John Davis, Large Animal Surgery
Justin DeVanna, Small Animal Medicine (Army)
Michael DiCicco, Small Animal Medicine
Jessica Gaskins, Clinical Veterinary Pharmacology
Jay Harrington, Ophthalmology
Julie Hempstead, Ophthalmology
Timothy Hodge, Cardiology
Blaire Holland, Equine Medicine
Marie Hopfensperger, Behavior
Rae Hutchins, Small Animal Medicine
Stephanie Istvan, Small Animal Emergency & Critical Care  
Chad Johannes, Oncology  
Hani Korani, Small Animal Surgery (Tuskegee)  
Renee Krebs, Small Animal Surgery (Army)  
Toni Kwan, Small Animal Surgery  
Dustin Lewis, Radiation Oncology  
Melissa Lewis, Neurology  
Kristin Manning, Clinical Investigator  
Allison Mazepa, Clinical Investigator  
Larry Minter, Zoological Medicine  
Margaret Musser, Oncology  
Jay Newman, Equine Surgery  
Rafael Obrador de Aguilar, Small Animal Emergency & Critical Care  
Jean-Sebastian Palerme, Small Animal Medicine  
Nelson Pinto, Ophthalmology  
Eric Rowe, Small Animal Surgery  
Malte Schwartz, Neurology  
Renan Sper, Theriogenology  
Josh Stern, Cardiology  
Lindsay Thalheim, Oncology  
Joanne Tuohy, Small Animal Surgery  
Julie Walker, Small Animal Emergency & Critical Care  
Emma Warry, Oncology Fellowship, Bone Marrow Transplant  
Jennifer Willcox, Oncology  

Interns  
Marcia Backstrom, Small Animal  
Alexander Bennett, Small Animal  
Timothy Bolton, Small Animal  
Ashley Brandes, Small Animal  
Whitney Brown, Theriogenology  
Amy Edwards, Equine  
Clare Hyatt, ER/CC  
Kim Kane, Equine  
Jessica Partlow, Equine  
Jessica Pritchard, Small Animal  
Mason Savage, Small Animal  
Andrea Tomas, Small Animal  
Maarja Uri, Dermatology  
Maria Waldrop, Oncology  
Jenessa Winston, Small Animal  
Andrew Woolcock, Small Animal  

Graduate Students  
Teresa Buchheit, CBS (Jones)  
Petra Bizikova, Immunology (Olivry)  
Natalie Cherry, CBS (Breitschwerdt)  
Megan Downey, CBS (Birkenheuer)  
Mila Freire-Gonzalez, CBS (Lascelles)  
Gregory Gojanovich, Immunology (Hess)  
Liara Gonzalez, Physiology (Blikslager)  
Tracy Hill, CBS (Blikslager)
Younggeon Jin, CBS (Jones)
Raphael Labens, Physiology (Blikslager)
Dana LeVine, CBS (Jones)
Allison Mazepa, CBS (Bissett)
Emily Medlin, CBS (Jones)
Meghali Nighot, CBS (Blikslager)
Elizabeth Pultorak, CBS (Breitschwerdt)
Peter Ross, Immunology (Hess)
Caryline Salzmann, CBS (Olby)
Mary Sheats, CBS (Jones)
William Sills, CBS (Jones)
Eui Jae Sung, CBS (Jones)
Jaime, Tarigo, CBS (Birkenheuer)
Debra Tokarz, CBS (Jones)
Mary Katie Tolbert, CBS (Bissett)
Ganokon Urkasemsin, CBS (Olby)
Adam Ward, CBS (Jones)
Jamie Wearn, CBS (Davis)
IV. DEPARTMENTAL BIBLIOGRAPHY FOR 2011-2012

1. Original works in peer-reviewed journals.


Harms CA. Harms RV. Venous blood gas and lactate values of mourning doves (Zenaida macroura), boat-tailed grackles (Quiscalus major) and house sparrows (Passer domesticus) following capture by mist net, banding, and venipuncture. J Zoo Wildl Med 2012;43:83-90.


Ott LE, McDowell ZT, Turner PM, Law JM, Adler KB, Yoder JA, Jones SL. Two myristoylated alanine-rich C-kinase substrate (MARCKS) paralogs are required for normal development in zebrafish. Anatomical Rec 2011;294:1511–1524.

Thakur S, Sandfoss MR, Kennedy-Stoskopf S, Deperno CS. Detection of Clostridium difficile and Salmonella in feral pigs in North Carolina: Implications and potential for horizontal transmission. J Wildl. Dis 2011;47(3):774-776. (Contacted Dr. Thakur to see if he would be interested in samples from the feral swine that Mark Sandfoss was processing and made the transfers to his laboratory. An active collaboration is evolving between Thakur, DePerno and myself on feral pigs.)

Sandfoss MR, DePerno CS, Betsill CW, Erickson G, Kennedy-Stoskopf S. A serosurvey of Brucella suis, classical swine fever, porcine circovirus type 2, and pseudorabies in feral pigs (Sus scrofa) of eastern North Carolina. J Wildl Dis 2012;48(2):462-466. (I essentially wrote this paper for Mark because he did not have the infectious disease background to put it in the proper perspective.)


2. Case reports in peer-reviewed journals.


3. Review articles in peer-reviewed journals.


4. **Books.**


5. **Chapters in Books.**


6. **Titles of abstracts from scientific and professional veterinary conferences (i.e. abstracts submitted for presentation as papers or posters at scientific/clinical conferences where the proceedings are citable).**

Kleisch DJ, Erickson AM, Atkins CE, Keene BK, Lascelles BDX, DeFrancesco TC. Effect of apparently asymptomatic feline hypertrophic cardiomyopathy on activity levels and owner-assessed quality of life. NCSU CVM Research Forum, Raleigh, NC, January 2012.


Hill T, Blikslager AT. Indomethacin decreases recovery of gastric barrier function after acid injury in a novel ex vivo canine model. 7th Annual NC State University Research Graduate Student Symposium, 2012.


Altman JA, Blikslager AT, Kopp KJ. Recurrent colic, acute and chronic: evaluation of 30 cases included in a clinical field study of 144 horses with digestive disorders. 10th Equine Colic Research Symposium, 2011.


Brown MA, Blikslager AT. Hypoxia disrupts recovery of injured non-transformed small intestinal cells, but not transformed cells. Gastroenterology, 2011.


Nighot PK, Young K, Blikslager AT. Chloride channel CIC-2 modulates susceptibility to DSS-induced murine colitis: implications for the role of the tight junction in IBD. Gastroenterology, 2011.

Nighot PK, Young K, Blikslager AT. The chloride channel CIC-2 modulates tight junction barrier function via intracellular trafficking. Gastroenterology, 2011.


Kruger KL, Davis JL, Breuhaus BA. Pharmacokinetics and pharmacodynamics of quinapril in horses. ACVIM Forum 2011, Denver, CO.


Tolbert K, Gookin JL*. Exogenous sialic acid and cysteine protease inhibition block adherence of Tritrichomonas foetus to the intestinal epithelium. 30th Annual Forum of the American College of Veterinary Internal Medicine, New Orleans, LA, June 2012 (oral). (*corresponding author).


Anderson ET, Minter LJ, Clarke EO, Mroch RM, Beasley JF, Harms CA. Postprandial changes in hematological and plasma biochemical profiles in green (Chelonia mydas) and Kemp's ridley (Lepidochelys kempii) sea turtles in North Carolina, USA. Proceedings of the International Association for Aquatic Animal Medicine, Las Vegas, NV, May 7–11, 2011.


Nafe LA, Robertson ID, Hawkins EC*. Cervical lung lobe herniation in dogs with cough as identified by fluoroscopy. Veterinary Comparative Respiratory Society Symposium, Vienna, Austria, November 2011. (*presented abstract, trainee (intern) first author.)


Meurs KM, Lahmers S, Keene BW. Characteristics of ARVC boxers with sudden death. 29th annual Veterinary Medical Forum of the American College of Veterinary Internal Medicine, June 2011.


Walton MB, Cowderoy E, **Lascelles BDX**, Innes JF. Owner based metrology instruments for conditions of canine chronic mobility impairment - construct and criterion validity of LOAD, HCPI and CBPI. Poster presentation, 20th Annual ECVS Scientific Symposium, ECVS Proceedings, University Forum UFO, Ghent University, Ghent, Belgium, page 56

Walton MB, Cowderoy E, **Lascelles BDX**, Innes JF. Owner based metrology instruments for conditions of canine chronic mobility impairment - construct and criterion validity of LOAD, HCPI and CBPI. Poster presentation, Musculoskeletal Research Science Day, University of Liverpool, Liverpool, UK, June 2011.

