TABLE OF CONTENTS

Mission Statement (p.3)

Instructional Program (p. 3)
Research (p. 13)
Extension (p. 14)
Faculty (p. 20)
Students (p. 34)
House Officers (p. 35)

Departmental Listing (p. 42)

Departmental Bibliography (p. 47)

Adjunct and Associate Faculty Achievements (p. 121)
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.

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>CORE COURSES:</th>
<th>SEMESTER</th>
<th>COORDINATOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Careers in Veterinary Medicine (VMC-910)</td>
<td>FALL</td>
<td>FISH</td>
</tr>
<tr>
<td>Group Communication in Veterinary Medicine (VMC – 914)</td>
<td>FALL</td>
<td>KEDROWICZ</td>
</tr>
<tr>
<td>Introduction to Companion Animal Behavior (VMC-927)</td>
<td>SPRING</td>
<td>SHERMAN</td>
</tr>
<tr>
<td>Intro to Physical Exam Skills-Lab Animal and Zoological Species (VMC-931)</td>
<td>SPRING</td>
<td>LEWBART</td>
</tr>
<tr>
<td>Principles of Surgery (VMC-932)</td>
<td>FALL</td>
<td>MATHEWS/HARDIE</td>
</tr>
<tr>
<td>Theriogenology (VMC-933)</td>
<td>FALL</td>
<td>BAILEY</td>
</tr>
<tr>
<td>Introduction to Physical Examination Skills – Small Animal (VMC-937)</td>
<td>FALL/SPRING</td>
<td>MARKS</td>
</tr>
<tr>
<td>Companion Animal Medicine Surgery I (VMC-951)</td>
<td>FALL</td>
<td>VADEN</td>
</tr>
<tr>
<td>Equine Medicine &amp; 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 (YEAR LONG)</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>Animal Welfare, Ethics and Societal Responsibility (VMC-962)</td>
<td>SPRING</td>
<td>DORMAN</td>
</tr>
<tr>
<td>Advanced Principles of Surgery (VMC-965)</td>
<td>SPRING</td>
<td>TATE</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SELECTIVES:</th>
<th>SEMESTER</th>
<th>COORDINATOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active Learning in Companion Animal VTH (VMC-992)</td>
<td>FALL/SPRING</td>
<td>HARDIE</td>
</tr>
<tr>
<td>Advanced Equine Theriogenology (VMC-991)</td>
<td>SPRING</td>
<td>BAILEY</td>
</tr>
<tr>
<td>Advanced Companion Avian Medicine (VMC-991)</td>
<td>SPRING</td>
<td>DEGERNES</td>
</tr>
<tr>
<td>Advanced Fish Medicine (VMC-991)</td>
<td>SPRING</td>
<td>HARMs</td>
</tr>
<tr>
<td>Applied Surgical Anatomy (VMC-991)</td>
<td>SPRING</td>
<td>MATHEWS</td>
</tr>
<tr>
<td>Carnivore Medicine (VMC-991)</td>
<td>FALL</td>
<td>KENNEDY-STOSKOPF</td>
</tr>
<tr>
<td>Critical Concepts in Emergency Medicine (VMC-991)</td>
<td>SPRING</td>
<td>HANEL</td>
</tr>
<tr>
<td>Environmental Med &amp; Policy (VMC-991)</td>
<td>SPRING</td>
<td>KENNEDY-STOSKOPF</td>
</tr>
<tr>
<td>Equine Colic (VMC-991)</td>
<td>FALL</td>
<td>BLIKSLAGER</td>
</tr>
<tr>
<td>Equine Endoscopy (VMC-991)</td>
<td>SPRING</td>
<td>TATE</td>
</tr>
<tr>
<td>Extramural Experience in Lab Animal Medicine (VMC-992)</td>
<td>FALL</td>
<td>FISH</td>
</tr>
<tr>
<td>Extramural Experience in Zoo Medicine (VMC-992)</td>
<td>FALL/SPRING</td>
<td>LEWBART</td>
</tr>
<tr>
<td>Feline Oncology (VMC-991)</td>
<td>FALL</td>
<td>GIEGER</td>
</tr>
<tr>
<td>Health &amp; Safety in the Third World (VMC-991)</td>
<td>FALL</td>
<td>STOSKOPF/LOOMIS</td>
</tr>
<tr>
<td>Horse Handling for Vets (VMC-991)</td>
<td>SPRING</td>
<td>JONES/GERARD</td>
</tr>
<tr>
<td>Introduction to Equine Orthopedics &amp; Lameness (VMC-991)</td>
<td>SPRING</td>
<td>REDDING</td>
</tr>
<tr>
<td>Introduction to Conservation Health (VMC-991)</td>
<td>SPRING</td>
<td>STOSKOPF</td>
</tr>
<tr>
<td>Lab Animal Medicine(VMC-991)</td>
<td>FALL</td>
<td>FISH</td>
</tr>
<tr>
<td>Large Animal Practice Experience (VMC-992)</td>
<td>FALL/SPRING</td>
<td>PRANGE</td>
</tr>
<tr>
<td>Mindful Veterinary Practice (VMC-991)</td>
<td>FALL</td>
<td>FLAMMER</td>
</tr>
<tr>
<td>Miniature Pig Basics (VMC-991)</td>
<td>SPRING</td>
<td>MOZZACHIO</td>
</tr>
<tr>
<td>Professional Meeting (VMC-991)</td>
<td>FALL/SPRING</td>
<td>FLAMMER</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-------------</td>
<td>---------</td>
</tr>
<tr>
<td>Psychomotor Skills (VMC-991)</td>
<td>FALL/SPRING</td>
<td>HARDIE</td>
</tr>
<tr>
<td>Physical Therapy and Rehabilitation (VMC-991)</td>
<td>FALL</td>
<td>MARCELLIN</td>
</tr>
<tr>
<td>Raptor Medicine and Rehabilitation (VMC-991)</td>
<td>FALL</td>
<td>DEGENRES</td>
</tr>
<tr>
<td>Small Animal Clinical Neurology (VMC-991)</td>
<td>SPRING</td>
<td>MARIANI</td>
</tr>
<tr>
<td>Small Animal Practice Experience (VMC-992)</td>
<td>FALL/SPRING</td>
<td>DUNNING/GIEGER</td>
</tr>
<tr>
<td>Success in Veterinary Practice (VMC-992)</td>
<td>FALL</td>
<td>SYDNER</td>
</tr>
<tr>
<td>Veterinary Acupuncture in China (VMC-992)</td>
<td>SPRING</td>
<td>DEGENRES</td>
</tr>
<tr>
<td>Veterinary Medicine and Farriery (VMC-991)</td>
<td>SPRING</td>
<td>REDDING</td>
</tr>
<tr>
<td>Veterinary Illustration (VMC-991)</td>
<td>SPRING</td>
<td>STOSKOPF</td>
</tr>
<tr>
<td>Virtual Reality Clinic (VMC-991)</td>
<td>FALL</td>
<td>BIRKENHEUER/LUNN</td>
</tr>
</tbody>
</table>

**ELECTIVES:**

| Clinical Theriogenology I (CBS-810) | FALL | BAILEY |
| Clinical Theriogenology II (CBS-810) | SPRING | BAILEY |
| Advanced Topics in Zoological Medicine (CBS-817/818) | FALL/SPRING | KENNEDY-STOSKOPF |
| Ethics in Fisheries & Wildlife Sciences (FW-730) | FALL | STOSKOPF |
| Advanced Topics in Equine Medicine & Surgery (VMC-911) | SPRING | DAVIS |
| Veterinary Acupuncture in China (elective) (VMC-922) | SPRING | DEGENRES |
| Research in Zoological Health (VMC – 923) | FALL/SPRING | STOSKOPF |
| Chelonian Medicine & Surgery (VMC-928) | SPRING | LEWBART |

**CLINICAL ROTATIONS:**

| Rehabilitation and Mobility (VMC-930) | FALL/SPRING | DUNNING/SIMS |
| General Limited Small Animal Practice (VMC-939) | FALL/SPRING | STEVENS/TAYLOR/FERRIS |
| Clinical Theriogenology (VMC-940) | FALL/SPRING | WHITACRE/BAILEY |
| Clinical Rotation in Veterinary Radiation Oncology (VMC-948) | FALL/SPRING | GIEGER |
| Equine Primary Care (VMC-949) | FALL/SPRING | FOGLE |
| Sea Turtle Medicine & Rehabilitation (VMC-950) | FALL | HARM |
| Companion Animal Medicine for Food Animal Students (VMC-954) | FALL/SPRING | HARRELL |
| Extramural Experiences in Laboratory Animal Medicine (VMC-955) | FALL/SPRING | FISH |
| Advanced Prosimian Medicine (VMC-958) | SPRING | STOSKOPF |
| Advanced Primate Medicine (VMC-959) | FALL | STOSKOPF |
| Small Animal Emergency Service (VMC-960) | FALL/SPRING | HANEL/MUSULIN |
| Extramural Experiences in Zoological Medicine (VMC-963) | FALL/SPRING | LEWBART |
| Zoological Husbandry and Nutrition (VMC-964) | FALL/SPRING | STOSKOPF |
| Equine Emergency & Critical Care (VMC-966) | FALL/SPRING | PRANGE |
| Clinical Veterinary Dentistry (VMC-967) | FALL/SPRING | EROSHIN |
| Equine Orthopedic Surgery & Lameness (VMC-968) | FALL/SPRING | TATE |
| Companion Animal Medicine II (VMC-971) | FALL/SPRING | HARRELL |
| Clinical Small Animal Veterinary Cardiology (VMC-972) | FALL/SPRING | DEFRANCESCO |
| Small Animal General Surgery (VMC-973G) | FALL/SPRING | ROE |
| Small Animal Orthopedic Surgery (VMC-973O) | FALL/SPRING | ROE |
| Equine General Surgery (VMC-975) | FALL/SPRING | TATE |
| Veterinary Critical Care (VMC-976) | SPRING | HANSEN |
| Equine Lameness (VMC-978) | SPRING | PRANGE |
| Equine Medicine (VMC-979) | FALL/SPRING | BREUHAUS |
| Veterinary Clinical Oncology (VMC-980) | FALL/SPRING | HAUCK |
| Laboratory Animal Medicine (VMC-981) | FALL | FISH |
| Ophthalmology (Equine) (VMC-982) | FALL/SPRING | GILCER |
| Ophthalmology (Small Animal) (VMC-982A) | FALL/SPRING | GILCER |
| Dermatology (VMC-983) | FALL/SPRING | MURPHY |
| Introduction to Clinical Neurology (VMC-984) | FALL/SPRING | MUNANA |
| Advanced Companion Animal Internal Medicine (VMC-986) | FALL/SPRING | HARRELL |
| Exotic Animal Medicine (VMC-988) | FALL/SPRING | GRUNKEMEYER |
| Zoological Medicine (VMC-989) | FALL/SPRING | STOSKOPF |
| Musculoskeletal Ultrasound in the Horse (VMC-990) | SPRING | REDDING |
| Special Problems Equine Medicine & Surgery (VMC-993) | FALL | JONES |
| Extramural Experiences in Small Animal (VMC-994) | FALL/SPRING | DUNNING/RISSELADA |
| Clinical Conference (VMC-995) | FALL/SPRING | CAMPBELL/GUY |
| Advanced Avian Clinical Medicine (VMC-996) | FALL/SPRING | DEGENRES |
| Raptor Medicine and Rehabilitation (VMC-997) | FALL/SPRING | DEGENRES |
Clinical Sciences Faculty Introduced a Number of Innovations in their courses:

Courses:
- Bailey –
  - Development of Communications module as component of senior theriogenology rotation with time dedicated for discussion of communications-techniques and opportunities for students to observe/critique client-veterinary interactions on the service (VMC 940)
  - Development of equine palpation elective (expected to be offered spring 2017)
  - Assisted with integration of clinical material into first-year reproductive physiology section (VMB 913)
  - Newly designed Advanced Equine Theriogenology course (VMC 991-02 selective)
- **Birkenheuer** - Developed new selective (Virtual Reality Clinic) with Kathy Lunn that was well received.

- **Blikslager** - Colic Selective: Teaching colic from anatomy and physiology to clinical management in practice. Developed teaching models for rectal palpation and intestinal anastomosis. Used a series of interactive presentations and case series. This included an interactive session with a referring veterinarian (Dr. Rebecca Stinson, Carolina Equine Hospital, Gibsonville NC)

- **Bizikova** - I have implemented an online case-based training module to review, in practical settings, the lectured material. I am in a process of development of additional cases with different dermatological problems to provide broader spectrum of case-based learning modules.

- **Davis** –
  - Developed colic clinical signs video for the colic selective course
  - Developed normal and abnormal neurologic and lameness exam videos for VMP 936

- **DeFrancesco** - In VMC 972, we have designated a set time (3:30-4:30 pm) for our afternoon topic rounds to provide more consistency. For VMC 937, I redesigned the LAB experience to better accommodate the increased class size and the first year student. We auscultate more animals jointly with the wireless infrared and have less small group hands-on sessions.

- **Degernes**- Every year, I update and revise my printed notes and lecture/lab material, and incorporate Turning Point questions in the lecture material.

- **Eroshin** - VMC 967 – full independent regional anesthesia performed by students during their second week on the rotation is a rule now. As a result of a successful previous year of 2014 VMC 965 – more complicated procedures (interdental wiring, mandibular canine tooth extractions) can now be covered during clinical rotations at VMC 967.