**Hill T, Lascelles BDX, Blikslager AT.** Co-administration of NSAIDs and Tramadol Decreases Gastric Mucosal Barrier Function. Research abstract, ACVIM, Denver, CO, June 2011.

**Hill T, Lascelles BDX, Blikslager AT.** Indomethacin Decreases Recovery of Gastric Barrier Function after Acid Injury in a Novel Ex Vivo Canine Model. Poster presentation, Digestive Disease Week. Chicago, IL, May 2011.

Walton MB, Cowderoy E, **Lascelles BDX**, Innes JF. Owner based metrology instruments for conditions of canine chronic mobility impairment - construct and criterion validity of LOAD, HCPI and CBPI. Oral presentation, BSAVA Scientific Congress, Birmingham, April 2011.

Gulledge B, Levine D, Tillman L, Harrysson OLA, Osborne J, **Marcellin-Little D.** Comparison of selected stretch positions of the piriformis muscle using computed tomography and biomodeling. NCSU CVM Research Forum, January 2012. (poster)

**Mariani CL, Bedard KM, Dunston S, Fogle JE, Nordone SK, MacKillop E, Borst LB.** Immune cell proliferation in canine meningoencephalitis. South Eastern Veterinary Neurology Group (SEVEN) Symposium, University of Georgia, Athens, Georgia, 2011.


Harrington JT, McMullen Jr RJ*, Cullen JM, Campbell NB, Gilger BC. Clinical and histopathology effects of diode laser endoscopic cyclophotocoagulation in the normal equine eye. 42nd Annual Conference of the American College of Veterinary Ophthalmologists, Hilton Head, SC, 2011. (Award for Best Clinical Research Presentation). (*senior author; mentor to resident trainee first author)


Xia XR, Monteiro-Riviere NA, Riviere JE. Biological surface adsorption index (BSAQI) for characterizing carbon nanomaterials with different surface chemistries in biological systems. Toxicologist CD-An Official Journal of the Society of Toxicology, 2011; p.251, 1174.


Schwartz M, Muñana KR, Nettifee-Osborne JA, Messenger KM, Papich MG. Pharmacokinetics of midazolam after intravenous, rectal and intramuscular administration in dogs. The 30th Annual Forum of the American College of Veterinary Internal Medicine, New Orleans, LA, June 2012. (First author trainee)


Koh S, Tsai S, Bischoff S, Olby NJ, Piedrahita J. Generation of putative induced pluripotent stem cells (iPS) from adult canine fibroblast submitted to SSR meeting. Stem Cells and Reproduction in Portland Oregon, July 31–August 4, 2011.


Sherman BL. One year later: focus group assessment of applied learning in a veterinary behavior course (poster presentation), NCSU Teaching and Learning Symposium, Raleigh, NC, April 8, 2011.


Thalheim LB, Suter SE, Borst LB, Williams LE. Agreement between flow cytometry, PARR and immunohistochemistry in canine lymphoma. Veterinary Cancer Society Conference, 2011;31. (*senior author; mentor to resident trainee first author)

7. Works prepared for presentation and distribution through electronic media, including CD-ROMS, audio and video disks and tapes, computer-generated presentations, broadcast videos, etc.


Keene BW. www.cardiologycarenetwork.org

Olby NJ. Canine Spinal Cord Injury Program Web and facebook pages. I have developed a detailed web page for my spinal cord injury program, and more recently we started a facebook page. We post news and updates on our spinal cord injury work on a weekly to biweekly basis.

Olby NJ, Olivry T. Atopic dermatitis in West Highland White Terriers. Podcast for AKC Canine Health Foundation.
Roe SC. Orthopaedic Examination of the Dog, CVM Video web site, 2011.

Roe SC. Ortolani Manipulation, CVM Video web site, 2011.

8. **Titles of invited presentations/papers/proceedings (including CE) where the primary audience was professionals (veterinarians, scientists, etc.)**


**Atkins CE.** Current advances. Controversies and Dilemmas in Canine Heartworm Disease Banfield Pet Hospital Symposium, Las Vegas, NV, February 28-29, 2012. (4 hrs)

**Atkins CE.** Heartworm Disease: An Update Banfield Pet Hospital Symposium, Las Vegas, NV, February 28-29, 2012. (4 hrs)

**Atkins CE.** Heartworm University. Midwest Veterinary Conference, Columbus, OH, February 26, 2012. (6 hrs)

**Atkins CE.** Heartworm University. Virginia Veterinary Association, Roanoke, VA, February 24-25, 2012. (6 hrs)

**Atkins CE.** Program Chair for Cardiology. Pathophysiology & Diagnosis of Feline Heart Disease, Treatment & Prognosis of Feline Cardiac Disease, Systemic Arterial Embolism in Cats, When TO Use and NOT TO Use RAAS Antagonists, When TO Use and NOT TO Use Inotropes (Pimobendan, Dobutamine, & Digoxin), The ACVIM Consensus Statement on Mitral Insufficiency: What It Means to You. Western Veterinary Conference, Las Vegas, NV, February 19, 2012. (6 hrs)

**Atkins CE.** Topics in Veterinary Cardiology. International Veterinary Seminars, Incline Village, NV, January 23-25, 2012. (6 hrs)


**Atkins CE.** Topics in Cardiology. Chicago VMA, Chicago, IL, December 14, 2011. (6 hrs)

Atkins CE. Topics in Cardiology. FIAVC, 8th Iberoamericano Congresso, Punte-de-Este, Uruguay, November 24, 2011 (4 hrs)


Atkins CE. Current Advances, Controversies and Dilemmas in Canine Heartworm Disease. New Orleans Veterinary Academy, New Orleans, LA, October 23, 2011. (2 hrs)

Atkins CE. Topics in Cardiology, Respiratory Disease, Hypertension, and Heartworm Disease. WSAVA, Jeju, Korea, October 15, 2011. (6 hrs)

Atkins CE. Where are we with Aldosterone Escape. CEVA, Human Veterinary Crosstalk Symposium: Aldosterone, Bordeaux, France, October 1, 2011. (1 hr)

Atkins CE. Current Advances, Controversies and Dilemmas in Canine Heartworm Disease. Central IL VMA, Marian, IL, September 20, 2011. (2 hrs)

Atkins CE. Heartworm University. Banfield Pet Hospital, Atlanta, GA, September 18, 2011. (6 hrs)

Atkins CE. Topics in Cardiology. Coastal Bend VMA, CE by the SEA, Port Royal, TX, September 9, 2011. (3 hrs)

Atkins CE. Current Advances, Controversies and Dilemmas in Canine Heartworm Disease. Columbus Veterinary Academy, Columbus, OH, September 1, 2011. (2 hrs)

Atkins CE. Topics in Canine and Feline Cardiovascular Disease. Southern Veterinary Conference, Birmingham, AL, August 12, 2011. (4 hrs)

Atkins CE. Hot Topics: Current Advances, Controversies, Dilemmas in Canine Heartworm Disease. American Veterinary Medical Association, St. Louis, MO, July 16, 2011. (1 hr)

Atkins CE. Current Advances, Controversies and Dilemmas in Canine Heartworm Disease. Central AL VMA, Montgomery, AL, July 12, 2011. (2 hrs)

Atkins CE. Current Advances, Controversies and Dilemmas in Canine Heartworm Disease. Central LA VMA, Monroe, LA, July 12, 2011. (2 hrs)

Atkins CE. Current Advances, Controversies and Dilemmas in Canine Heartworm Disease. NW LA VMA, Shreveport, LA, July 12, 2011. (2 hrs)

Atkins CE. Topics in Canine and Feline Cardiac Disease. MS Veterinary Medical Association, Orange Beach, AL, June 24, 2011. (5 hrs)
Atkins CE. ACE-Inhibitors, Emerging and Established Roles in the Treatment of Heart Failure, (0.5 hour). Electrocardiography in the ER, ACVIM Forum, ACVCP/AAVPT, Denver, CO, June 16 & 18, 2011. (2 hrs)

Atkins CE. Clinical Implications of the Pathogenesis of Heartworm Disease in Dogs; Developments and Controversies in Diagnosis and Prevention of Heartworm Disease in Dogs; Developments and Controversies in Treatment of Heartworm Disease in Dogs; Heartworm Disease in Cats; AL VMA/GA VMA, Sandestin, FL, June 2, 2011. (4 hrs)

Atkins CE. Current Advances, Controversies and Dilemmas in Canine Heartworm Disease, Gwinnet County Veterinary Medical Association, Atlanta, GA, May 25, 2011. (1 hr)


Atkins CE. Current Advances, Controversies and Dilemmas in Canine Heartworm Disease, Panhandle VMA, Pensacola, FL, May 18, 2011. (2 hrs)

Atkins CE. Current Advances, Controversies and Dilemmas in Canine Heartworm Disease. Southern AL VMA, Mobile, AL, April 17, 2011. 2 (hrs)

Atkins CE. Current Advances, Controversies and Dilemmas in Canine Heartworm Disease. Maryland Veterinary Medical Association, Annapolis, MD, May 10, 2011. (2 hrs)

Atkins CE. Current Advances, Controversies and Dilemmas in Canine Heartworm Disease. North Carolina State University, Terry Center Dedication Lectures, Raleigh, North Carolina, May 7, 2011. (2 hrs)

Atkins CE. Current Advances, Controversies and Dilemmas in Canine Heartworm Disease, Central Veterinary Conference, Kansas City, MO, April 21, 2011. (1 hr)

Atkins CE. Canine and Feline Cardiology. International Veterinary Seminars, Amelia Island, FL, April 16-17, 2011. (6 hrs)

Bailey CS. Pregnancy diagnosis and timing elective C-sections, Veterinary Answers, January 2012.