- **Fish** –
  - VMC 953: We used Moodle-based exam (both a take-home and in-class portion), with mixed reviews; made first attempt at flipping the classroom for first lecture.
  - VMC 931: Used a Moodle-based pre-lab quiz to drive better preparation for the labs; re-organized labs to decrease content (and remove mouse section), but offered optional, terminal labs for interested students to pursue additional techniques.

- **Fogle** –
  - Developed a course and distributive practice experience to enhance equine primary care education for fourth year students through solicited partnerships with five select equine practices and annual education seminars with topics strategically chosen to enhance the experience for all parties involved. This achievement enhances the success of our equine and mixed animal focus students, and enhances local and statewide engagement through our partnerships with North Carolina equine veterinary practitioners.
  - Created castration and hand-tie videos for enhanced out of lab education, with a goal of improving the castration lab experience for students in my VMP 956 course.

- **Gieger** –
  - In VMC 948 (clinical rotation), the students are required to present a journal club article of their choosing to our group. This encourages them to practice self-learning as well as their presentation skills. After they present and critique the article, we discuss that topic and any questions that they have about it. To my knowledge, other clinical rotations do not require a journal article presentation.
In VMC 991 (Feline Oncology), the students have to create a 10-15 PowerPoint presentation and be prepared to answer questions about a topic. This hopefully encourages creativity and self-teaching.

- **Gookin** – VMB 932 Veterinary Medical Decision Making (In Development) (Course Participant)
- **Hanel** - I initiated a new selective this year which encompassed applied skills and group projects.
- **Hansen** - Participated in a new selective this year, implementing a novel fluid therapy lab that emphasized development and reinforcement of math and technical skills by having students create intravenous fluids (that were analyzed for accuracy feedback) and set up various types of fluid pumps at prescribed flow rates.
- **Harms** -
  - VMC 953 – introduced new dry lab table-top exercise in non-recoverable live stranded whales. This exercise illustrated how veterinary training can be applied successfully to unexpected massive challenges, and was the first formal euthanasia instruction these students had received.
  - VMC 991-227 Fish Medicine Selective moved to CMAST and partnered with fisheries graduate student research to provide veterinary students with novel surgery experience on weakfish.
- **Harrell** - For VMC 992-308: Increased time spent with each student and more specific tasks. Additional computers to support growth in numbers.
- **Hawkins** –
  - Continued active participation on EMR committee. As noted in prior reports, I am the primary committee member with interest in student friendly SOAPing capability. VetView will impact all clinical teaching.
  - Delayed major updating of VMC 951 courses pending final decisions of curriculum revision.
- **Hess** – Together with my faculty colleagues in Medical and Radiation Oncology, we re-organized the Cancer Class that we’ve been providing to the House Officers in these two programs since 2009. This is a semester-long course whose content repeats biannually. Cancer Class is designed to help with Board preparation and overall success during residency training. Briefly, the changes/innovations instituted this year include:
  - Mandatory participation of all faculty
  - Weekly, rather than biweekly, classes
  - The year 1 curriculum reviews a core cancer biology textbook (Tannock & Hill) on a chapter-by-chapter basis
  - End of semester quizzes are provided
  - Solicitation of written feedback on the course content & delivery
- **Jones** - CBS 810 New Comparative Medicine and Translational Research Journal club developed and established for CMTRTP and combined DVM/PhD programs
- **Kedrowicz** - I enhanced core DVM courses, rotations, and selectives through developing and delivering communication modules. Specifically, I provided instruction in (1) VMB 912 – Taking a history by incorporating core communication skills, (2) VMC 995 – Preparing and delivering dynamic presentations, (3) VMC 992 – Providing relationship-centered care and communicating during euthanasia decision making, and (4) VMC 949 – Providing relationship-centered care and core client communication skills. Additionally, I developed and taught a new selective open to first through third year students—Marketing Communication and Information Management.
- **Keene** - VMC913 – will take over the CV physiology part of VMC913 starting 2016
- **Kennedy-Stoskopf** - Participating in more undergraduate courses as a guest lecturer to introduce students to concepts related to One Health and skills necessary for
Conservation Biology (e.g. field immobilizations, proper necropsy techniques to collect usable samples).

- **Lewbart** - We moved the annual Fish Medicine Selective to CMAST and we integrated the surgery portion of the course with ongoing research that requires fish anesthesia, analgesia, and surgery.

- **Lunn** –
  - VMB 912 (Introduction to Clinical Problem Solving in Veterinary Practice): I worked closely with Dr. Schoenfeld to develop course content for this new course. I was responsible for creating and grading 2 separate homework assignments. All the lectures that I presented in this course were new in Fall 2014.
  - VMB 913 (Veterinary Physiology I): I attended all of Dr. Gadsby’s endocrinology lectures. I then applied his learning objectives to clinical case material and used this for the basis of 2 new laboratory sessions. Each laboratory lasted a total of 3 hours and consisted of 12 stations with clinical material (images, radiographs, test results etc.) from 12 cases. Each station included several questions that tested the students’ basic understanding of endocrine physiology.
  - VMC 951 (Companion Animal Medicine and Surgery I): I created 4 new lectures in this course (I took over from Dr. Marks and did not reuse his materials).
  - VCM 951 (Companion Animal Medicine and Surgery I): I created a new laboratory for this class in Fall 2014. The students worked in 20 groups of 5, and each group was assigned 1 of 5 different endocrine diagnoses in advance, to research and then present to their classmates as a typical case. The rest of the class had to ask questions of the presenters to figure out the diagnosis. The laboratory was divided into 4 groups of 25, with 2 1.5-hour sessions running concurrently (Dr. Jenessa Winston was recruited to assist).
  - Resident Lectures: I created a total of 6 new lectures for resident didactic teaching (1 for SAIM, 4 for VECC, and 1 for clin path).
  - Coordinated and presented a new 1-week fall selective with Dr. Birkenheuer (VMC 991 253: Virtual Reality Clinics). I created and managed the Moodle site for this selective.

- **Mariani** - Coordinating an effort to redesign the neurology section of VMC 961 as a blended, team-oriented and mastery-based course module.

- **Mathews** - VMC932 – Moodle (computer based) midterm exam. Hired two new teaching technicians.

- **Munana** –
  - Designed and implemented online assessment for VMC 984 that focuses on the key concepts in neurology for a general practitioner; students are required to complete the assessment with a score of 80% or above to pass the rotation.
  - Organized and oversaw laboratory session in VMC 961 that utilizes client owned pets to teach principles of the neurological examination. This was implemented in Spring 2014. This year (Spring 2015) I worked to obtain approval to compensate owners for their pet’s participation in the laboratory.

- **Musulin** – For VMC 960 (Emergency Clinical Rotation):
  - We have instituted student assessment outcome sheets.
  - I am also working to integrate new ways to optimize student learning while managing the high caseload. Examples include having the students triage the cases with the technicians, so that the students are involved from the second the case walks in the door. We are also working on our history-taking model, so that the students watch our ER doctors take client histories. In most of the other clinical rotations, the students take the histories themselves. Our model will
allow for the student to observe the history-taking process and learn from watching.

- **Nolan** - Developed an innovative online module for the laboratory component of VMC951, which teaches students about canine multicentric lymphoma using a virtual clinic.

- **Olby** - Restructuring of the 4 lectures on spinal cord injury and peripheral nerve disease. In the past these lectures have been structured according to localization – so monoparesis, paraparesis, tetraparesis (UMN) and LMN. The problem with this is many diseases can appear in each of these lectures, and choosing where to present them is a problem, but there is also the concern that students might think the disease only causes the one presentation. I reorganized the lectures and notes into acute spinal cord injury, chronic spinal cord compression, inflammatory and neurodegenerative diseases, and LMN diseases. The lecture flow felt much better to me, and I felt I could emphasize the top differentials really well. I rewrote my exam questions to focus more clearly on items that I felt they HAD to know and they scored better than in the past on my part of the exam. I am intrigued to review their comments when I see the reviews.

- **Prange** - Together with Dr. Davis, I created a video for the students in VMP 936 that showed the basic steps of an equine lameness examination. This was done on short notice but proved to be a valuable asset to the course.

- **Risselada** - VMC 994 will move to an online course (registration, experience reports, case logs and supervisor evals) rather than the current all paper course.

- **Roe** –
  - Re-arranged VMC961 to accommodate 4 Dentistry lectures
  - Revised Orthopaedic section to adjust to smaller number of lectures
  - Re-made 2 lab videos for Closed Captioning
  - Developed interactive Wrap-up lecture for VMP922
  - New lecture in Biomechanics course in BME

- **Schnabel** - I have continued to restructure lameness lectures in VMC 952 and work on better integration of audiovisual aids.

- **Sherman** – VMC 927
  - Moodle in-class exams (3)
  - Video Case Discussion Small Groups with Rubrics (3)
  - Training Project with Rubric to teach behavior methods and writing skills (1)

- **Stevens** –
  - Updated vaccine lecture to students, integrating more question/answer
  - Added clinical relevancy to Communications lecture
  - Modified 957 Laboratories to accommodate larger student numbers
  - Modified VMC 939 to accommodate larger numbers
  - Improved rounds discussion with interactive games, eg Jeopardy for k9 and feline vaccines
  - Instituted self-assessments combined with faculty assessments of students at mid-block

- **Stoskopf** - Developed new selective to be taught 2015, beta tested online distance graduate course to be taught 2015, and ground work for design-build with CoD

- **Tate** - Support the other two instructors with my knowledge. Provide new instrumentation to advance Laparoscopic surgery case load. Always be available to support and provide assistance to house officers.

- **Taylor** –
  - GP Clinical rounds - Implementation of a variety of teaching methods in clinical rounds to increase interest and encourage participation of all students including: role playing, competitive question and answer sessions, point/counterpoint discussions etc.
o VMB 912 - Participated in script writing and performing in a communications and problem solving video prepared for course
o VMC 932 - Instigated inversion of OVH teaching video for students to ease spatial learning; produced testicular local anesthetic block video; assisted in 4 venipuncture teaching video production; produced poster for teaching surgical rub technique; distributed survey and collated data on ways to improve surgical teaching innovations in future years

- **Vaden** –
  o VMC 951: I am the course coordinator and have worked hard to make changes in the course to account for the pending reduction in credit hours.
  o VMC 942: This is a new course that will be offered starting Spring 2016. Simon Roe and I worked to develop this course, which was approved by a faculty vote. I have submitted the new course forms and am currently waiting for the forms to make it through the system, after which time the course will be presented to the curriculum committee.
  o Advanced Internal Medicine Elective: The elective is included in the elective offerings that Regina Schoenfield has been developing. I have worked with the current teaching faculty in VMC 951 to develop a plan for this course so that all areas covered in VMC 951 can have expanded content to those students who elect to take the course. The exception is dermatology, who has decided to offer their own elective and will not be included in the advanced internal medicine elective.

**Curricula:**
- **Birkenheuer** - Involved with curricular revision and course content reviews
- **Blikslager** - Adding additional lecturers for CBS764 from main campus to cover nutrition (Odle/ Jacobi). This also fulfills an educational commitment as part of the CALS-CVM grant. In addition, adding lectures from MDs from UNC and Duke.
- **Davis** - Currently involved in the re-organization and updating of the TAU laboratory curriculum
- **Degernes** – As Assistant Department Head of MSM, I am working with faculty and course coordinators who teach in both VMC 931 and VMC 953 to totally revise these courses. These changes will go into effect in spring 2016 with the second year class, pending approval at the college and university levels. In summary, course content for VMC 931 will include reptile, amphibian and fish medicine (combined topics currently split between the 2 core courses), and content in VMC 953 will include avian, small mammal / lab animal, and wildlife topics. Splitting the topics into these courses will allow more efficient use of faculty time (especially for Dr. Harms, who has to travel from C-MAST to teach in both courses currently), and will free up some time to add different learning modules in the lab periods.
- **Eroshin** - Introduced 4 hours of lectures on Dentistry and Oral Surgery in VMC 961
- **Fogle** –
  o Participated in curricular review for Anatomy, Infection and Immunity, and Equine Medicine and Surgery courses.
  o Leading and participating in a working group to review the body of equine skills education for years 1-4 DVM students, with a goal of enhancing the education delivered to students through the Teaching Animal Unit courses.
- **Gookin JL, Harvey A.** A model for understanding regulatory control of plasma volume and osmolality (In Progress)
- **Grunkemeyer** –
  o VMC 953 Laboratory Animal and Special Species Medicine, 3rd year vet students, Fall semester, all labs team taught:
    - “Rabbit medicine and disease” (1 hr), ’14 (new lecture)
“Small mammal case discussions” (two 2 hr labs), ’14   (revised lab)
  o VMC 931 Intro to Physical Examination Skills-Laboratory Animal and Zoological Species, 2nd year vet students, Spring semester, all labs team taught:
    ▪ “Rabbit biology, care, and handling” (1 hr), ’15   (new lecture)
    ▪ “Rabbit handling and basic techniques” (two 3 hr labs), ’15   (revised lab)
    ▪ “Advanced clinical techniques, gonadectomy, and necropsy in rabbits” (3 hr elective lab), ’15   (new lab)
    ▪ “Rodent handling and basic techniques” (two 3 hr labs), ’15   (revised lab)
    ▪ “Advanced clinical techniques, gonadectomy, and necropsy in rodents” (3 hr elective lab), ’15   (new lab)
  • Kedrowicz - I developed and taught the first course in the communication curricula—Group Communication in Veterinary Medicine.
  • Kennedy-Stoskopf - Offer 3 long-established, elective courses for DVM students. These will continue as currently structured; not sure if enrollment in these courses will satisfy "required" elective time or will be additional electives. My impression is that either way, veterinary students will self-select the electives based on interest.
  • Lunn - VMC 991 – Developed and introduced surgical model for OVH procedure into selective
  • Mathews - Will be adding 2 nutrition based lectures to VMC 932 abdominal surgery lectures as they fit in well w discussion on septic peritonitis.
  • Musulin - VMB 912 Clinical Reasoning Course – this course was offered for the first time this fall 2014. I organized the lecture on differential diagnoses. All of the instructors for the course were involved in the planning of this course as a springboard for VMP 922.
  • Prange - I am part of the equine Curriculum Committee that is currently re-assessing the “equine skills” all students as well as equine focused students should obtain during the 4 years at our college.
  • Redding - Teach the latest advances in advanced imaging, regenerative medicine, equine sports medicine and rehabilitation and equine orthopedic surgical techniques
  • Roe –
    o Co-ordinated review of VMC961 content in preparation for curricular changes
    o Participated in Course Coordinator Group meetings
    o Submitted 2 Elective courses, one of which was converted to a core course for Yr2
  • Schnabel - I have continued to teach the latest advances in regenerative medicine and now also in equine sports medicine and rehabilitation. These subjects were not in the curriculum previously.
  • Sherman –
    o Course Coordinators Group, Member and attendee
    o May S. Educational Symposium: Engaging Students. NCSU College of Veterinary Medicine, June 15, 2014.
    o CVM lectures on veterinary medical education (Newmiller and others)
  • Stevens – Developed Advanced General Practice rotation
  • Stoskopf - Participated in re-working of Toxicology offerings in DVM curriculum
  • Simulation (psychomotor skills) Lab (ongoing)
  • Taylor - Development and presentation of curriculum ideas for the newly developed
  • Vaden - As a member of the curriculum committee, I have spent hours reviewing the curricular changes and brainstorming ideas about how these changes should look. I
have also been an active member of the course coordinators group when meetings are taking place.

Programs:

- **Davis** –
  - Organized and facilitated an equine gastric ulcer wet lab with representation from Merial for 3rd and 4th year students
  - Developed ACVIM Practice exam for LAIM residents
- **Early** - Regular Cadaver labs for Neurology and Surgery residents.
- **Hansen** - Converted our house officer service rounds/journal club to an organized board preparation course that covers all topics on the ACVECC certification exams. This requires heavy faculty preparation weekly for a 3-year cycle; each of has been responsible for just under 4 months of instruction during the past year. With the addition of Dr. Vigani this will be reduced to 3 months per year for each faculty starting in July of 2015.
- **Hauck** - Worked with oncology faculty to develop course for house officers
- **Hawkins** - Investigated possibilities for endoscopy simulator replacement or rental
- **Kedrowicz** - I collaborated on the revitalization of the graduate student teaching certificate program, including defining parameters of the program, brainstorming workshop sessions, planning fours sessions for this year, and inviting two speakers from main campus. I also facilitated a graduate student workshop on communicating science.
- **Kennedy-Stoskopf** –
  - Zoological Teaching Animal Unit (proposed): This program is modeled off TAU and currently includes the Wild Carnivore Team that has been functioning since 2011. This is a voluntary endeavor that provides interested students with the opportunity to manage and care for 7 red wolves. The objective is to provide students interested in working with non-domestic animals in practice settings an opportunity to gain practical, hands-on experience so they can work safely around these animals and advise clients accordingly. The red wolves serve as a model species. The number of students in any given semester can range from 45-63 students from the first-third year classes. Students are responsible for the daily care and feeding, preventive medicine, and enrichment of the wolves. The students gain confidence in their abilities to assess animal well-being by visual observations; develop communication skills to ensure all team members know what needs to be done daily; make decisions on management and husbandry; repair fences, hotwires, feeders, hoses, etc. April 20th, 2014, three pups were born, and students gained valuable experience managing pododermatitis, a life-threatening condition in red wolf newborns (Carnivore Team members writing a case report.) To provide additional opportunities, we partner with the Conservators’ Center to allow student participation on ongoing cases at the Center in Mebane and those that are presented to EAMS for diagnostic work-up (Current EAMS intern preparing a paper on a binturong case.) Many of the animals are geriatric and have necessitated euthanasia. As a direct consequence, students have organized Wildlife and Exotic Necropsy Team (WENT) through Path Heads, and I, in turn, am the liaison between the organizations submitting the animals and necropsy. My role is to get back to the facilities and explain the necropsy findings to help manage their animals better.
  - Resident Training: With the loss of an ACZM Diplomate at the NC Zoo, I have had to increase my contact time with residents at the Zoo for our training program to remain compliant. (Do the same, but much less frequently, with residents visiting the NC Aquariums.) This is done primarily via videoconferencing on a weekly basis and occasionally a daily basis depending
on the situation. This has been a positive for the program and will continue even when all veterinarians at the NC Zoo are ACZM diplomates. I bring different perspectives to case management, which allows our residents to consider other options. Also gets me more involved with the residents, other than the didactic course, and has lead to a serval study with Dr. Cannizzo.

- **Lewbart** - Continuing to find and support creative ways to sustain and improve the Turtle Rescue Team.

- **Mathews** - Registered small animal residency program as a collaborative program in conjunction with Veterinary Specialty Hospital of the Carolinas as a new requirement by ACVS. Reorganizing residency program to include either a clinical instructor or intern this year so residents have required study time for new ACVS exam structure.

- **Musulin** - ECC Residency Training – The ECC faculty have developed a 3-year course curriculum for resident training. Each DACVECC faculty is responsible for ~8 months of the curriculum.

- **Olby** –
  - Member of the NCSU genetics program. Participant and presenter at their annual retreat, presenter in the seminar series, meet and interview graduate students and post docs.
  - Mentor for the T32 and T35 programs administered at the CVM.

- **Royal** –
  - I have developed a plan for “house system” model for the CVM that intends to help accomplish intellectual, social, mental/emotional, cultural and physical wellness goals. This program is expected to be unveiled during the Fall of 2015. A great deal of time and planning will occur this summer to ensure a smooth rollout of the program.
  - I have been working on numerous teaching opportunities for faculty development, including workshops on test item writing, survey research, grading, etc. I hope to offer multiple opportunities for faculty development in the coming year.

- **Sherman** –
  - Organizational Committee member ACAA Animal Welfare Short Course, 2014
  - Organizational Committee chair, ACAA Animal Welfare Short Course, 2015
  - Director, ACVB Dog-Cat on line behavior course for veterinary students, 2010-2015

- **Stoskopf** - Initiated steps to have unique alternate path ACZM program and ZTAU as part of TAU

- **Suter** - Medical Oncology faculty have been put a significant amount of time and energy into revamping the HO Cancer Class

### Research

#### Volume of Activity

- Extramural Grants as Primary Investigator and/or Co-Investigator – $2,731,279
- CVM/NCSU Grant Funding – $159,686
- DoCS Firestone Canine Research – $2500
- DoCS Veterinary Practice Plan Research – $3000
Extension

Extension and Public Service

Clinical Sciences faculty average nearly 40% FTE teaching in the Veterinary 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 NC State Veterinary Hospital

- **Blikslager** - Approved clinical trial, funded by Grayson Jockey Club: Flunixin or firocoxib in postoperative colic patients. To start 5/1/14
- **Davis** –
  - Introduced the use of new FDA trimethoprim-sulfadiazine formulation for horses
  - Began using trazodone in clinical cases for anxiety in horses confined to stall rest
- **DeFrancesco** –
  - Use of point of care lung ultrasound being used to aid in the rapid diagnosis of dogs and cats presenting with dyspnea.
  - Use of feline proBNP snap tests (Idexx) to aid in the rapid diagnosis of dogs and cats presenting with dyspnea.
  - Currently working with Dr. Jennica Harashak, SA rotating intern, and Dr. Rita Hanel on small clinical project assessing the utility of feline proBNP snap test using pleural fluid (not blood) to differentiate cardiac from non cardiac cause of pleural effusion in cats
  - Working with cardiology team assessing the use of cardiospheric stem cells in Doberman Pinchers with dilated cardiomypathy
  - Working with cardiology team assessing the use of a checklist to improve the safety of cardiac cath procedures. Based on pre checklist pacemaker study, afterhours pacemaker implantations carries a higher risk of complications most notably infectious.
  - BLASTT study assessing the use of early TPA in cats with acute ATE.
  - Completed EPIC and ANTECH BNP Clinical Trials.
  - Spearheaded the simplification of hospitalization fees in the specialty areas.
  - Participated in ad hoc committee to reduce the paperwork in the MR (no more pink card, one history and PE form for all visits)
  - Worked with nutrition service and nursing supervisors to improve our feeding practices for our hospitalized patients.
  - Worked with pharmacy resident Dr. Carolyn Arnish, to develop a survey to better understand and document medication compliance issues in our veterinary patients. (Should result in publication)
  - Also worked with Dr. Arnish to develop a medication administration chart to help clients better track complex medication administration regimens.
- **Eroshin** –
  - fully referral-based service since November 2014
  - mobile unit now can travel to remote locations and has been utilized on multiple occasions at Pine Knoll Shore aquarium, NCSU Lab Animals, Exotics, GP, IM and Emergency Service
  - modifications in Dentistry OR to improve ergonomics, safety and efficiency (standing computer stations, large monitors and wall-mounted x-ray unit) were proposed to Curtis Colwell and discussed with Ken Satterwhite in 2014, feedback is pending
• **Fogle**
  o Assisting with development of a reusable cauterizing device, for standing laparoscopic surgical use.
  o Marketing of the dynamic endoscope, to referring veterinarians and horse owners.

• **Gieger** – Continued modifications of the radiation oncology service are being made as a result of monthly meetings with staff to try to improve efficiency and patient care.

• **Hanel** –
  o Still trying to introduce both plasmapheresis and dialysis (now available) to the VTH
  o We have expanded TEG to include different modes of activation for evaluation of hemostasis
  o Development of aggregometry for clinical use – just approved by hospital board
  o Development of Anti-Xa assay in conjunction with clinical pathology service – this was aborted due to cost and time
  o Developing nomogram for use in monitoring heparin – this was completed and is now instituted
  o Introduced usage of TPA for ATE in cats – new protocol through MAF study

• **Hansen** –
  o I continued to work towards upgrading our benchtop chemistry analyzers/blood gas machines (equipment purchase decision for 2015-16 still pending)
  o Researched and facilitated purchase of telemetry-based monitoring system for ICU patients (Installed, May 2015)
  o Assisted in development of heparin nomogram for Hanel’s MAF-funded study

• **Harms** - Working with NC Aquariums to transition to new model of service with full time clinical veterinarian while continuing partnership with NCSU CVM Zoological Medicine residency program and access to aquatic animal medicine specialists and VTH specialty services.

• **Harrell** –
  o Fecal transplantations for difficult GI cases
  o Better use of Pre and Probiotics
  o Work to establish the best treatment protocol for thyroid ACA in cats
  o IMHA grant-use of TEG for monitoring heparin effectiveness

• **Hauck** –
  o Phase III randomized trial of masitinib vs. placebo for high grade, nonpresectable MCT in dogs
  o B-cell mAb therapy for dogs with B-cell LSA (trial discontinued)
  o Pending: phase III randomized paclitaxel trial for MGT

• **Hawkins** –
  o Post-rhinoscopy protocol
  o Continued participation in VetView development
  o Intensive support for enhanced functioning of the Oncology Service
  o Participation in Radiation Oncology organizational meetings

• **Hess** - I constructed an Adverse Events Questionnaire to capture data from our clients on the frequency and nature of side effects of chemotherapy, based on established Veterinary Comparative Oncology Group Adverse Events criteria/reporting. We are using that survey instrument to collect that quantifiable data as a group service project, with the intent to ultimately publish those findings.

• **Jones** - Identified misoprostol as a potential anti-inflammatory agent in horses

• **Keene** –
  o Checklist implementation for interventional procedures.
o Obtained EnSite electrophysiologic imaging and ablation equipment from completed NIH grant w/ NCSU Engineering.