Birkenheuer AJ. Cytauxzoonosis update. Teleconference for consultants, Antech Diagnostics. April 7, 2011. (2 hrs)

Birkenheuer AJ. Various. Florida Veterinary Medical Association. Orlando, FL, April 30-May 1, 2011. (10 hrs)

Birkenheuer AJ. Fever of unknown origin. Hudson Valley Veterinary Medical Society, Fishkill, NY, September 21, 2011. (1 hr)

Birkenheuer AJ. Various. Central Veterinary Conference, Kansas City, KS, August 28-29, 2011. (7 hrs)

Birkenheuer AJ. Various. Keys to CE, Key West, FL, September 14-15, 2011. (8 hrs)

Birkenheuer AJ. Babesia and Cytauxzoon. Idexx Webinar, September 28, 2011. (2 hrs)

Birkenheuer AJ. Cytauxzoonosis. Potomac Veterinary Medical Association. November 12, 2011. (1 hr)

Birkenheuer AJ. Various. The Ohio State Infectious Disease Symposium, Columbus, OH, March 17, 2012. (3 hrs)

Blikslager AT. What’s new in pain control for horses with colic. Finnish Annual Veterinary Meeting, Helsinki, Finland, December 2011.

Blikslager AT. Reducing the time to referral for horses with colic. Finnish Annual Veterinary Meeting, Helsinki, Finland, December 2011.


Blikslager AT. Early detection of strangulating colic in horses. Finnish Annual Veterinary Meeting, Helsinki, Finland, December 2011.

Blikslager AT. Advances in pain management in horses. 12th World Equine Veterinary Conference, Hyderabad, India, December 2011.

Blikslager AT. Triaging colic patients. 49th Annual Ocala Equine Conference, Ocala, FL, October 2011.


Blikslager AT. How to deal with rectal tears. 49th Annual Ocala Equine Conference, Ocala, FL, October 2011.
Blikslager AT. Update on COX-2 inhibitors as a new therapeutic modality for critical care. 17th International Veterinary Emergency and Critical Care Symposium, Nashville, September 2011.

Blikslager AT. Current understanding of inflammatory pathways in postoperative ileus. 17th International Veterinary Emergency and Critical Care Symposium, Nashville, September 2011.

Blikslager AT. The importance of the Chloride Channel 2 (ClC-2) in post-ischemic mucosal repair. 17th International Veterinary Emergency and Critical Care Symposium, Nashville, September 2011.

Blikslager AT. Update on COX-2 inhibitors as a new therapeutic modality for critical care. 17th International Veterinary Emergency and Critical Care Symposium, Nashville, September 2011.


Blikslager AT. Distinguished clinician scientist presentation, The Pathway from Colic to Basic Science - a Traveler's Guide. NC State University, May 2011.


Breitschwerdt EB. Bartonellosis Updates. Cincinnati Veterinary Medical Association Meeting, Cincinnati, OH, November 22, 2011.

Breitschwerdt EB. Bartonellosis: Of Cats, Dogs, Mice and Men, UNC Medical School, Division of Pathology Seminar Series, Chapel Hill, NC, November 19, 2011.


Breitschwerdt EB. World Small Animal Veterinary Association Meeting, Infectious Diseases, JeJu, Korea, October 14-18, 2011.

Breitschwerdt EB. Bartonellosis and One Health, Duke University Medical Center, Pediatric Infectious Disease Seminar Series, Durham, NC, October 7, 2011.

Breitschwerdt EB. Canine Vector Borne Infectious Diseases In North America, Palm Springs, CA, October 4, 2011.

Breitschwerdt EB. Infectious diseases. Chicago Veterinary Medical Association, Hamburger University, Oakbrook, IL, September 14, 2011.


Clode AB. Managing common ocular problems in small animals. International Veterinary Seminars, Asheville, NC; May 2011. (8 hrs)


Davis JL. Clinical pharmacology of antifungal drugs. Presented at the American Veterinary Medical Association Annual Forum, July 2011, St. Louis, MO. Published in the Proceedings of the AVMA Forum, 2011.


DeFrancesco TC. Understanding cardiac biomarkers, Diagnosis of heart disease and heart failure, Can we delay progression of heart disease, Updates in the treatment of heart failure, The effects of systemic disease on the heart. Music City Veterinary Conference, Nashville, TN, March 9–10, 2012. (6 hrs)

DeFrancesco TC. Demystifying cardiac biomarkers – what a clinician needs to know. Invited dinner seminar sponsored by Idexx. St. Louis, MO, February 16, 2012. (1 hr)

DeFrancesco TC. Common cardiac drugs, Common cardiac emergencies, ECG 101, How and when to do a blood pressure, Sedating and anesthetizing the cardiac patient. Spring CE for Veterinary Technicians. Tri-county Technical College, Pendelton, SC, February 12, 2012 (5 hrs)

DeFrancesco TC. Cardiac biomarker – focus on Troponin and BNP; Can we delay progression of heart disease?; Updates in the treatment of congestive heart failure?; Potomac Regional Veterinary Conference, Washington DC, November 12, 2011. (4 hrs)

DeFrancesco TC. Update in the management of heart failure; Can we delay progression of heart disease?; Infectious Endocarditis- can we save them?; The effect of systemic disease on the heart; Minimally invasive repair of congenital heart disease. Latin American Veterinary Conference. Lima Peru, October 25-26, 2011. (5 hrs)

DeFrancesco TC. Hands on lab for the instruction of echocardiography. International Veterinary Emergency and Critical Care Conference, Nashville, TN, September 16, 2011 (4 hrs)

DeFrancesco TC. Cardiac Biomarker – focus on Troponin and BNP; Can we delay progression of heart disease? Treatment of heart failure – triple therapy please. Southern Veterinary Conference, Birmingham, AL, August 11, 2011 (4 hrs)

DeFrancesco TC. Update in the diagnosis and management of heart disease. Metropolitan New Jersey Veterinary Medical Association Meeting, June 22, 2011. (2 hrs)

DeFrancesco TC. Can we delay the progression of heart disease. NC Veterinary Forum. NCSU College of Veterinary Medicine, Raleigh, NC, July 20, 2011. (1 hr)

DeFrancesco TC. Management of acute heart failure – panel discussion. American College of Veterinary Internal Medicine Forum. Denver, CO, June 17, 2011 (1 hr)

DeFrancesco TC. Cardiac Biomarkers – focus on troponin and BNP; Can we delay progression of heart disease? Update Assessing and anesthetizing the cardiac patient. Update in the diagnosis and management of heart disease. First Flight Veterinary Conference, Kitty Hawk, NC, May 21-22, 2011. (5.5 hrs)

Degernes L, Grunkemeyer V. Avian anesthesia, diagnostic and treatment techniques. Annual Conference of the Association of Avian Veterinarians, Seattle, WA, 2011. (2, 4-hr lectures and labs)

Degernes L. Parrot emergency medicine. China Agricultural University College of Veterinary Science, Beijing, China, 2011. (presentation to Chinese faculty, graduate students and veterinary students)


Fish RE. Animals in research -- What makes it right? LAR Large Staff Meeting, October 28, 2011.

Fish RE. Rabbit handling laboratory. RTB AALAS continuing education, NCSU CVM, July 28, 2011.


Fogle C. Upper Respiratory Case Discussion. ACVS, Chicago IL, 2011.

Fogle C. Urogenital Case Discussion. ACVS, Chicago IL, 2011.