- **Lascelles** – See research publications in bibliography
- **Lewbart** - Collaborated on a cataract removal in a FW sunfish. This first of its kind procedure was published with the EAMS intern as first author.
- **Marcellin-Little**-
  o Prospective clinical trial evaluating silver-coated external fixator pins (PI)
  o Long-term prospective clinical trial evaluating juvenile pubic symphysiodesis (co-I)
  o I introduced the use of 2.0 / 2.4 locking screws (Depuy SynthesVet) in our hospital. The set is a donation in kind from Ms. Sandy Lerner.
  o We obtained the TATE total elbow replacement set. The set is a donation in kind from Ms. Sandy Lerner.
  o We are developing and manufacturing novel orthopedic implants
  o We are developing a new method for the management of limb deformities
  o We are developing a novel total elbow replacement
  o We are developing novel methods to protect joints after total joint replacement
- **Mathews**-
  o Instituted change in hand scrub procedure throughout the small and large animal hospitals and teaching labs: Antiseptic and methicillin resistance in Staphylococcus aureus strains obtained from veterinary surgeons before and after switching from chlorhexidine to alcohol based hand scrub.
  o Instituted muscle-sparing laryngoplasty for dogs with laryngeal paralysis: Evaluation of the influence of muscle transection on swallowing dysfunction and aspiration in dogs following a lateral surgical approach to the larynx.
  o Garnered funds for radiolucent dog stanchions (swallowing boxes) so that high quality swallowing studies can be obtained from patients with dysphagia: Evaluation of the influence of muscle transection on swallowing dysfunction and aspiration in dogs following a lateral surgical approach to the larynx. (swallowing study protocol has been changed for all clinical patients in the teaching hospital)
  o Instituted stem cell therapy for dogs with urethral sphincter mechanism incompetence: Striated muscle progenitor cell urethral injections for the treatment of medically unresponsive canine urethral sphincter mechanism incompetence (responsible for muscle biopsy and stem cell implantation).
  o Instituted change in CT scan methodology for patients with idiopathic pneumothorax to include both dorsal and sternal CT to better highlight pulmonary bullae.
- **Munana** –
  o Clinical trial on use of imepitoin as a treatment for dogs with idiopathic epilepsy
  o Use of accelerometry to detect seizure activity in dogs (pilot study, full proposal pending)
  o Demonstrated that phenobarbital administration alters the pharmacokinetics of levetiracetam in dogs with epilepsy, supporting the use of drug monitoring to optimize dosage.
- **Murphy**- Pilot evaluation of the efficacy of a topical TRPM8 agonist for treatment of atopic pododermatitis in dogs.
- **Musulin** - The Lean Initiative for ER has generated several new ideas to improve efficiency in patient care, client & rDVM communications and student clinical learning. I am eager to explore these ideas and put some into action over the next year.
- **Nolan** - Immunolight therapy
- **Olby** - Reformatted our hearing test clinic to offer more affordable hearing tests. The proceeds are now directed to a fund for resident training.
• Redding –
  o Use of elastography and Doppler to assess tendon/ligament injury.
  o Use of MR fusion to assist the injection of regenerative therapies in musculoskeletal injuries in the horse.
  o Development of bursagraphy/tenoscopy techniques to treat MR confirmed lesions of the distal limb.
• Roe -
  o Continuing prospective evaluation of uncemented total hip replacement cases
  o Micro SK external fixator system purchased
  o Vertical cup impactor – new instrument to improve uncemented cup alignment prior to impaction
• Scharf - Introduction of single-incision laparoscopic procedures via use of the SILS port (awaiting receipt of ordered ports).
• Schnabel –
  o Continue to run and grow the NCSU CVM Equine Mesenchymal Stem Cell (MSC) Culture Service in the Schnabel Laboratory for NCSU patients as well as for referring veterinarians. Have cultured MSCs from 28 cases to date (had 4 at last year’s review) and at least half of these cases have come back for repeat injections and after care.
  o As a team, Dr. Rich Redding, Ms. Catherine McDonald (LVT), and myself have worked to build the Equine Sports Medicine and Rehabilitation Service and NC State. Both Dr. Redding and myself became board certified diplomats of the American College of Veterinary Sports Medicine and Rehabilitation (ACVSMR) this year. Ms. Catherine McDonald also completed her rigorous training this year and is now a Certified Equine Rehabilitation Practitioner (CERP). Together we are working on obtaining more equipment for this purpose and are putting together a business plan for Mr. Jim Brawley. We are incorporating the equipment we currently have into our clinical service and are also educating students on the use of such equipment. Next year, Dr. Meghann Lustgarten will take the ACVSMR board exam as well and after that we hope to discuss starting an Equine Sports Medicine internship and residency here with the hospital administration. As discussed below, I am also representing the interest of this new service on the building committee.
• Sherman –
  o Innovative clinical trial protocol, funded by the Stanton Foundation (in collaboration with Duke researcher Evan MacLean) and using the CSC, to study the roles of oxytocin and vasopressin in dogs with aggression.
  o Application of a novel behavioral drug for veterinary use, escitalopram, that will be the focus of clinical research in 2015-6.
  o Expanded appointments by veterinary behavior technician, Sherrie Yuschak, to support clinician recommendations and better serve patients and clients
  o Expanded educational materials to give to clients
  o Camera system installed in consultation room for remote student observation
• Stevens –
  o Instituted new pain management protocols including using long acting buprenorphine for cats.
  o Developed kits for students containing supplies for their rotation (including otoscopes and ophthalmoscopes) in order to promote student responsibility.
  o Following taking an Ultrasound CE integrated the mobile ultrasound in General Practice
• Stoskopf - Improved method for collecting metabolomic samples from clinical patients
• **Tate** - Currently designed and have applied a new instrument- application of a non-disposable trifunctional instrument (cautery, cutting and cutting and cautery) for equine laparoscopic surgery, currently 9 cases. In addition have worked at creating instruments to preform Laryngoplasty surgery for left laryngeal hemiplegia correction in the standing horse of which one surgery was performed successfully.

• **Taylor** - Initiating joint injections for DJD in canines on the GP service (following wet lab at ACVSMR symposium)

• **Tou** –
  - Delivery and assessment of cardiosphere-derived stem cells in Doberman Pinschers with dilated Cardiomyopathy (in collaboration with Dr. Ke Cheng’s lab).
  - Application of a pre-operative checklist to improve catheter-based surgeries (in collaboration with NCSU Human Factors psychology).
  - Coil embolization of intrahepatic portosystemic shunts in dogs.

• **Vaden** - The biggest innovation that we are working on is the regenerative approach for the treatment of urinary incontinence. I am also continuing to look for ways to prevent UTI. We continue to refine our minimally invasive urinary procedures.

**Managed a clinical practice that provided effective and efficient service (Information provided for April 1, 2014 – March 31, 2015)**

<table>
<thead>
<tr>
<th></th>
<th>Total VPP Revenue Generated by Department</th>
<th>Total Hospital Revenue Generated by Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>$2,299,306.46</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$8,165,061.02</td>
<td></td>
<td></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 Hospital under supervision of DoCS faculty.

**Number of Faculty Lectures:**

- Bailey - 5
- Birkenheuer - 20
- Blikslager - 6
- Bizikova - 2
- Breitschwerdt – 35
- Breuhaus - 2
- Davidson – 2
- Davis - 18
- DeFrancesco – 19
- Degernes – 9
- Early - 8
- Eroshin – 6
- Fogle - 3
- Gieger - 3
- Gilger – 5
- Gookin – 2
- Gonzalez – 1
- Grunkemeyer – 2
- Hanel - 15
• Hansen - 38
• Harms – 2
• Harrell - 6
• Hauck – 6
• Hess – 1
• Jones - 3
• Kedrowicz – 16
• Keene – 6
• Kennedy-Stoskopf – 2
• Lascelles - 20
• Lewbart - 11
• Lunn – 1
• Marcellin-Little – 14
• Mariani - 26
• Mathews – 2
• Murphy - 2
• Nolan – 3
• Olby - 16
• Olivry – 16
• Prange - 2
• Redding – 4
• Roe – 3
• Schnabel – 7
• Sherman - 5
• Stoskopf – 2
• Suter – 4
• Tate – 1
• Vaden - 8

See bibliography for specific presentations
Faculty

Faculty Achievements in Advancing the College Strategic Plan:

• **Birkenheuer** - 1. Enhance the success of our students through educational innovation: Introduced new selective (Virtual Reality Clinic) that utilizes case material from the teaching hospital in real time. 2. Enhance scholarship and research by investing in faculty and infrastructure: Recruited donor to establish the Companion Animal Research Endowment (CARE): Infectious Disease

• **Blikslager** - NCSU-CVM Translational Gastroenterology cluster hire funded for 2 positions in 2015, 1 position in 2016

• **Bizikova** - Despite a busy year full of personal changes, I was able to continue to grow in my professional life. I received very positive evaluations for my lectures from students as well as from veterinarians attending my lectures. I was able to finalize two clinical trials, results of which will be published in the near future. Although I was not able to secure any funding this year, I continue with a research on autoimmunity with two publications submitted and published this year.

• **Breitschwerdt** - Our research group reported blood borne co-infections with three different bacterial genera in a veterinarian, persistent human infections with Anaplasma playts in both cats and humans for the first time, and persistent infection with Ehrlichia chaffeensis in a physician for the first time. Also in collaboration with veterinary colleagues at Oregon State University, we described a new species of Ehrlichia that infects horses in Central America.

• **Breuhaus** –
  o Publication of my study of thyroid function in premature and septic foals in JVIM
  o My USEF grant - Activation of the Renin-Angiotensin-Aldosterone System in Horses with Mitral or Aortic Valve Regurgitation – was funded
  o Submitted 2 abstracts that were accepted and participated in a Dorothy Havemeyer symposium on geriatric horses and endocrine diseases.

• **DeFrancesco** –
  o Successfully recruiting and hiring Dr. Darcy Adin.
  o Published 5 peer reviewed original research manuscripts as co-author.
  o Finished data collection for several clinical trials: CEVA, EPIC, Lung Rocket and BNP studies
  o Starting new feline ATE clinical trial (BLASTT study), pleural effusion BNP SNAP study, multicenter canine HCM with Ohio St, SAME in feline HCM (with UPenn).
  o Matching with #1 rank for next year’s cardiology resident.
  o Successfully recruiting and hiring Dr. Ashley Brandes for a clinical asst professor in oncology
  o Collaborating in stem cell clinical research in Doberman Dilated Cardiomyopathy
  o Invited speaker and lead instructor for IVECCs on various cardiology based topics. Also invited speaker for regional and state conferences.
  o Acceptance of a research abstract for this year’s ACVIM forum (lung rocket study)

• **Degernes** – Several major achievements in the past year include promotion to Professor, and being awarded three university extension and engagement awards – 1) Outstanding Extension Service Award; 2) induction into the Academy of Outstanding Faculty Engaged in Extension; and 3) recipient of the 2014 Alumni Association Outstanding Extension and Outreach Award. The extension awards acknowledge my involvement with state, regional and international companion and wild avian groups and
wildlife organizations, and are consistent with advancement of the college’s strategic plan, #5 - Enhance local and global engagement though focused strategic partnerships.

- **Davis**
  - I have authored or co-authored 5 scientific papers, 2 case reports, with 5 additional papers submitted for publication. Several of these papers involve collaborations with specialists in other Universities.
  - I have authored 2 book chapter and been a section editor for the Large Animal Internal Medicine book.
  - I am a Co-I or Co-PI on grants totaling $471,909.
  - I have been an invited speaker at 5 conferences, giving a total of 18 lectures for continuing education.
  - I currently serve as committee chair or member for 2 residents and 3 interns, as well as 2 graduate students.
  - I was awarded promotion and tenure in 2014.

- **Early** – I was invited to speak at several National and International Conferences on spinal surgery.

- **Elfenbein**
  - In my short time here, I believe I have fulfilled the expectations of my hire in the equine hospital. I believe that I have proved to be a consistent face in the equine medicine service and have developed the trust of the more senior clinicians, the technicians, and the administration in the hospital. I believe that I have contributed to an improved house officer satisfaction with the program.
  - I have developed interdisciplinary collaborations with faculty in the Department of Chemistry and the Department of Food Bioprocessing and Nutritional Science. These collaborations are aligned with the CVM strategic plan to use interdisciplinary scholarship to address the challenges of society and will result in research publications and extramural grants to enhance scholarship.
  - I have completed a few important experiments requested by reviewers of my manuscript that is currently in revision at *PLoS Genetics*
  - My career achievements were recently recognized by the University of Florida Alumni Association through receipt of the UF Young Alumni Award, awarded to a graduate of the University of Florida under the age of 35 for outstanding personal and professional contributions to veterinary science, and outstanding service to mankind and the advancement of animal welfare.

- **Eroshin** – Main achievements in the last year include developing a Dentistry and Oral Surgery part at VMC 961 course, recognition of full time service technician and personal life changes – birth of a child. The challenges continue exist in perioperative patient care logistics, equipment performance and student lab renovation as well as less than satisfying efficiency when attempt collaborating with other services.

- **Ferris**
  - 1. Advance the College Strategic Plan to enhance local and global engagement though focused strategic partnerships to improve the welfare of homeless pets in North Carolina:
    - Moore County, NC. Assisted County Manager, Wayne Vest, in ongoing effort to improve animal sheltering and decrease animal intake numbers in Moore County. I was instrumental in repairing the relationships between the Moore County Animal Center staff, volunteers, animal advocates, local veterinarians, county commissioners, and the local media. Over the last year, the actual standard of care as well as the public perception of the Center have been transformed through consensus building, strategic hiring of a new shelter manager, replacing or retraining specific staff and volunteers, and a focus on improved and
transparent communications and clear standard operating procedural documents.
  o Partnered with the Rowan County Animal Shelter, NCDA&CS Animal Welfare regional inspector, and engaged local veterinarians in developing standard operating procedures to manage and eradicate endemic infectious diseases in the Shelter and meet North Carolina animal sheltering licensure requirements.
  o Paws Place Dog Rescue. Served as design consultant for new state-of-the art shelter facility for an established non-profit animal sheltering, training, and adoption center in Boiling Springs, NC.

2. Advance the College Strategic plan to enhance the success of our students through educational innovation
  o Small animal pre-operative physical examination teaching initiative. Along with General Practice colleagues, we now provide preoperative mentoring and feedback during Fall Semester for VMC 932 Intro to Surgery students and VMC 957 Intro to Clinical Practice feline surgery students. Students receive one-on-one instruction and feedback to help them hone skills, increase accuracy and confidence in their exam findings and diagnostic testing, and enhance preoperative care for our surgery patients. The exams, performed the day prior to the surgery, also help ensure that all students are able to have the opportunity to complete a designated surgical procedure by allowing us more time to find replacement surgery animals for groups with patients that are already altered or have underlying problems that make them unsuitable candidates for surgery.

3. Scholarship and research:
  o Completed a collaborative study and have submitted it for consideration to AJVR and have completed a collaborative seed grant application as described above.
  • Fogle –
    o Publication (first author trainee) won the Equine Veterinary Journal Open Award for Clinical Publication, an international award presented to the best clinical equine publication in 2014, presented at the British Equine Veterinary Association 2014 convention.
    o Developed a course and distributive practice experience to enhance equine primary care education for fourth year students through solicited partnerships with five select equine practices and annual education seminars with topics strategically chosen to enhance the experience for all parties involved. This achievement enhances the success of our equine and mixed animal focus students, and enhances local and statewide engagement through our partnerships with North Carolina equine veterinary practitioners.
    o Participated in FRANK communication course, developed a communication rounds session for equine interns and residents, incorporated communication concepts into the new equine primary care education, and participated in development of an equine communication video to be used during the communication course for veterinary students. This achievement enhances the success of our students through educational innovation.
    o Initiated and organized monthly education articles written by faculty for the Carolina Hoofbeats and Southeastern Equine magazines, participated in development of a video segment for the Carolina Hoofbeats television show. This achievement enhances local and regional engagement through a focused strategic partnership.
    o I was selected to participate in an AAEP-CVM leadership conference held in Lexington, Kentucky. Participants discussed ways to improve engagement of equine faculty within the AAEP organization, and participated in a half-day
leadership exercise. This achievement enhances local and regional engagement through a focused strategic partnership.

- **Gieger** –
  - Initiated a new selective course about Feline Oncology, which is only minimally present in the veterinary curriculum
  - Achieved a very good clinical review from department head and very good peer teaching evaluation, indicating that clients, students and faculty are pleased with the clinical radiation oncology service and clinical teaching
  - Delivered 4 hours’ worth of talks at a national veterinary meeting (AVMA) + 4 hours at the NC State VMA + 4 hours at the MS State VMA (all invited talks)
  - Served as Assistant Chair and Chair of the ACVR, Specialty of Radiation Oncology exam committee

- **Gilger** - I have successfully held the ophthalmology service together with a complete transition of faculty, except for myself, this past year. I have kept the residents productive and maintained their training program. I have taken over all teaching requirements from Drs. Clode and Montgomery (Dr. Davidson has taken some responsibility after August 2014). I have also maintained a research laboratory and kept the clinic going by being on clinical duty approximately 75% of the time. This has been an extremely stressful year with all of the changes in the service, etc.

- **Gonzalez** - Along with the NIH funding that I have obtained and will likely be awarded (Impact score of 24 on K01 application), I traveled to Onderstepoort, Pretoria, South Africa to help establish a collaborative relationship between that veterinary college and our own.

- **Gookin** –
  - **Teaching:** Presented results of a teaching innovation grant – “A model for understanding regulatory control of plasma volume and osmolality” (poster) in the Teaching of Physiology Section at Experimental Biology, San Diego CA 2014 (Strategic Plan: Educational Innovation)
  - Fostered inter-institutional scholarship and research by providing mentored research over the summer as part of our Associate Dean for Research Undergraduate Research Opportunities program (student from Clemson University), our Global Partnership Program (student from Surrey University), and our Veterinary Scholars Program (NCSU student) (Strategic Plan: Enhance Local and Global Engagement)
  - Invited speaker, Class of 2015 Oath and Hooding Ceremony
  - **Research:** Obtained a Research Innovation and Seed Fund grant that brings together faculty in the Department of Microbiology with faculty at the CVM (Strategic Plan: Enhance Interdisciplinary Scholarship)
  - Zoetis Award for Veterinary Research Excellence
  - **Clinics and Extension:** Invited opponent for defense of thesis disputation entitled “In vitro studies of canine giardiasis” By Ph.D. candidate Kristoffer Tysnes. Norwegian University of Life Sciences, School of Veterinary Medicine. Oslo, Norway, Feb 3, 2015 (Strategic Plan: Enhance Global Engagement)

- **Grunkemeyer** –
  - Continued to contribute all aspects of the NCSU VH Exotic Animal Medicine Service (EAMS) and, thus, created new educational opportunities for NCSU CVM students and house officers and a veterinary service for exotic pet owners and referring clinicians
  - Continued to contributed to the educational offerings of the CVM with my experience in the medicine and surgery of exotic pets (particularly my expertise with small mammals) and added new lectures and laboratory offerings to multiple CVM courses
Continued to develop relationships with partner institutions, exotic pet enthusiast groups, and referring veterinarians through management of EAMS cases and outreach engagements

- **Hanel** - Our service continues to grow every year, and our ECC training program is known as one of the top programs in the nation. There is an excellent dynamic between the ECC seniors, and we push each other to succeed. This year, my colleagues supported my effort to create a selective that was well received by 3rd year students and encompassed applied skills and small group problem solving sessions.

- **Hansen** – Our service has re-grown with the addition of Dr. Vigani; this will further enhance our ability to meet the demands of caseload while allowing us to continue to improve the scope and depth of student and house officer teaching.

- **Harms** -
  - Presented results of investigation into clinical pathology effects of crude oil and dispersant exposure to sea turtles, at international meeting in Australia.
  - Program committee and session chair for Regional Aquatics Meeting and for Southeast Regional Sea Turtle Meeting.
  - National Oceanic and Atmospheric Administration, Southeast United States Marine Mammal Stranding Network award in recognition of North Carolina State University, College of Veterinary Medicine, Center for Marine Sciences and Technology, for excellence in responding to stranded marine mammals during the 2013-2014 mid-Atlantic bottlenose dolphin Unusual Mortality Event.

- **Harrell** –
  - **My biggest personal achievement was meeting the publication requirement.** With my heavy clinical, teaching and intern duties, it is extremely difficult to conduct research totally on my own, so I learned to work with other veterinarians to help meet my research goals. This research was done in collaboration with Dr. Takara, a previous resident and now a high ranking officer in the military corps. This research has enhanced global engagement through this partnership.
  - **I am extremely proud of my VTH comprehensive evaluation again this year.** Teaching is exceptionally important to me and although I do not necessarily use many new “educational innovations”, my teaching evaluations continue to be outstanding. I have added in and kept a few new actions for our students. The moodle quizzes seem to be good for the students learning and I worked out some problems with my specific quiz this year. I also have continued to meet with students early in the year before they start their medicine rotation as they tend to be very anxious about the medicine rotation. I have received very positive feedback on these meetings. In order to accommodate the larger student numbers, I have increased the selective number and (along with other medicine faculty) worked to make the selective experience more interactive with the faculty and house officers. I (and other faculty) also worked hard to acquire additional technology (mainly computers and rearranging the set up in the medicine rounds room) to allow for the increase in student and house officer numbers coming through the medicine clinic. This change has been instituted and seems to be successful. I also continue to strive to bring the students into as many case discussions as possible, even when the house officer would rather quickly discuss the case without the student involved. **I believe the far reaching consequences of my teaching efforts is to develop well trained problem solvers who can meet the call to enhance interdisciplinary scholarship and address the challenges of society as a whole.**
The medicine courses continue to be ranked very highly by the students in terms of usefulness for their career. I continue to seriously review the evaluations from students in regard to our medicine courses and institute changes when appropriate based on those evaluations. The medicine courses are a joint effort by all faculty, but I do feel as course coordinator and the faculty member on clinics the most, that I have a big part in the success of our medicine rotations. In addition, the radioactive iodine treatment clinic has treated over 400 cats and has a cure rate of approximately 96%. By involving the students in the hyperthyroid cases, they are exposed to the gold standard of treatment. These efforts enhance the success of our students through education and innovation.

I served on the CVM Diversity strategic planning committee. This committee was appointed by the dean in keeping with the overall goals of the strategic plan. Although this committee entailed a good amount of extra work, it was a committee with an important goal and I am proud to have served on it.

I served on the LEAN anaesthesia processing committee. This committee also took a fair deal of extra time, but was again a committee with clear goals and an excellent outcome.

I continue to have success in directing one of the most successful internship programs in the world. I was able to advocate for and acquire an 11th intern to help meet the demands of an increasing hospital case load. In addition, I gained funding for the next 3 years to support hiring an international intern. I am also working to establish a diversity intern position. I have also worked diligently to improve the mentoring of each of our interns. At this point, after 10 years in the clinics at NCSU and 8 years of directing the intern program, I have aided in the training of nearly 100 interns and 25-30 medicine residents. These veterinarians are now practicing all over the world and I maintain excellent connections with them. This work has enhanced local and global engagement through focused strategic partnerships.

I wrote 24 letter of recommendations for students and interns seeking further training. All of the interns and the majority of the students obtained further training positions. These letters do take a great deal of time to write well, but I am very proud that I can help these young veterinarians reach their ultimate goals. With this additional training, these veterinarians will enhance interdisciplinary scholarship to address the challenges of society.

I have continued to develop and maintain excellent relationships with the referral veterinary community through speaking engagements and frequent phone and email consults. I believe this work to help enhance excellence by creating a culture of constant improvement.

Hauck - I think one of my major achievements is really a group achievement—the successful weaning of the oncology service back to an independently operating clinical service. As a group we are making steady progress on our “to-do” list. We are very supportive of one another; and have managed to hire our 3rd year resident for the next year to help with continuity of clinical coverage. I am chairing the Oncology Pathology Working group on sarcoma grading, along with Don Meuten, and we are making progress towards our paper on the grading of STS in dogs. I have had one multi-institutional collaboration published, another is ready for submission. I have submitted two papers, one as first author and one as corresponding author (post-doc first author). I have received one grant for a clinical trial in MCTs, one clinical trial was stopped by the company due to drug issues. A third clinical trial is currently in negotiation. The fourth has been funded and will start pending IACUC approval. I have a CCMTR grant with my
graduate student, Keara Boss. These trials serve as learning opportunities for the resident, as there is a resident attached to each trial, so they can gain experience in running GCP trials. I think the suggestion box that now sits in the oncology rounds room by my efforts supports the culture of constant improvement.

- **Hawkins** –
  - As Section Leader of Oncology, have led the service on path of enhanced organizational excellence through a culture of improvement.
  - Continue to be one of the faculty leaders of the Electronic Medical Record committee. Major faculty contributor of NCSU’s involvement in the development and customization of VetView. When released and adopted, the electronic medical record will greatly impact education and scholarship.
  - Ongoing collaborative research within the CCMTR to identify genetic mutations in dogs with tracheal collapse.
  - Ongoing collaborative research in collaboration with Texas A&M and University of Florida to measure pulmonary function in dogs to undergo gene therapy trials as a model of Duchenne’s muscular dystrophy. Invited presentation of work at the Veterinary Comparative Respiratory Society meeting.
  - Recognition: ACVIM Distinguished Service Award, invitation to address the 50th intern class of the Animal Medical Center at their White Coat Ceremony, invitation to review an article in a top medical respiratory journal, and a positive Departmental VHC evaluation.

- **Hess** –
  - Teaching/mentoring:
    - I’ve taken 2 CBS PhD students into my lab, and have developed independent, multi-year research projects that should generate 1-2 publishable papers for each student.
    - I coordinated the development/implementation of the next generation of our Service’s Cancer Class for Oncology House Officers.
    - I coordinated the Spring 2015 semester of Advanced Topics in Immunology (816).
  - Service:
    - I helped plan and implement the re-organization of the Medical Oncology Service.
  - Research:
    - Our lab has discovered new tumor-associated antigens in canine histiocytic sarcoma by a means not previously reported in veterinary oncology.

- **Jones** –
  - NIH T35 training grant renewed for the veterinary student summer research program
  - CBS PhD enrollment increased
  - Immunology integration into CBS completed
  - Morris Animal Foundation grant funded
  - 2 graduate students successfully defended their thesis

- **Kedrowicz**-
  - I enhanced student success through educational innovation via the development and teaching of two new courses: Group Communication and Marketing Communication and Information Management. Additionally, infrastructure enhancements were completed this year in the communication training rooms of the Health and Wellness Center to allow for sophisticated video recording, annotation, feedback, and review of students practicing client communication.
I completed 4 research projects for which I am first author and also engaged with external constituencies by facilitating 16 seminars and workshops.

- **Keene**
  - 2014-15 has been a good year professionally, with highlights including ongoing, productive collaborations with Greg Buckner’s lab (NCSU mechanical engineering), Anne McLaughlin’s lab (NCSU Human Factors Psychology), and Duke Peds Cardiology (Piers Barker, Joe Kisslo, Jay Campbell, Kevin Hill, and Andrew Lodge).
  - Bernie Hansen and I completed and Elsevier published a book (including on-line heart and lung sounds) and narrated guide to cardiac and pulmonary auscultation for students and practitioners.
  - Jessica Ward published the results of a joint human factors initiative in the cath lab that provides baseline complication data on pacemaker implantation both during and after regular business hours, and we now have complication data for our other 2 most common cath lab procedures (I presented a specialist forum at ACVIM on cath lab safety) that we will use to evaluate the effects of the check list we implemented for these procedures.
  - Designed by Dr. McLaughlin’s lab and based on an ACVIM funded, completed human factors task analysis of our cath lab procedures.
  - We (NCSU engineering, NCSU human factors group, Duke peds cardiology and NCSU vet school) are currently developing 3-D printed models of the most common heart defects that require catheter-based intervention, and we will apply for further ACVIM funding to construct simulators based on these models.
  - On a light note, I was delighted to be invited to give the keynote address for the 100th anniversary of the Japanese Society of Veterinary Cardiology.
  - Named the Jane Lewis Seaks Distinguished Professor of Companion Animal Medicine

- **Lewbart**
  - Two productive trips to the Galápagos.
  - Continued growth and success of EAMS
  - Successful trip to Australia in May
  - Good progress on many previously completed projects/papers.
  - Increased involvement with SCAVMA and other student mentoring activities.