Fogle C. Wounds and Wound Management Case Discussion. ACVS, Chicago IL, 2011.

Gookin JL. Essentials of the oral abstract presentation. CVM Graduate Student Association Lunch and Learn, Spring 2012.


Gookin JL. The neonatal piglet model of necrotizing enterocolitis. NCSU-University of Surrey Models of Animal Disease Workshop, Raleigh, NC, January 10, 2012.

Gookin JL. Diagnostic approach to infectious causes of feline diarrhea, North Carolina Veterinary Conference, Raleigh, NC, November 4, 2011.

Gookin JL. Diagnostic approach to infectious causes of feline diarrhea, Ross University School of Veterinary Medicine, St. Kitts, West Indies, October 21, 2011.
**Gookin JL.** Clinician or scientist – what is the difference? Ross University School of Veterinary Medicine, St. Kitts, West Indies, October 20, 2011.

**Gookin JL.** Invited Speaker – Borrough’s Wellcome Foundation Young Investigators Workshop Becoming Faculty, Orlando, FL, August 4, 2011.

**Gruen ME.** Enrichment and behavioral conditioning for laboratory animals. NC Academy of Laboratory Animal Medicine, March 2012.

**Gruen ME.** Veterinary Behavior: an introduction and case studies. American Pre-Veterinary Medical Association, March 2012.

**Gruen ME.** A pilot field study to evaluate efficacy endpoints and the effect of low dose oral NSAID in cats with degenerative joint disease. North Carolina Veterinary Conference, November 2011.

**Gruen ME.** Providing enrichment opportunities for dogs in your shelter, practice, and home. North Carolina Veterinary Conference, November 2011.

**Gruen ME.** Feline Inappropriate Elimination. Virginia Beach Veterinary Academy, October 2011.

**Gruen ME.** Canine Fears and Phobias (Separation Anxiety and Storm Phobia). Virginia Beach Veterinary Academy, October 2011.

**Gruen ME.** Update on Drug Therapy in Veterinary Behavior II. Virginia Beach Veterinary Academy, October 2011.

**Gruen ME.** Update on Drug Therapy in Veterinary Behavior I. Virginia Beach Veterinary Academy, October 2011.

**Gruen ME.** Drug therapy in Behavior: The old, the new, and the nutraceutical II. Continuing Education in the Keys (NCSU), September 2011.

**Gruen ME.** Drug therapy in Behavior: The old, the new, and the nutraceutical I. Continuing Education in the Keys (NCSU), September 2011.

**Gruen ME.** Feline Housesoiling. Continuing Education in the Keys (NCSU), September 2011

**Gruen ME.** Handling canine and feline aggression in the veterinary hospital. Continuing Education in the Keys (NCSU), September 2011.


Hansen BD. Using the strong ion gap to interpret acid-base status. Proceedings, Midwest Veterinary Conference, Columbus, OH, February 25, 2012.

Hansen BD. Analgesia techniques laboratory. Advanced analgesia laboratory. IVECCS, Nashville, TN, September 14-18, 2012. (3 hrs)


Harms CA. Sea turtle biology, medicine and surgery. Aquavet I, Roger Williams University, Providence, RI, May 31, 2011 (3 hr lecture, 2 hr laboratory)


Hauck ML. Tyrosine kinase inhibitors. 17th Annual Veterinary Sportsmen Society Meeting, Yakutat, AK, August 7-13, 2011.


Lascelles BDX. Chronic Pain: An Introduction; Chronic Pain: Case Studies. Oral presentations at Orion events, Copenhagen and Horsens, Denmark, March 7 & 8, 2012. (with proceedings)

Lascelles BDX. Maximizing benefit and minimizing risks in canine osteoarthritis management. Oral presentation at 85th Western Veterinary States Conference, Las Vegas, February 20, 2012. (with proceedings)

Lascelles BDX. Using NSAIDs peri and post-operatively: minimizing risks and maximizing benefits. Oral presentation at 85th Western Veterinary States Conference, Las Vegas, February 19, 2012. (with proceedings)


Lascelles BDX. Decision making in preventing and managing OA in the young dog. Masterclass discussion at North American Veterinary Conference, Orlando, January 15, 2012. (no proceedings)

Lascelles BDX. Management of DJD-associated pain in dogs and cats: What’s new? Oral presentation at Onsior Launch Seminar, Tokyo, Japan, November 23, 2011. (with proceedings)


Lascelles BDX. Update on NSAIDs in cats. Oral presentation at Dorinken Congress, Osaka, Japan, November 20, 2011. (with proceedings)

Lascelles BDX. Re-think your approach to OA. Oral seminar, Pfizer event, Brisbane, Australia, October 19, 2011. (no proceedings)

Lascelles BDX. Re-think your approach to OA. Oral seminar, Pfizer event, Sydney, Australia, October 20, 2011. (no proceedings)

Lascelles BDX. Re-think your approach to OA. Oral seminar, Pfizer event, Melbourne, Australia, October 18, 2011. (no proceedings)

Lascelles BDX. Effective Perioperative Pain Relief Without Opioids. Oral presentation at Boot Camp, Team Anaesthesia and Analgesia, Japenese Society of Veterinary Anesthesia and Surgery, October 16, 2011. (with proceedings)

Lascelles BDX. Study Design. Oral seminar, Merck Merial NCSU Summer Students Research Program, NCSU, May 18, 2011. (no proceedings)


Lewbart GA. The Deepwater Horizon oil spill; one week in the life of a veterinary response team. North Carolina Herpetological Society Annual Fall Conference, Raleigh NC, November 5, 2011.


Lewbart GA. Introduction to chelonian medicine. Central Veterinary Conference, Kansas City MO, August 29, 2011.

Lewbart GA. Introduction to pet fish medicine and surgery. Central Veterinary Conference, Kansas City MO, August 29, 2011.

Lewbart GA. The Deepwater Horizon Gulf of Mexico oil spill veterinary response. Central Veterinary Conference, Kansas City MO, August 28, 2011.

Lewbart GA. Invertebrate medicine: A review and clinical techniques (3 hrs). Central Veterinary Conference, Kansas City MO, August 28, 2011.

Lewbart GA. Reptile medicine. AVMA Annual Conference, Kansas MO, MO August 28, 2011.

Lewbart GA. Fish medicine. AVMA Annual Conference, St. Louis, MO July 19, 2011.

Lewbart GA. Invertebrate medicine: A review and clinical techniques. (4 hours). AVMA Annual Conference, St. Louis, MO July 18, 2011.
Lewbart GA. Advances in fish anesthesia, analgesia, and surgery. NAVC Amazon Expedition, Sacha Lodge, June 2011.

Lewbart GA. Review of pet fish medicine and surgery. NAVC Amazon Expedition, Sacha Lodge, June 2011.

Lewbart GA. Amphibian medicine. NAVC Amazon Expedition, Sacha Lodge, June 2011.

Lewbart GA. Invertebrate medicine: A review and clinical techniques. NAVC Amazon Expedition, Sacha Lodge, June 2011.


Mariani CL. Seize the day – Treatment plans for the routine and difficult to control epileptic. Proceedings of the Central Veterinary Conference East, 2011.

Mariani CL. Treatment of cluster seizures and status epilepticus. Proceedings of the Central Veterinary Conference East, 2011.


Mariani CL. Down dogs: Disk disease, the steroid controversy and beyond. Proceedings of the Central Veterinary Conference East, 2011.


Mariani CL. Inflammatory brain and spinal cord diseases – More common than you think! Proceedings of the Central Veterinary Conference East, 2011.

Mariani CL. Is it neuro or ortho? Sorting our lameness, Paresis and dogs that won’t get up. Proceedings of the Central Veterinary Conference East, 2011.

Marks SL. Practical pain management. Proceedings, Southwest Veterinary Symposium, San Antonio, TX, September 2011.

Marks SL. Interactive case presentations. Proceedings, Southwest Veterinary Symposium, San Antonio, TX, September 2011.

Marks SL. Critical care techniques. Proceedings, Southwest Veterinary Symposium, San Antonio, TX, September 2011.

Marks SL. Fluid therapy for the trauma patient. Proceedings, Southwest Veterinary Symposium, San Antonio, TX, September 2011.

Marks SL. Introduction to CPCR. Proceedings, Southwest Veterinary Symposium, San Antonio, TX, September 2011.


Marks SL. Interesting internal medicine cases. Proceedings, CVC, Kansas City, KS, August 2011.

Marks SL. What’s new in CPCR. Proceedings, CVC, Kansas City, KS, August 2011.


Marks SL. Diagnosis and management of respiratory trauma. Proceedings, CVC, Kansas City, KS, August 2011.