- **Lunn, K.** – Achievements related to the strategic plan are aligned with #1 in the plan. I became involved in several more courses and was able to integrate my teaching of endocrinology across all years in the curriculum. I have been significantly involved in the new curriculum, particularly in areas of clinical reasoning/problem-based learning, and communication skills. For #4 in the plan I have integrated my roles as residency program director and acting assistant department head to provide leadership in my section.

- **Marcellin-Little**
  - Having the residents I am mentoring or have mentored succeed in passing ACVS boards (Joanne Tuohy) and have first author articles accepted (Joanne Tuohy, Mischa MacDonald Lynch)
  - Have two PhD students I mentored (Ron Aman, Tim Horn) complete their PhD programs at ISE, NCSU
  - Securing more than $2 million (~$1.6M in gift, ~$500K in endowment) to support my research efforts
  - Developing stronger ties with engineering research, including becoming adjunct in the Fitts Department of Industrial and Systems Engineering
  - Obtaining a CALS/CVM 2-year research grant valued at ~$140K
  - Developing a collaborative research program with DePuy SynthesVet
  - Publishing ~10 research papers
• Mariani - I obtained a teaching innovation grant in order to redesign the neurology section of VMC 961 (advances the CVM Strategic Plan #1). This grant funded some equipment as well as services from the Media & Design group within Educational Support Services. The new course module is to be implemented next spring.


• Munana –
  o ACVIM Consensus Panel Member, Seizure Management
  o Invited member, International Veterinary Epilepsy Taskforce
  o Positive results from pilot study evaluating use of accelerometry to detect seizure activity in dogs
  o Implementation of online assessment in VMC 984

• Murphy –
  o Enhance the success of our students through educational innovation-made more changes to the dermatology laboratory portion of didactic teaching by giving the case-based presentations to the students before the lectures and labs to gain more student discussion/involvement.
  o Enhance interdisciplinary scholarship to address the challenges of society-continued to implement major changes to the board certification examination for veterinary dermatology candidates in the area of application of knowledge (AOK) questions on the histopathology portion of the certification examination.

• Musulin –
  o Teaching – I have expanded my teaching involvement beyond that listed on my original SME. I became a block leader this April for VMC 976 (Small Animal Emergency & Critical Care). I really enjoyed the challenge of organizing the entire block. This included daily ICU patient rounds, several lectures and leading four cadaver laboratories. The course went very well, the students were engaged and I found the teaching very rewarding personally. Concerning HO teaching, the ECC faculty began our faculty led board review course this past August 2014. For my lectures, I instituted a format that was so positively received by the HOs and my colleagues that the other faculty have emulated my format for their lectures.
  o Scholarship/Research – I completed a review paper with one of my residents that was just published this month. I also completed a research project with an ambitious 4th year student, a neurology faculty and ECC faculty. The paper has been accepted for publication. I was corresponding author on both of these papers. I am also working on a co-authored book chapter on transfusion medicine.
  o Enhance Organizational Excellence – The ER service has recently completed a Lean Workshop that I envision will lead to positive change for the hospital and the community we serve.

• Nolan –
  o Engaged in productive interdisciplinary research, on several projects which address cancer-related challenges in society with a wide array of collaborators from industry and academia (NC State, Duke University and UNC Chapel Hill); these relationships have resulted in significant extramural funding, and peer-reviewed publications. This interdisciplinary work, which enhances the college’s engagement with other NC State colleges, and regional academic & business partners directly enhances the CVM’s Strategic Plan.
o Revamped the oncology portion of VMC 951 (with feedback, input and extensive discussion from the other 4 oncologists on faculty) to be sure the 6 hours of lecture cover the essentials of what we expect every graduating veterinarian to know about clinical oncology; an innovative virtual clinic was also introduced (after development in collaboration with educational specialists from the Veterinary Information Network), which replaced a hands-on clinical skills lab, to better align with the learning outcomes outlined for that course. This educational innovation advances the CVM strategic plan. Helped Dr. Gieger organize and implement a new selective in Feline Oncology.

o Oversaw significant growth of the Radiation Oncology section in the Veterinary Hospital, including addition of a second resident, and expansion of staff to include 2 therapists, 1 anesthetist and 2 clinical technicians; implemented and run monthly service meetings, with the goal of constantly improving the service we provide to patients and clients, the environment in which we work (including improving efficiencies in workflow and care patterns), and effectiveness of our cancer management strategies; introduced an annual newsletter and updated website to interface better with clientele, and serve as a development tool. Have also hosted and trained a number of visitors (technicians, resident veterinarians and veterinary radiation oncologists) from several institutions (namely, Univ of Georgia, and the University of Copenhagen), which advances the College’s Strategic Plan by enhancing engagement through strategic partnerships.

• **Olby**
  o Publication of an important clinical trial in PLoS One, with subsequent local and national media coverage.
  o Obtained funding from AKC CHF to work on the genetics of Chiari Like Malformations
  o Two new PhD students joined my laboratory
  o Reorganized lectures and labs for VMC961

• **Olivry** - The highlight of this year was my sabbatical at Harvard’s Mass General Hospital, where I participated in the activities of a research group, saw human patients in an itch clinic and self-studied to become an expert in the field of itch. I have developed connections that will remain for years to come. This year, I also secured two years of funding + a post-doc from LEO Pharma, one of the largest human dermatology pharma company in the world (it is based in Denmark). Nearly all of my research funding now comes human Pharma companies, and most of it from international companies. This reflects the global and translational impact of our work.

• **Prange**
  o **CVM Strategic Plan: Enhance the success of our students through educational innovation**
    The new CVM Grand Rounds took place twice this year, presented by different clinicians every time. This rounds format is for students, staff and faculty and I have been able to recruit cases from equine surgery, small animal internal medicine and exotic animal medicine so far. A variety of clinicians, house officers and staff members have contributed to the presentations that are attended by over 100 students, staff members, house officers and faculty members. A challenging case is presented by all the specialists, that were involved in the treatment of the patient. So far, people from equine internal medicine, equine surgery, radiology, anesthesia, anatomy, small animal internal medicine, small animal soft tissue surgery, poultry health, exotic animal medicine, hospital management, pathology, clinical pathology have participated.
    To accomplish this, I first have to identify an interesting case and then contact various clinicians, etc. to see if they are able to participate. At the same time I identify
and contact a suitable student organization (e.g. the Student Chapter of the American Association of Equine Practitioners for an equine case) that will provide lunch and promote the event. After a suitable date and time has been found, I meet with the speakers to discuss the outline for the rounds. I eventually put the presentation together; using individual slides from every speaker.

- **CVM Strategic Plan: Enhance scholarship and research by investing in faculty and infrastructure**
  
  Dr. Shrauner submitted an abstract outlining the results of the research project “Feasibility and Safety of Standing Lumbosacral Epiduroscopy in Horses”, that was funded by the New Investigator or Feasibility Fund, to the 2015 ACVS Surgery Summit. The abstract has been accepted into the Large Animal Residents’ Forum, where Dr. Shrauner will be able to compete for the Outstanding Surgical Residents’ Award.

- Co-author on two peer-reviewed publications

- Submitted a peer-reviewed scientific publication as a first author (including a house officer as a co-author)

- Submitted a case report to a peer-reviewed journal as a first author (with a referring veterinarian and a house officer as co-authors)

- Successful and uncomplicated transition from an internship program with originally 2 to 3 rotating interns. During this process, I updated and re-wrote the Manual for the LA House Officers with the input from various clinicians. It is now a more comprehensive and user-friendly document that is available for online access. With the growing number of house officers, an updated manual is essential to maintain high quality internship and residency programs.

- **Redding** - Achieved diplomate status in the American College of Veterinary Sports Medicine and Rehabilitation (ACVSMR)

- **Risselada** – Obtained an intramural grant, completed the study within 10 months and submitted it as an abstract to ACVS for this years surgical summit.

- **Roe** - Published case reports, one of which lead to design improvements in the canine uncemented THR system

- **Royal** - With regard to the strategic plan: #1: I helped enhance the success of our students by developing a “house system” model to ensure comprehensive wellness and the attainment of intellectual, social, emotional/mental, cultural and physical health outcomes. #2: I helped enhance scholarship and research by publishing (or having accepted) 17 articles. #3 I helped enhance interdisciplinary scholarship by collaborating with faculty at students at numerous universities throughout the United States and Canada. #4 I helped enhance organizational excellence by creating a culture of constant improvement by way of outcomes assessment activities.

- **Scharf** - My major achievement this year was to achieve Diplomate status in the American College of Veterinary Surgeons, which reflects the investment in faculty at NCSU and enhances organizational excellence. In addition to passing boards, I was able to assimilate into clinical service at NCSU, contributing to the teaching of students and house officers.

- **Schnabel** -
  
  o Achieved diplomate status in the American College of Veterinary Sports Medicine and Rehabilitation (ACVSMR) and created Equine Sports Medicine and Rehabilitation team in order to ultimately create a new service for the hospital. In doing so we as a team are striving to offer the best service to our clients and referring veterinarians and to make NC State Equine Hospital the best that it can be!
o Established productive collaborations with colleagues from my department (Dr. Gilger) as well as other departments (Dr. Lustgarten from MBS and Dr. Matthew Fisher from BME/COE). These collaborations have resulted in two funded grants with projects underway as well as one submitted grant with project also underway. In addition, Dr. Fisher and I are currently working on an R21 to be submitted to NIH later this year.

- Sherman –
  o Enhance the success of our students through educational innovation,
    ▪ Goal 1: In order to advance training of veterinary students in clinical animal behavior, I implemented 5 educational innovations in the core course, VMC 927, Introduction to Companion Animal Behavior. These were Moodle low-stakes quizzes, Moodle exams, small group case discussions, a grading rubric for projects, and a grading rubric for case discussions.
  o Enhance scholarship and research by investing in faculty and infrastructure,
    ▪ Goal 2. In the past year, I have proposed research projects that involved a veterinary student, who was awarded a Morris Animal Foundation Veterinary Student Scholar Award, and a behavior resident, who was awarded the Resident Research Award by the American College of Veterinary Behaviorists in 2014. I wrote a proposal for a faculty position in Animal Behavior and Welfare that I presented to the DOCS department.
  o Enhance interdisciplinary scholarship to address the challenges of society,
    ▪ Goal 3. I have helped develop collaborative, NIH- and NSF-funded interdisciplinary research projects with colleagues in DOCS and MBS, in NCSU Computer Engineering, Duke Canine Cognition, and the UNC Department of Neurology.
  o Enhance organizational excellence by creating a culture of constant improvement,
    ▪ Goal 4. I presented a low-stress animal handling initiative to the DOCS department, and integrated it into laboratory courses (VMC 937), and Health and Wellness Center practices. An ongoing program extends these practices throughout the VH. Working with the VM Foundation and the CVM Library, I have obtained extramural private funding for teaching enhancements in the Behavioral Medicine Service, such as an on-site reference library and web-cam video equipment, creating a culture of constant improvement in clinical behavior.
  o Enhance local and global engagement though focused strategic partnerships
    ▪ Goal 5. I have conducted working canine research sponsored by the U.S. Office of Naval Research, published I 2014 and 2015, and represented NCSU-CVM internationally in these projects. Another project, with collaborators in NC State Computer Science and Engineering and funded by NSF, will use computers and robotics to harness the physical and cognitive capacities of dogs for search and rescue in disasters, and other applications.

- Snyder –
  o Leading initiative to change the business training our students receive – Advances the College’s Strategic Plan to enhance the success of our students.
  o Part of team to recruit a Director of Career Services - Advances the College’s Strategic Plan to enhance the success of our students.

- Stevens - We have added a 4th veterinarian to the general practice that will allow us to continue to effectively teach the 4th year rotation in light of the increased student numbers. We also have embraced the addition of business acumen into our program.
We will also be hiring a 4th technician to continue to grow our service. I have also begun the lunch and learn events for the HWC to provide continuing education for our faculty and staff as well as to increase visibility of faculty to increase collaborative efforts.

- **Stoskopf**
  1. Enhance the success of our students through educational innovation
     - Successful competition to host the CoD Design Build project in the summer of 2015 as part of the ZTAU development.
     - Beta tested a new online course targeted to Zoological Medicine post DVM students.
  2. Enhance interdisciplinary scholarship to address the challenges of society
     - Supported and participated in first American College of Animal Welfare Short Course
     - Improved methods of clinically sampling for metabolomic analysis of animals in the field.
  3. Enhance organizational excellence by creating a culture of constant improvement
     - Facilitated the successful relocation, refurbishment and replacement of the lobby coral reef.
     - Hosted Dean’s seminar speaker, Renate Reimscheusssel
  4. Enhance local and global engagement though focused strategic partnerships
     - Successfully facilitated hiring the replacement for the NC Zoo Senior Veterinarian position
     - Successful facilitated hiring of temporary veterinarian for the NC Aquariums and projection for hiring the permanent position in 2015.