Marks SL. ECG’s in the ER. Proceedings, CVC, Kansas City, KS, August 2011.


Murphy KM. Otitis externa: Diagnosis and treatment. Veterinary Medical Forum, Raleigh, NC, 2011. (1 hr)


Olby NJ. How to treat intervertebral disc disease. The Old, the New, the Future. Proceedings Midwestern Veterinary Conference, Columbus, Ohio, February 26, 2012.


Olby NJ. How to get the most from spinal radiographs. Proceedings Midwestern Veterinary Conference, Columbus, Ohio, February 26, 2012.


Olivry T. Principles of scientific manuscript writing. European College of Veterinary Dermatology Post-Congress Day, Brussels, Belgium, 2011.


Olivry T. Treatment of canine atopic dermatitis: new international guidelines. European College Day, University of Zagreb, Croatia. (online streaming lecture with > 700 delegates from 50+ countries), 2011.


Redding WR. Musculoskeletal ultrasound and injection techniques lab – Pfizer supported lab, 2012.

Redding WR. Imaging the distal limb. Northeast Association of Equine Practitioners annual mtg Chesapeake, VA, February 2012.

Roe SC. Implant design and performance. Course Notes, AONA Surgical Fixation of Fractures, Columbus, OH, April 2011.
Roe SC. Principles and application of cerclage wire. Course Notes, AONA Surgical Fixation of Fractures, Columbus, OH, April 2011.

Roe SC. Biomechanical considerations in the fixation of comminuted fractures. Course Notes, AONA Surgical Fixation of Fractures, Columbus, OH, April 2011.


Sherman BL. Environmental enrichment in laboratory animals. ACVB Resident Symposium for Laboratory Animal Behavior, University of Toronto, August 24, 2011.


Suter SE. Autologous peripheral blood progenitor cell transplantation for the treatment of canine lymphoma. American College of Veterinary Internal Medicine, 2011, Denver, CO, June 2011.


9. **Titles of continuing education presentations/papers/proceedings where the primary audience was not professionals (livestock producers, dog breeders, horse owners, etc.)**

**Bailey CS.** Peripartum care of the mare and foal. NCSU Cooperative Extension Distance Education Lecture, January 2012.


**Bailey CS.** Reproductive characteristics of the bitch. Sheltie Breeders of Raleigh, Apex, NC, September 2011.

**Bailey CS.** Pregnancy termination options in the dog. SFT/ACT Conference and Symposium, Breeders Symposium, Milwaukee, WI, August 2011.

**Blikslager AT.** Equine colic. Pepperwood Horse Health Fair, Pepperwood Farm, Fuquay-Varina, NC, March 2012.

**DeFrancesco TC.** How would I know that my dog or cat had heart disease? Seminars for NCSU Cardiology clients about pets and heart disease. NC Veterinary Medical Foundation, March 17, 2012. (30 min)


**Gruen ME.** How to approach and handle animals, and veterinary health for your pets. Girl Scouts Veterinary Health Day, Raleigh, NC, 2011.


**Hanel R.** Course coordinator, lecturer and laboratory instructor. Physical Examination. K9 First Aid. IV fluid therapy and therapeutic interventions for shock, heatstroke, smoke inhalation and burn wound management in the “K9 Down; Are You Prepared? Immediate Care of the Injured Dog for Emergency Personnel” course. NC State University, College of Veterinary Medicine, Raleigh, NC, March 17-18, 2012.

**Hanel R.** Course coordinator, lecturer and laboratory instructor. Physical Examination. K9 First Aid. IV fluid therapy and therapeutic interventions for shock, heatstroke, smoke inhalation and burn wound management in the “K9 Down; Are You Prepared? Immediate Care of the Injured Dog for Emergency Personnel” course. NC State University, College of Veterinary Medicine, Raleigh, NC, February 18-19, 2012.


**Lewbart GA.** Fish anatomy and dissection. NCSU-CVM Office of Diversity, Veterinary Experience, June 23, 2011.


**Sherman BL.** How to help your dog during thunderstorms. NC Federation of Dog Clubs, Raleigh NC Meeting, April 16, 2011.

10. **Bulletins, booklets, and similar educational material developed for distribution.**


11. **Copyrighted software and other copyrighted scholarly material (if not included in 1-10).**

**Atkins CE.** Standards of care in the management of canine heart disease. CEVA, Sante Animale Webinar, 2011. (1 hr)

**Atkins CE.** Current controversies and dilemmas in heartworm disease: Defining the issues by close examination. American Animal Hospital Webinar, May 3, 2011. (1 hr)


12. **Patents.**


Fonaro R, Kennedy-Stoskopf S. WolfScout (integrated database management system). Filed NCSU software disclosure (SDF #12213) January 18, 2012 in preparation for submitting Chancellor’s Innovation Proposal; the IP was returned to Dr. Fornaro and myself. We are pursuing development on our own.


Olby NJ. Genetic Testing for Canine Cerebellar Cortical Degeneration. Invention Disclosure filed with NCSU in February 2012.

13. Awards/Other Contributions.

Atkins CE. Invitation to participate in Pre-Congress Meeting on ACE-I and Aldosterone Breakthrough, ECVIM, 2012.


Gookin JL. American Veterinary Medical Foundation/Winn Feline Foundation Research Award for contributions to advancing feline research. AVMA Conference 2011.


Lascelles BDX. NCSU College of Veterinary Medicine Pfizer Award for Excellence in Research 2012.

Marcellin-Little DJ. My research was featured in *Wired Magazine*, on *ABC news*, and in > 300 newspaper articles.


Monteiro-Riviere NA. Invited Talks:


“Nanoparticle Interactions with Skin: Blessing or Curse”? Karolinska Institutet, Institute of Environmental Medicine, Stockholm, Sweden, June 15, 2011.

Monteiro-Riviere NA. News Releases:
Nanoparticle based sunscreens-Chemical and Engineering News: http://t.co/lKPFv3B

Council of Canadian Academies 2011 analysis –top 1% most highly cited papers worldwide.


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**Muñana MR.** Member, Advisory Panel for NIH Grant R21NS072166-01 "Canine Status Epilepticus: A Translational Platform for Human Therapeutic Trials". September 2010 – August 2012, $415,250.

**Muñana MR.** Recipient of annual donations from Epi-K9 Foundation and the Krauss Charitable Foundation in support of research on canine epilepsy


**Olivry T.** The first veterinarian invited to lecture to a World Congress of Itch, a human medical meeting, Brest, France, September 2011.

**Olivry T.** Invited to give a lecture in a foreign medical school, What could dogs bring to atopic dermatitis research? Graduate seminar, Immunodermatology group, Department of Dermatology, School of Medicine, Hannover, Germany, 2011.

**Vaden SL.** Participating in the IRIS treatment of canine glomerular disease study group (Co-chair, Treatment Without Biopsy; Member, Standard Treatment Subcommittee), 2011.

**Williams LE.** Outstanding Clinical Research Presentation Award at annual Veterinary Cancer Society Conference, 2011.

14. **Grants Applied for as Principal or Co-Investigator.**

**Bailey CS (PI),** Gadsby J. Placental inflammation and anti-inflammatory therapy. 2012-2014 (Grayson Jockey Club Research Foundation, Inc) $90,726. (not funded)

**Smith GW, Davis JL.** Safety and pharmacokinetics of tulathromycin in alpacas. March 2012 (Alpaca Research Foundation) $40,396. (pending)

**Campbell NB, Reid P, Davis JL.** The pharmacokinetics and sedative effects of detomidine hydrochloride following oral-transmucosal administration in swine. March 2012 (American College of Laboratory Medicine) $14,070. (pending)

**Hodge T, DeFrancesco TC, Keene BK, Tou ST, Atkins CE, Breitchwardt EB.** The role of vector borne disease in advanced atrioventricular block in dogs. Submitted to ACVIM resident research grant in May 2011 and to AKC Acorn grant ($11,405) in February 2012. (not funded)

**Gonzalez L, Fogle C, Blikslager AT.** Does large colon resection and anastomosis affect survival in horses with large colon volvulus? 2011 (NCHC research grant) $4,304. (accepted) (graduate trainee first author)
**Fogle C**, Marshall J, **Blikslager AT**. Pilot investigation of a selective cyclo-oxygenase 2 non-steroidal anti-inflammatory drug for treatment of horses suffering from endotoxemia secondary to intestinal disease. 2012 (CVM research grant application) $18,492. (submitted)


**Gookin JL** (PI), Foster DM, Sherry B. IFN-α/β as a therapeutic target for promoting intestinal epithelial stem cell proliferation and clearance of *Cryptosporidium parvum* infection. 2011 (USDA Formula Funds) $20,000. (in review)

Foster DM, **Gookin JL** (mentor), Smith G. Using technology to train future veterinarians in individual bovine medicine, surgery, and prudent drug use. 2011 (NIFA )$150,000. (in review)

Tolbert MK, **Gookin JL** (mentor). Modeling the feline intestinal epithelium – crossing the divide between proliferation and differentiation. 08/01/2011-07/30/2012 (CMTRTP) $15,000. (not funded)

Istvan S (PI), **Hanel R** (PI), **Suter S** (Co-I). The effect of platelet products on hemostasis in dogs after irradiation induced thrombocytopenia. 2011 (Morris Animal Foundation Pilot Study) $10,772. (not funded)

**Hauck ML** (PI), Saker KE, Willcox J, Glickman L. Preliminary Data on the Correlation of Vitamin D and Osteosarcoma in Dogs. 2012 (CVM Research Grant) $3,920. (pending)

**Hauck ML**. Targeting Metastatic Pathways. 2012 (Triangle Community Foundation) $5,000. (pending)


**Johannes CM, Hauck ML** (co-I), **Suter SE**. Effect of Toceranib on Cell Proliferation and Downstream Signaling in Canine Leukemia Cell Lines Harboring FLT3 Mutations. 2012 (Pfizer, Inc.) $4,325. (pending)

Musser ML, **Hess PR, Hauck ML**. Investigation of major histocompatibility complex class I molecule downregulation in canine solid tumors. 2012 (Firestone). (not funded)

**Lascelles BDX** (PI). Studies into the presence of and measurement of central sensitization associated with chronic painful disease in dogs. 11/01/2011-10/31/2013 (Boehringer Ingelheim) $139,402. (approved, but money not here yet)
Lascelles D, Tuohy JL, Hauck ML (co-I), Yoder JA, Fogle JE. Antibody validation for differentiation of inflammatory versus steady-state monocytes to aid in phenotypic characterization of monocytes in dogs with osteosarcoma. 2012 (NC Veterinary Foundation) $2,945. (not funded)

Harrysson OLA (PI), Marcellin-Little DJ (co-PI), King R, Weinhold P. In vitro assessment of bone-implant micromotion and bone surface strain generation during vibration of transdermal osseointegrated implants. April 2012 (NCSU Rehabilitation engineering center) $25,000.

Hudson SM (PI), Krause WE (Co-PI), Mathews K (Co-PI) Hanel RM (Co-PI). A new hemostatic biomaterial with a novel mechanism for control of severe hemorrhage. 2011 (Research and Innovation Seed Funding [RISF] Program) $12,000. (under review)

Monteiro-Riviere NA. “Transdermal Pediatric Formulations for Enhancing Elimination of Radionuclides.” (NIH/ National Institutes of Health), $213,408.

Monteiro-Riviere NA. American Chemistry Council $200,000 /yr which will be awarded to KSU

Monteiro-Riviere NA. US EPA . Evaluation of metal oxides. $40,000/yr which will be awarded to KSU

Monteiro-Riviere NA. MARS. “Alternative Methods for Ingredient Safety Evaluation”, $524, 998. Continuation and transferred to KSU

Muñana KR, Chappell KH, Mariani CL. Effect of S-Adenosylmethionine and silybin on phenobarbital induced liver changes in epileptic dogs. 2011 (Morris Animal Foundation) $132,840. (not funded).

Olby NJ, Linder K, Borst LB, Mariani CL, Kornegay J. Neuropathology teaching case database. 2011 (CVM Teaching and Innovation Grant) $8,525. (not funded).

Dorman D (PI), Sherman BL (Co-I), Roberts D (Co-I), Bozkurt A (Co-I), Gruen ME (Co-I). Enhancing the operational effectiveness of Naval expeditionary dogs. 2011-2014 (Office of Naval Research [NCSU subcontract]) ~ $2.2 M over 3 years.

Hudson L (PI), Sherman BL (Co-I), Gruen ME (Co-I). Novel neurotrophin therapy for FIV neuropathogenesis. 2011-2015 (NIH-R01, [NCSU 4-year subcontract]) $274,743 per year (Complete 4 year project $1,185,180).

Eggleston D, Stoskopf MK. Marine Facilities Development Grant for MRI Addition to CMAST 2012 (National Science Foundation) $350,000.

Won IJ, Stoskopf MK. SBIR Marine Aquaculture Noninvasive Health Monitoring System. 2012 (NOAA) $100,000.
**Suter S** (PI), **Hanel R** (Co-I). Development of a therapeutic plasma exchange (TPE) protocol for the treatment of dogs with immune-mediated diseases. 2011 (AKC Canine Health Foundation) $84,618. (not funded)


**Williams LE, Clarke DM, Johannes CJ.** The impact of carboplatin chemotherapy and the multi-kinase inhibitor toceranib phosphate (Palladia) on angiogenesis and survival in canine osteosarcoma. 2011 (Bone Cancer Dogs, Inc.) $12,000.

15. Grants Received as Principal and Co-Investigator.

**Atkins CE** (Co-PI), **Ames M.** The effect of high dose pimobendan on the furosemide-activated renin-angiotensin-aldosterone system (RAAS) in the dog. 2011 (ACVIM Grant) $11,587.28 (funded at $7,000).

**Atkins CE** (PI), **DeFrancesco TC, Keene B, Meurs KM, Tou SP, Ames MK.** Evaluation of C635, in comparison to benazepril, in dogs with heart failure caused by left atrio-ventricular valvular insufficiency. (CEVA Santa Animale) $48,840.


**Birkenheuer AJ** (Co-PI), **Cohn L.** Treatment and prevention of Cytauxzoon felis infections in domestic cats. Active 2012-2014 (ALSAM Foundation) $100,000, Competitive Renewal, Funding split evenly between institutions.

**Blikslager AT.** Does large colon resection and anastomosis affect survival in horses with large colon volvulus? 2012 (North Carolina Horse Council) $4,154.

**Blikslager AT.** Study of the interactions between linaclotide and non-steroidal anti-inflammatory drugs. 2011-2012 (Sucampo Inc.) $67,479.

**Blikslager AT.** Comparative effect of lubiprostone and the oral laxative PEG 3350 on intestinal phosphate transport. 2011-2012 (Sucampo Inc.) $93,582.

**Blikslager AT.** Study of the interactions between linaclotide and non-steroidal anti-inflammatory drugs. 2011-2012 (Sucampo Inc.) $80,904.

**Blikslager AT.** Pig model of gastroesophageal reflux disease and barrett’s esophagus. 2011-2012 (North Carolina Biotechnology Center) $126,853.

Breitschwerdt EB. Veterinarian perceptions of lyme disease transmission in North Carolina using dogs as sentinels. November 2011- October 2012 (Boehringer Ingelheim) $15,000.

Breitschwerdt EB. Potential role of pericytes in Bartonella-induced vasoproliferation. September 2010- August 2011 (American Kennel Club ACRON Grant) $12,744.

Maggi RG, Breitschwerdt EB (PI). IBIS Assay development and validation: Phase II. December 2010-March 2011 (ABBOTT-Tierogen Infectious Diseases) $60,000.

Breitschwerdt EB (Co-PI). Awarded to Galaxy Diagnostics (Chief Scientific Officer) Optimized Growth Media to Detect Intracellular Bacteria Implicated in Chronic Diseases (1R43AI088823-01A1). February 2011-February 2012 (NIH- SBIR Grant) $188,898.

Breitschwerdt EB. Support Human Bartonella Research in the Intracellular Pathogens Research Laboratory. 2010-2011 (Anonymous Donation to the North Carolina State University College of Veterinary Medical Foundation) $120,000.

Thakur S, Chappell K. Veterinary Cooperative Laboratory Agreement Salmonella Project VCLASP. 09/16/2011-09/15/2012 (US Food and Drug Administration Veterinary Laboratory Response Network) $60,000.

Chappell K, Olivry T. Evaluation of tetrathiomolybdate as an adjunctive immunosuppressive therapy in dogs with autoimmune skin disease 2011 (funding provided by Dr. Olivry) $13,000.

Dorman D, Alpi K, Chappell K. Expert and Public Evaluation of Student Brochures in Veterinary Toxicology. (funding provided by Dr. Dorman).

Clode AB, Kompella UB, Salmon JH. Use of an ex vivo canine eye model for determination of ocular concentrations of topically administered non-steroidal anti-inflammatory drugs. 2011 (NCSU Faculty Research and Professional Development Fund) $11,998.