- **Suter**
  - Overhaul of the clinical oncology service to the benefit of 4th year students and house officers as described above. Our aim was to create a culture of inclusiveness and constant improvement.
  - Initiated talks with Dr. Marks and ICU faculty re: opening an extracorporeal treatment unit to include dialysis and apheresis.
  - Began collaborative relationship with Cornell University Veterinary School.

- **Tate** - The equine Health Center continues to be in the black as to activity which includes reproduction, lab services and CEM services. The center is an interest to the community which has responded as expected in a very negative fashion to the Deans choice to not use the funding raised for the center at the center. I would suspect over %50 has been requested to be returned by donors. In a positive aspect I am working with two house officers in planning a project to assist in completion of board requirements. I have also been asked to speak at nation/international meeting in 2015. Internally I continue to coordinate 3 courses and various selective as well as sit on two CVM committee (curriculum and course coordinators).

- **Taylor**
  1. Enhance the success of our students through educational innovation
     - NCSU Sim Lab (psychomotor skills):
       - Led team for development of plans for lab renovations
       - Developed a model for OVH surgery procedure adapted from a model currently in use in Denmark (including a suspensory ligament rupture model). Piloted model in two psychomotor skills selectives.
       - Continued to build a portfolio of clinical skills resources for use in designing teaching models for the Sim Lab
     - Instigated inversion of OVH teaching video for students to ease spatial learning
     - Participated in script writing and performed in a communications and problem solving video prepared for teaching in VMB 912
     - Production of a video demonstrating testicular local anesthetic block for VMC 932
o Assisted editing process of script writing and video production of four feline and canine venipuncture videos for use in DVM teaching

2. Enhance organizational excellence by creating a culture of constant improvement
o Production of a poster demonstrating new surgical hand rub technique to aid training of second and third year DVM students and CVM personnel as part of the hospital surgical hand technique advancement
o Designed and circulated VMC 932 surgical teaching survey to assess how we can future assist the students with surgical teaching
o Designed a research project to be implemented this fall evaluating the efficacy of the new OVH surgical simulation model in clinical skills training
o Improved my veterinary educational skills via:
  ▪ NCSU Office of Faculty Development Fall 2014 term book club participation: ‘Teaching Unprepared Students’
  ▪ Attended Primary Care Veterinary Educators Symposium 2014
  ▪ Attended BAYER Communications project course resulting in becoming an affiliated faculty member of the IHC (Institute for Healthcare Communications)

o Furthered my education in general practice topics and towards ABVP certification:
  ▪ ACVSMR Symposium 2014
  ▪ NCVC 2014
  ▪ NCSU Ultrasound course summer 2014

3. Other Achievements:
  o Production of a leaflet distributed to competitors at the CVM annual Dog Olympics teaching sports injury prevention
  o Initiated implementation of a rehabilitation and sports medicine clinical journal club for home and international members of BVRSMA

• Tou –
  o Adding a 4th cardiologist (Dr. Darcy Adin)
  o Recruiting our top choice of incoming resident
  o Finished data collection for multiple clinical trials
  o Several successful ongoing collaborations: stem cell therapy for Doberman Pinscher DCM (CCMTR), interventional coil occlusion of canine IHPSS (ST surgery), improving safety in the catheterization lab (NCSU Human Factors Psychology).
  o Obtaining a MAF grant for studying transdermal pimobendan in cats
  o Completing and evaluating the clinical cardiology portion of VMC 951; determining ways to improve for next year.

Faculty Honors, Awards and Recognitions

• See bibliography

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>Refereed Articles – pedagogy or extension-related</th>
<th>Abstracts from scientific &amp; professional veterinary conferences</th>
<th>Books &amp; Book Chapters</th>
<th>Invited Research Presentations</th>
<th>Professional Audience</th>
<th>Non-Peer Reviewed Continuing Education Review Papers/Articles</th>
<th>Continuing Education Presentations</th>
<th>Bulletins, Booklets, etc.</th>
<th>Electronic Media</th>
<th>Copyrighted software or educational material</th>
<th>Copyrights awarded, invention disclosures, patents awarded</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOCS</td>
<td>122</td>
<td>13</td>
<td>19</td>
<td>2</td>
<td>107</td>
<td>43</td>
<td>23</td>
<td>4</td>
<td>421</td>
<td>6</td>
<td>11</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
</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, 2014:
- Dr. Jennifer Davis – promotion to Associate Professor with Tenure
- Dr. Laurel Degernes – promotion to Professor
- Dr. Peter Early – promotion to Clinical Associate Professor
- Dr. Callie Fogle – promotion to Clinical Associate Professor
- Dr. Paul Hess – promotion to Associate Professor with Tenure
- Dr. Chris Mariani – promotion to Associate Professor with Tenure
- Dr. Rich Redding – promotion to Clinical Professor

Reappointments to be effective July 1, 2014:
- None

New Faculty Appointments (since January 1, 2014):
- Dr. Betsy Coffman, Clinical Assistant Professor in Theriogenology
- Dr. Katie Sheats, Research Assistant Professor
- Dr. Liara Gonzalez, Research Assistant Professor
- Dr. Valery Scharf, Clinical Assistant Professor of Small Animal Surgery
- Dr. Kenneth Royal, Assistant Professor of Educational Assessment and Outcomes
- Dr. Amy Snyder, Clinical Assistant Professor of General Practice
- Dr. Johanna Elfenbein, Assistant Professor of Equine Internal Medicine
- Dr. Hans Westermeyer, Assistant Professor of Ophthalmology
- Dr. Christopher Adin, Associate Professor of Small Animal Soft Tissue and Oncologic Surgery
- Dr. Darcy Adin, Clinical Assistant Professor of Cardiology
- Dr. Freya Mowat, Assistant Professor of Ophthalmology

Faculty Departures (since January 1, 2014):
- Dr. Keith Montgomery
- Dr. Barbara Jones
- Dr. Alison Clode

Students

Student Activities

Graduate Students:
- \(27\) # Graduate students receiving CVM graduate student stipends (based on all CVM graduate students)
- \(8\) # Graduate students supported from extramural funds
- \(30\) # Graduate students in progress
- \(6\) # Graduate students completing degrees
# graduate students discontinuing their programs (on leave of absence)

**House Officers**

Faculty supervised the training of 42 residents and 17 interns in 17 specialty areas.

- **457** # of applications for DoCS residency programs
- **365** # of applications for DoCS Small Animal internship program
- **90%** residents finishing w/in the last 5 years passed certification exams w/in 4 years of finishing residency
- **9%** previous residents employed in specialty area or graduate program
- **57** # 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)

**Birkenheuer:**
- Megan Schreeg:
  - Kappa Alpha Theta Foundation Scholarship
  - NCSU Outstanding Teaching Assistant

**Blikslager:**
- Liara Gonzalez, AAEP Equine Foundation Research Fellow Scholarship, American Association of Equine Practitioners, December 2014
- Lauren Stranahan, Summer Scholar, First Place CVM Research Forum, May 2014
- Mary Brown. AGA Student Research Fellowship Awards/AGA-Eli and Edythe Broad Student Research Fellowship, May 2014.
- Liara Gonzalez. Awarded the University Graduate Student Association Award for Conferences, North Carolina State University, April 2014
- Jenna Scott, Outstanding Undergraduate Poster Award at the NC State Spring 2015 Undergraduate Research Symposium, April 2015

**Breitschwerdt:**
- Dr. Pultorak completed and successfully defended her thesis research. Graduated in 2014
- Dr. Nandu Balakrishnan- see publications in bibliography
- Dr. Barbara Qurollo- received the 2014 DOCS postdoctoral scientist award. See publications in bibliography

**Breuhaus:**
- Blaire Holland Krazeski passed her Internal Medicine boards

**Davis:**
- Blaire Holland achieved Diplomate status in ACVIM
- Danielle Lindquist received the Deborah S, Moore Memorial Service Award for Outstanding Student in Public Service and was an invited participant to the Holstein Foundation Young Dairy Leaders Institute
- Jennifer Halleran received the Large Animal Intern of the Year

**DeFrancesco:**
- Mandy Burke – one of my former research/work study undergraduate students recently got accepted into Veterinary School at Auburn Univ.
- Dr. Kate Woodruff received a White Coat of Excellence
- Both of my Class of 2015 mentees, successfully attained small animal rotating internships (Ohio St. and Purdue) and both are motivated to do cardiology residencies.
- Drs. Stephanie Istvan and Tim Hodge, both former residents trainees, joined faculty at University of California Veterinary Medical Center in San Diego, UC Davis Veterinary Medicine.

Degenres:
- Dr. Samantha Swisher matched for a residency program in Exotic Animal Medicine (ABVP approved residency in Exotic Companion Mammals)

Fish:
- Morika Williams (c/o 2014) received 2014 ASLAP Veterinary Student Award
- Entered LAM residencies in 2014:
  - Angela Garner (c/o 2013)
  - Jareca Giles (c/o 2014)
  - Morika Williams (c/o 2014)
  - Lauren Wimsey (c/o 2009)
- ACLAM Certification 2014:
  - Allison R. Rogala (c/o 2007)

Fogle:
- Publication (first author trainee) won the Equine Veterinary Journal Open Award for Clinical Publication, an international award presented to the best clinical equine publication in 2014, presented at the British Equine Veterinary Association 2014 convention.

Gieger:
- Dr. Arkans was awarded “House Officer of the Month” in DOCS.
- Dr. Arkans completed a combined case report/review article, which was submitted for publication
- Dr. Kelsey was awarded the DOCS Veterinary Practice Plan Grant

Gilger:
- Amanda Sherman was awarded an ACVO resident research grant 2015

Gookin:
- Dr. Mike Wood; Tenure Track Assistant Professor of Small Animal Internal Medicine, University of Wisconsin
- Dr. Elizabeth Lennon; NIH K01, NIH CGIBD P30, NIH-Merial Young Investigator Award 1st place
- Dr. Katie Tolbert; NIH-Merial Young Investigator Award 3rd place

Gonzalez:
- Lauren Stranahan won the 2014 Annual CVM Research Forum and Litwack Lecture presentation. She was my Merial Veterinary Summer Scholar in 2013.

Grunkemeyer:
- Laura Adamovicz, DVM, July 2014 – present, accepted into University of Illinois Wildlife Epidemiology PhD program
- Samantha Swisher, DVM, July 2013 – July 2014, ABVP – Exotic Companion Mammal private practice residency Indianapolis, IN

Hanel:
- Lindsey McGuire accepted an emergency clinician position in private practice
- Erin Long secured a position as our 1st year ECC resident at NCSU
- Lauren Adelman accepted a position as a 1st year medicine resident at the University of Tennessee
- Lisa Bazzle accepted a clinical instructor position at the University of Georgia
- Yu Xie completed her Masters, and her defense was successful (August 2014).

Hansen:
- Lisa Bazzle accepted a clinical faculty position at the University of Georgia
• Rebecca Walton completed data collection on a clinical study of central venous oxygenation in critically ill dogs

Harms:
• Emily Christiansen (Resident, 2014) – credentialed for ACZM examination, and Veterinarian, NC Aquariums
• Jb Minter (resident, 2013) – Veterinarian, NC Zoo

Harrell:
• Carly Dohse: Winner of NCSU CVM Spirit essay contest
• Kimberly Alexander-Internal Medicine Internship
• Alyssa Chandler-Internal Medicine Residency
• Brittany Enders-ER/CC specialty Internship
• Jenica Haraschak-ER/CC residency
• Arturo Otamendi-Neurology Residency
• Lydia Pan- Internal Medicine Residency
• Lily Parkinson-Zoo and Wildlife Residency
• Courtney Sampson-Neurology Internship
• Leslie Shelnutt-ER specialty internshhip
• Amber Wof-Ringwall-Oncology Residency
• Ji-Hey Lim- Neurology Residency

Hauck:
• Nicole Varallo won first place in the veterinary student poster session at the CVM Annual Research Forum
• Kelsey Poorman successfully defended her thesis and is currently a post-doctoral scholar at the Mayo in Arizona
• Ashley Brandes has accepted a faculty position at NCSU and past her qualifying exam
• Jenn Willcox passed her certifying exam, presented an abstract at the VCS meeting and achieved diplomate status, and is currently in an instructor position at the University of Missouri
• Meg Musser accepted a position as an oncologist at a specialty practice in Connecticut
• Keara Boss was awarded a translational comparative research grant from the CCMTR
• Emilea Burton will be doing a rotating internship at a large specialty practice in Colorado
• Leanne Magestro will be starting her Radiation Oncology residency at NCSU in July, 2015

Hawkins:
• Jenessa Winston passed the general examination toward ACVIM Board Certification

Hess:
• Graduate students: Odessa Marks & Sylvia Hood successfully defended their PhD and MS degrees, respectively. Sylvia accepted a technical position at the Duke Human Vaccine Institute; Odessa accepted a research position in Seattle, WA.
• Finishing House Officers: Brian Hallman completed her rotating internship and became a medical oncology intern with the NCSU Oncology Service. Jenn Willcox passed her Certifying Exam and took an Oncology instructor position at the University of Missouri-Columbia CVM. Meg Musser accepted a private practice position in Connecticut. Ashley Brandes applied for and accepted an appointment as a Clinical Associate Professor at NCSU.
• Former PhD student Greg Gojanovich accepted the 2nd year of a post-doctoral position in the lab of Roland Tisch at UNC-CH.
• Off-shore students Chad Joplin and Una Stone graduated from their DVM programs.