Davis JL, Newman JN. Pharmacokinetics of intravenous, intramuscular and intraarticular tobramycin in horses. October 2011 (NCSU Equine Health Program) $2,500.


DeFrancesco TC. Financial support of summer research intern for studies related to cardiac biomarkers. May 2011 (Yorkie Terrier Club of America) $3,000.
DeFrancesco T, Hodge T, Breitschwerdt EB. A prospective evaluation of the role of vector-borne infectious diseases in dogs with high grade second degree or complete atrioventricular block presenting for artificial cardiac pacing. 2011 (ACVIM Foundation, $7650, BAPGM testing platform subsidized $7500 by a CVM Foundation Donation to Dr. Breitschwerdt).

Gilger BC. Effect of suprachoroidal triamcinolone on porcine posterior uveitis. March 2011 – December 2011 (Clearside Biomedical, Inc.) $20,000.

Gilger BC. Evaluation of RV-10009 on allergic conjunctivitis in guinea pigs. October 2011 – March 2012 (Celtic Therapeutics, Inc.) $20,000.

Gilger BC. Ocular pharmacokinetics of SCY-961. April 2011 – December 2011 (Scynexis Inc.) $18,000.


Gilger BC. Assessment of Synedgen compound on epithelial corneal wound healing in New Zealand White Rabbits. November 1, 2010-October 31, 2011 (Synedgen, Inc.) $25,000.


Gilger BC. Effectiveness of an aqueous cyclosporine solution on naturally-occurring keratoconjunctivitis sicca in dogs. June 2009-June 3 2011 (Scynexis, Inc.) $40,000.

Gookin JL (PI), Magness ST, Tolbert MK. A transformative in vitro model of the intestinal epithelium for advancement of feline gastroenterology. 7/1/11 – 12/31/13 (Waltham Foundation) $15,000.

Gookin JL (PI), Cullen J, Bodnar W, Kesimer M, Mathews K, Seiler G. Identifying the cause of gallbladder mucocele formation in dogs. 7/1/10 – 6/30/13 (Morris Animal Foundation D12CA-044) $52,156.

Magness S, Piedrahita J, Dekaney C, Gookin JL (Co-I), Blikslager AT. Bridging the divide between mouse and man: Creating a transformative model of intestinal stem cell transplantation. 07/01/11 – 6/30/12 (NC TraCs Institute 50KR71108) $50,000.

Gookin JL (co-PI), Jones S. Merial Veterinary Scholars Research Program. 01/1/12–12/31/12 (Merial Foundation) $20,000.
Gruen ME (PI), Lascelles BDX (Co-PI). A pilot field study to evaluate efficacy endpoints and low dose oral NSAID in cats with degenerative joint disease. 10/17/11-0531/12 (Boehringer Ingelheim) $164,510/direct costs $135,898/year

Istvan S (PI), Hanel R (Co-PI), Suter S (Co-I). The effect of platelet products on hemostasis in dogs after irradiation induced thrombocytopenia. 2011-2012 (Firestone Canine Research Endowment) $3,000.

Istvan S (PI), Hanel R (Co-PI), Suter S (Co-I). The effect of platelet products on hemostasis in dogs after irradiation induced thrombocytopenia. 2011-2012 (NCSU Oncology Foundation Grant) $6,000.

Harms CA, Chinnadurai SK. Sex differences in meloxicam pharmacokinetics in ferrets after single subcutaneous and oral administration, 2011-2012 (Association of Exotic Mammal Veterinarians - AEMV) $5,000.


Hauck ML. Targeting the metastatic phenotype in canine soft tissue sarcoma cell lines. Summer 2012 (Morris Animal Foundation [VSS]), $4,000.

Hauck ML (PI), Chappell KH (co-PI). Multicenter Non-controlled Pilot Field Study To Assess The Maximum Tolerated Dose And Efficacy Of Bgt226 Tablets When Administered For Up To 4 Weeks In Treatment Cohorts Of Increasing Doses To Client-owned Dogs With B-cell Lymphoma. 3/15/2012-3/14/2013 (Novartis Animal Health) $178,090.

Hauck ML (PI), Fisher J, Burgess S. Exposing the “genomic landscape” of canine soft tissue sarcomas. 10/1/2011-9/30/2013 (Morris Animal Foundation) $103,475.

Jones SL (PI). Targeting neutrophil activation to develop novel drugs to treat respiratory tract inflammation in dogs. 2011 (Canine Health Foundation OAK Grant) $63,580.


Jones SL (Co-I), Nordone SK (PI). MARCKS inhibition as a novel treatment for acute lung injury and acute respiratory distress syndrome. 2012 (NC TraCS grant) $50,000.

Keene BK, DeFrancesco TC, Atkins CE, Tou SP. Evaluation of Pimobendan in dogs with cardiomegaly caused by preclinical mitral valve disease (EPIC trial). August 2011 (Boehringer Ingelheim) $30,650
Keene BW (PI, NCSU): Evaluation of pimobendan in dogs with cardiomegaly caused by preclinical mitral valve disease 2011–present (EPIC) $34,000.


Keene BW (PI), Fox PR. HECTOR Trial (Efficacy of Bay 41-9202 in delaying the onset of heart failure). 2008–2012 (FDA-approved GCP pivotal trial) $43,000.

Shea D (PI), Kennedy-Stoskopf S (Co-PI representing CVM). Southeast Regional Climate Center. 2010-2014 (US Department of Interior and US Geological Survey) $1,527,123.

Kennedy-Stoskopf S (PI). 2011(USDA Animal Health Funds) $5,000.


Hill T (PI), Lascelles BDX (Co-I). Effect of NSAIDs and misoprostol on gastric mucosal recovery after acid injury in an injury model. 08/04/11-07/30/12 (CCMTR) $14,565.

Lascelles BDX (PI). Faculty salary for pending study: Evaluation of low dose meloxicam for the treatment of chroci musculoskeletal pain. 05/01/11-4/30/13 (Boehringer Ingelheim) $116,928.

Correa M, Lewbart GA. Hispanic/Latino Veterinary and Pre-veterinary Student Mentorship to Increase Recruitment and Retention. 2011 (AVMA SCAVMA/SAAVMA Faculty Advisor Grant Program) $500.

Lewbart G (PI), Christian S (Co-I), Harms C (Co-I). Veterinary Medical Services Rendered to the North Carolina Museum of Natural Sciences. 7/01/2011 thru 6/30/2014 (NC DENR) $65,000.

Lewbart GA, Harms CA. Veterinary Medical Services Rendered to the Museum of Natural Sciences. 2012-2013 (NC DENR) $25,000.


Maggi RG (Co-PI). Optimized Growth Media to Detect Intracellular Bacteria Implicated in Chronic Diseases February 2011-February 2012 (NIH- SBIR Grant 1R43AI088823-01A1) $188,898.

Maggi RG (PI). IBIS Assay development and validation: Phase II. December 2010-March 2012 (ABBOTT-Tierogen Infectious Diseases) $60,000.

Maggi RG (PI). Scope of work for laboratory testing of tick samples. November 2010-June 2011 (NC Department of Environment & Natural Resources) $17,000.

Maggi RG (PI). IBIS Assay development and validation: a phase I study. August 2010-August 2012 (ABBOTT-Tierogen Infectious Diseases) $130,872


McMullen Jr RJ (PI). Development and evaluation of corrective lenses for horses. 2011-2012 (DoCS Internal Seed Grant) $5,000.


Monteiro-Riviere NA (PI). Hierarchical 3-D Textile Architecture for Tissue Engineering Scaffolds Using Bioactivated Nanofibers, Multi-grooved Microfibers and Porous Spacer Knit Fabrics. May 2010-April 2012 (National Textile Center (NTC) TAC Project F10-NS01) $120,000.


Monteiro-Riviere NA (Co-PI). Evaluation of the cytotoxicity and antibacterial efficacy of electrically generated silver ions for potential applications in orthopedic implants - Pilot Study”. November 2011- October 2012 (Research and Innovation Seed Funding Program NCSU (RISF) $20,000


Cerda-Gonzalez S, Olby NJ (Co-PI). Role of morphology in clinical progression and syringomyelia in canine chiari-like malformations. 06/12/2011-06/12/2012 (American Cavalier King Charles Spaniel Club Charitable Trust) $18,815.

Caggiano A, Wessel T, Parry T, Wrathall J, Olby N (Co-PI). This is a multi-institutional grant. Translational pharmacologic efficacy studies of glial growth Factor 2 (GGF2) in spinal cord injury models and in the veterinary clinical setting. 09/30/2011-10/29/2014(Department of Defense) Olby budget: $364,335.
Olby NJ, Olivry T, Nielsen D. Discovery of Genetic Susceptibility Loci in Atopic Dermatitis Using a Genome-Wide Association Study. 01/01/2012-12/31/2012 (AKC CHF) $107,133.

Olby NJ. Investigation into the Genetics of Scottie Cramp: Sequencing of associated chromosomal regions. 01/01/2012-12/31/2012 (AKC CHF) $52,180.


Olivry T, Linder KE. Validation of an epicutaneous delivery system for mite allergy diagnosis in experimentally-sensitized mite-allergic dogs. 2012 (DBV Technologies, France) $33,115.

Sherman B (PI), Gruen M, Roe SC. The use of trazodone to facilitate post-surgical exercise restriction in dogs. 2010 (CVM Research Grant) $13,405.

Sherman BL (PI) Gruen ME, Roe S. The use of trazodone to facilitate post-surgical exercise restriction in dogs. 2010-2012 (NCSU-CVM Grant Research Award [#204540-047042010-2011]) $14,570.

Dorman D (PI), Sherman BL (Co-I), Gruen ME (Co-I), Fish R (Co-I). Developing the second generation of improvised explosive device detector dog. 2011-2012 (Office of Naval Research [NCSU subcontract #K2-NCSU-0493]) ~$925,000.

Hudson L, Sherman BL (Co-I), Gruen ME. Cognitive assessment in FIV-infected cats. 2009-2012 (National Institutes of Health-R21 [#NS066843-01A1]) $413,873.

Stoskopf MK, Wayne E, Waffa B. NCSU CVM Teaching Innovation Grant, Anatomy Atlases of Pogona and Python 2011 (NCSU CVM) ~$10,000

Wayne E, Stoskopf MK. Anatomy Atlas of Pogona vitticeps 2011 (Hitchings Grant, Triangle Foundation (~$5,000)

Stoskopf MK (Co-PI), Shea D (PI). 2011 -2015 (USGS Southeastern Climate Science Center G10AC00624) $1,527,123.


Warry E, Suter SE. Determination of the optimal storage conditions of canine CD34+ cells. 01/03/2012-06/04/212 (NCSU Veterinary Medical Foundation) $2,000.

**Williams LE**, Clarke DM, Johannes CJ. The impact of carboplatin chemotherapy and the multi-kinase inhibitor toceranib phosphate (Palladia) on angiogenesis and survival in canine osteosarcoma. 2011 (Bone Cancer Dogs, Inc.) $12,000.

**Wood MW, Gookin JL** (mentor). Polysulfated glycosaminoglycans as an alternate therapy for managing urinary tract infection in dogs. 7/1/10 – 6/30/13 (Morris Animal Foundation) $33,000.

**Wood MW, Hanel RM**. Renal replacement therapy. 2011 (CVM Equipment Grant) $30,000.
V. ADJUNCT AND ASSOCIATE FACULTY ACHIEVEMENTS

Dr. G. Chanoit, Adjunct Assistant Professor, Surgery

Committees
Member for the examination committee of the European College of Veterinary Surgeons, 2011-2015.

Publications


Grants
A novel approach to the treatment of cardiac arrhythmia: A robotic catheter for endocardial ablation (PI: Dr. G Buckner, NCSU), NIH-SBIR phase II, $513,273, funded, NIH Application ID: 2R44HL095227,2010-2012. Role: Co-applicant – perform surgery, data collection and analysis

The effect of remote ischemic preconditioning (RIPC) on vulnerability of isolated cardiomyocytes to cardiac insult (PI Pr.Saadeh, UoB BHI), 2011-2012. Role: Co-investigator-surgeon-responsible for animal phase – student mentoring


Dr. D. Deresienski, Adjunct Assistant Professor, Aquatics, Wildlife & Zoo Medicine

- Promoted to Medical Director of Bowman Animal Hospital
- Taught a student for 2-week senior block (VMC963)
- Authoring a quarterly column for Triangle Dog magazine called “Ask the Vet”
- Invertebrate Medicine Laboratory Instructor, 2011 Keystone Veterinary Conference, Hershey, PA
Committee and Board Activities

- US Environment Protection Agency representative to the Interagency Research Animal Committee (IRAC), a government-wide consortium on issues related to animal care and use policies, guidelines, regulations, and conservation and management of research resources, 2009-current
- Executive (ex officio, representing the USEPA) Committee member, North Carolina Association for Biomedical Research (NCABR) Board of Directors, 2007-present
- Member and Past-President, Veterinary & Comparative Respiratory Society (VCRS) Board of Directors, 2003-present

Awards

- EPA “S” award in recognition for valuable contributions as Acting Assistant Laboratory Director (ALD) for NHEERL’s Clean Air Research Program and continued efforts in supporting the transformation of ORD’s research portfolio, 2011
- EPA “S” award in recognition of outstanding efforts related to the Air, Climate, and Energy (ACE) Research Action Plan (RAP) development, 2011
- EPA “S” award in special recognition for assistance with developing research tasks within ORD’s Air, Climate and Energy 9ACE) program to implement “Path Forward” trans-disciplinary research, 2011

Dr. T. Edling, Adjunct Assistant Professor, Aquatics, Wildlife & Zoo Medicine

- Promoted to Vice President of Veterinary Medicine for Petco

Dr. R. Ford, Professor, Emeritus, Small Animal Internal Medicine

Publications, Textbook


Publications, Textbook Chapter


Invited Presentations

Ford RB. “Vector-Borne Diseases”, Banfield Symposium (12 lecture hours), Las Vegas, NV, December 2011- February 2012.

Ford RB. Multiple topics (6 lecture hours), 2012 Music City Veterinary Conference Nashville, TN, March 2012.

Ford RB. “Vaccination Symposium” (4 hours), 2012 Western Veterinary Conference, Las Vegas NV, February 2012.
**Ford RB.** Multiple topics (4 lecture hours), 2012 North American Veterinary Conference, Orlando, FL, January 2012.

**Ford RB.** Multiple topics (8 lecture hours), 2011 University of Illinois Fall Conference, Urbana, IL, September 2011.


**Ford RB.** “Bioterrorism and Veterinary Medicine.” Animal Health Institute, Kansas City, KS, May 2011.

**Dr. D.H. Johnson, Adjunct Assistant Professor, Aquatics, Wildlife & Zoo Medicine**

**Presentations**

Johnson DH. San Diego County veterinary Medical Association, Annual Fall Veterinary Conference, San Diego, CA, September 17-18, 2011.


**Publications**


**Dr. D.M. Mulcahy, Adjunct Associate Professor, Aquatics, Wildlife & Zoo Medicine**

**Publications**


Dr. J. Norton, Adjunct Assistant Professor, Zoological Medicine

Presentations
Norton J. Vibration and Noise: Expect the Unexpected. QUAD Branches, American Association for Laboratory Animal Sciences, Uncasville, CT, 2012.

Norton J. Veterinary Care-Update to the Guide. North Carolina Association of Biomedical Research Symposium, Research Triangle Park, NC, 2011


Grants
Norton J. American Association for Laboratory Animal Science, Grants for Laboratory Animal Science (GLAS) – “The Effects of Vibration on Mouse Physiology,” Principle Investigator: John N. Norton, 2012-2014, $36,000. This grant provides funding to determine amplitude and frequency of vibration resulting in perturbations of mouse physiology and thresholds for research interference.

Publications


Dr. L.V. Powers, Adjunct Assistant Professor, Avian Medicine

Publications


Presentations


Awards
Powers LV. Recipient, Outstanding Service Award (President’s Award), Association of Avian Veterinarians, August 2011.

Dr. G.A. Preston, Small Animal Internal Medicine

Publications


Hewins P, Belmonte F, Jennette JC, Falk RJ, Preston GA. Longitudinal studies of patients with ANCA vasculitis demonstrate concurrent reactivity to complementary PR3 protein segments cPR3m and cPR3C and with no reactivity to cPR3N. Autoimmunity 2011;44(2):98-106.
Abstracts


Invited Lecture
Preston GA. ANCA Vasculitis Workshop 2011

Dr. B. Schopler, Adjunct Assistant Professor, Avian Medicine
- BBC documentary “Madagascar, Lemurs and Spies
- Mentored 3 NCSU vet students at Duke Lemur Center and 1 French veterinary student, Summer 2011

Dr. S. Sontakke, Adjunct Assistant Professor, Internal Medicine
- Assisted Dr. Edward Breitschwerdt with several invited research manuscript reviews
- Co-authoring a review on neurological manifestations of Bartonellosis

Dr. M.R. Zalutsky, Adjunct Associate Professor, Oncology

Publications