Jones:
• Emily Medlin awarded American Heart Association predoctoral fellowship
• Emily Medlin awarded Leroy Coggins Graduate Student Fellowship Award
Emily Medlin awarded 3rd place at University Graduate Student Symposium
Teresa Buchheit appointed to faculty position at Purdue
Katie Sheats leading primary care education block

Keene:
- Tim Hodge passed cardio certifying exam.
- Jess Ward passed the general medicine exam.

Kennedy-Stoskopf:
- Dr. Christiansen is the veterinarian for the 3 NC Aquariums; she maintains an office at CMAST and interacts routinely with the Zoological Medicine Faculty.
- Dr. Gjeltema credentialed and will be sitting the ACZM boards in October. She is currently interviewing for several positions at zoos and universities.
- Dr. Cannizzo won the award for best resident presentation at the 2014 AAZV meeting; although she did the work at another institution, I worked with her to re-organize the presentation and held several practice sessions before she went to the meeting.

Lascelles:
- Margaret Gruen - DoCS Graduate Student of the Year 2014 and Leroy Coggins Graduate Fellowship Award 2015
- Tim Horn, Unconditional Pass, PhD, 2014
- D. Knazovicky, M Freire, B Case, K Jiamachello, B.D.X. Lascelles. Efficacy of canine anti-nerve growth factor antibody for the alleviation of degenerative joint disease-associated pain in dogs. NC State College of Veterinary Medicine Annual Research Forum, 4th April 2014 (Won Certificate of Achievement)

Lunn:
- Dr. Winston recognized as House Officer of the month by DOCs in 12/2014.
- Dr. Winston successfully competed for T32 funding for her PhD studies.
- Dr. Winston successfully passed the ACVIM General Examination in 2014
- Dr. Pan matched for a residency in Small Animal Internal Medicine in 2014.

Marcellin:
- Dr. Joanne Tuohy, whose program ended on July 1, 2014 passed ACVS Boards. I was Dr. Tuohy’s advisor and research mentor. We published a research article in Veterinary Surgery. Tuohy is first author as my mentee. I funded the study and was corresponding author.
- Dr. Toni Kwan (former NCSU surgery resident). We published a research article in Veterinary Surgery. Kwan is first author as my mentee. I funded the study and was corresponding author.
- Dr. Mischa MacDonald Lynch Kwan (current NCSU surgery resident). We wrote a research article that has been accepted at the Am J Vet Res. MacDonald Lynch is first author as my mentee. I funded the study and was corresponding author.
- Katherine Martucci / DVM student at Washington State University. First place, poster presentation, Medical and Life sciences, “Digit injuries and amputations in agility dogs”, Wiley Research Exposition, 20 Feb 2015, Graduate and Professional Student Association, Washington State University, Pullman, WA.

Mariani:
- Dr. Katherine Crook achieved ACVIM Diplomate status and accepted a position in private specialty practice.
• Dr. Melissa Lewis achieved ACVIM Diplomate status and accepted a position in the NCSU PhD program.
• Carolyn Nye was selected as one of the students presenting research for the ACVM COE group during their site visit to NCSU.
• Carolyn Nye was awarded an ACVIM Forum Scholarship to attend the annual ACVIM meeting.

Mathews:
• Dr. Joanne Tuohy passed board exam.

Munana:
• Dr. Melissa Lewis (Neurology Resident 2011-2014) achieved ACVIM Neurology board certification and was accepted into a PhD program through NIH/NCSU Comparative Medicine and Translational Research Training Program.
• Dr. Arturo Otamendi was accepted into Neurology residency training program at Texas A&M.

Murphy:
• Dr. Frane Banovic has been hired as tenure track dermatology faculty, Assistant Professor, at University of Georgia veterinary college.

Musulin:
• Dr. Lisa Bazzle is ECC faculty at University of Georgia. She will be sitting for her boards this September 2015.
• All four of our current ECC residents have completed prospective research projects.
• Dr. Amanda Cavanagh research project manuscript has been accepted for publication in JVECC and she has completed her ACVECC credentials packet to sit for her boards this September 2015.
• Drs. Walton and Long were both selected to attend the 2015 AAVC Resident’s Leadership Conference.

Nolan:
• Dr. Arkans recently submitted a manuscript for publication in the journal Veterinary Comparative Oncology, which is entitled “Misadministration of Radiation Therapy and Chemotherapy in Veterinary Medicine: A Case Report and Literature Review”; the manuscript received positive reviews and is currently undergoing revision.
• Dr. Kelsey was awarded $3000 through a DOCS Veterinary Practice Plan Grant (2015) for a project entitled: “A placebo controlled pilot study of NSAID use in dogs with acute radiation induced dermatitis”.

Olby:
• Dr. Lewis became ACVIM board certified and was awarded a T32 scholarship to complete a PhD.
• Dr. Katherine Crook became ACVIM Neurology board certified.
• Dr. Correia was awarded her clinical doctorate in Portugal with the highest honors based on the project she performed in my lab.
• Dr Ji-Hey Lim: Dr. Lim has been a post doc in my lab for 6 years. She finally completed her position in September 2014 and moved on to fill an internship position at the VHC. She has been accepted for a neurology residency position at Florida.

Prange:
• Dr. Shrauner - House officer of the month (1/2015) and abstract accepted for Residents’ Forum at the 2015 ACVS Surgery Summit

Redding:
• Dr. Claudia Reyner will be submitting an abstract of the Effects of LASER & PRP on SDF tendon injury
• Dr. Jessica Partlow has submitted and abstract on the use of US to evaluate hair contamination of wounds to synovial structures both to ACVS for the 2016 meeting.
• Both are writing/preparing their first manuscript to be submitted to EVJ/EVE or ACVS.

Risselada:
• Meredith Kapler and Mischa McDonald-Lynch are both expected to finish the SA Surgery residency and have their credentials accepted.

Roe:
• Dr. Joanne Tuohy pass ACVS Boards

Schnabel:
• Dr. Reyner has done an exceptional job on her research project with Dr. Lustrtgarten and myself on evaluating the effect of laser therapy on the healing of tendon lesions in the horse. Claudia will be submitting an abstract of this work to ACVS for the 2016 meeting as well as a first manuscript to the journal of our choice describing the surgical technique used to make the tendon lesions in addition to a second manuscript describing the results to a journal to be decided.

Sherman:
• Jillian Orlando - ACVB Resident Research Award (2014)
• Margaret Gruen - Preliminary Doctoral Exam (2015), CVM Graduate Student of the year (2014), Certificate of Recognition, CVM Research Forum Poster Presentation (2014), Leroy Coggins Graduate Students Award (2015)

Stoskopf:
• Kate Archibald – match – rotating internship – California
• Lori Westmoreland – match – aquatic internship – National Aquarium in Baltimore
• Sam Young – contract veterinarian for the Greensboro Natural Sciences Museum
• Lauren Charles – Smith - completed PhD under Dr. Kennedy-Stoskopf and accepted postdoctoral at Batelle in Washington state.
• Kelly Britt – completed internship at Vancouver Aquarium.
• Kate Freeman - appointed assistant professor of Ophthalmology – Colorado State
• Jen Hurley-Sanders – completed PhD – promoted to general manager – Banfield
• John Wilson – completed PhD
• Scott Willens – boarded in American College of Preventative Medicine
• Emily Christiansen – credentialed to sit ACZM examination
• JB Minter – appointed senior veterinarian, NC Zoo
• Emily Christiansen – appointed temporary full time veterinarian NC Aquariums
• Sarah Cannizzo - 1st place post DVM presentation award 2014 AAZV meeting
• Tres Clarke (former resident) – screen role as veterinarian in new Jurassic Park Film

Suter:
• Jennifer Willcox: Achieved board certification and is currently a Medical Oncology faculty member at University of Missouri
• Margaret Musser: Failed certification boards and is currently an associate at a private practice in New England area
• Briana Hallman (Oncology intern): matched to NCSU Oncology Program
• Ashley Brandes: Passed qualifying boards and to take clinical faculty position at NCSU 8/2015

Tou:
• All trainees are progressing well in their training programs and have met requirements as outlined by their specific residency programs and specialty colleges. All trainees have received biannual evaluations, and overall evaluations that meet or exceed standards.
• Dr. Kate Woodruff received a White Coat of Excellence
• Dr. Jessica Ward has accepted a faculty position at Iowa State University.
• Dr. Tim Hodge (cardiology resident, program ending 2014) accepted a faculty position at the University of California Veterinary Medical Center in San Diego, CA.

Vaden:
• Kristin Manning completed program and became board certified in SA Internal Medicine
• JS Palerme completed program and became board certified in SA Internal Medicine
• Jenessa Winston – passed qualifying SAIM boards
• Jessica Pritchard - passed qualifying SAIM boards

2015 CVM Research Forum Awards:
The 2015 CVM Research Forum Awards banquet will be in Fall 2015.

CVM Awards Banquet 2015:

<table>
<thead>
<tr>
<th>Award</th>
<th>Winner / Recipient</th>
</tr>
</thead>
<tbody>
<tr>
<td>DoCS Outstanding Small Animal Intern Award</td>
<td>Dr. Alyssa Chandler</td>
</tr>
<tr>
<td>NCSU Outstanding Resident Award</td>
<td>Dr. Ashley Brandes</td>
</tr>
<tr>
<td>Best Small Animal Intern</td>
<td>Dr. Alyssa Chandler</td>
</tr>
<tr>
<td>Best Small Animal Resident</td>
<td>Dr. Kate Aicher</td>
</tr>
<tr>
<td>Best Large Animal Intern</td>
<td>Jennifer Halleran (Davis mentee)</td>
</tr>
<tr>
<td>Best Large Animal Resident</td>
<td>Dr. Ben Shrauner</td>
</tr>
<tr>
<td>Leroy Coggins Graduate Fellowship Endowment</td>
<td>Dr. Margaret Gruen</td>
</tr>
<tr>
<td>Zoetis Animal Health Award for Research Excellence</td>
<td>Dr. Sam Jones</td>
</tr>
<tr>
<td>Huffman Leadership Award</td>
<td>Dr. Lizette Hardie</td>
</tr>
</tbody>
</table>

New EPA Non-Faculty and SPA Appointments
• Karen Marcus (Dr. Nolan’s Lab)
• Laura Ruterbories (Dr. Hanel’s Lab)
• Diana Courtright (Student Clinical Skills Lab)
• Amanda Hanley (Student Clinical Skills Lab)
• Mari-Wells Hedpeth (Assessment and Testing Manager)
• Michelle Nauerth (Dr. Elfenbein’s Lab)

Staff Awards and Recognitions
• Heather Broadhurst - Sarah Joyner Memorial Staff Excellence Award
• Joy Beaston – CVM 2014 Awards for Excellence Recipient
• Jennifer Holmes – CVM 2014 Awards for Excellence Recipient
Departmental Listing as of March 31, 2015

Professor
Blikslager, A.T., DVM, PhD, Professor, Equine Surgery
Breitschwerdt, E.B., DVM, Professor, Small Animal Internal Medicine
Davidson, M.G., DVM, Professor, Ophthalmology
DeFrancesco, T.C., DVM, BS, Professor, Cardiology/Critical Care
Degernes, L.A., DVM, MPH, BS, BA, Professor, Avian Medicine and Epidemiology
Flammer, K., DVM, Professor, Non-domestic Avian Medicine & Assoc Dean, Academic Affairs
Gilger, B.C., DVM, MS, Professor, Ophthalmology
Hardie, E.M., DVM, PhD, Professor & Department Head, Small Animal Surgery
Hauck, M.L., DVM, PhD, Professor, Oncology
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., VMDS, MS, Professor, Aquatics, Wildlife & Zoo Medicine
Lunn, D.P., BVMS, MS, DVM, PhD, Professor of Equine Medicine and Dean of CVM
Marceaux, P.J., DEDV, Professor, Small Animal Surgery
Mathews, K.G., DVM, MS, DACVS, Professor, Small Animal Surgery
Meurs, K., DVM, PhD, Professor & Assoc Dean for Research & Graduate Studies, Cardiology
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, MVS, MS, Professor, Small Animal Surgery
Stockof, 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
Adin, C., DVM, Associate Professor, Small Animal Soft Tissue and Oncologic Surgery
Birkenheuer, A.J., PhD, DVM, BS, Associate Professor, Small Animal Internal Medicine
Breuhaus, B.A., DVM, PhD, Associate Professor, Equine Medicine
Davis, J., DVM, Associate Professor, Equine Medicine
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
Hess, P.R., DVM, Associate Professor, Oncology
Lunn, K., BVMS, MS, PhD, Associate Professor, Small Animal Internal Medicine
Mariani, C.L., DVM, Associate Professor, Neurology
Suter, S.E., VMD, MS, BS, Associate Professor, Oncology
Whitacre, M., DVM, Theriogenology

Assistant Professor
Bailey, S., DVM, Assistant Professor, Theriogenology
Bizikova, P., DVM, Assistant Professor, Dermatology
Elfenbein, J., DVM, PhD, Assistant Professor, Equine Medicine
Hanel, R., DVM, Assistant Professor, Emergency Medicine
Kedrowicz, A., PhD, Assistant Professor, Communication Education
Mowat, F., BVSc, PhD, MRCPVS, Assistant Professor, Ophthalmology
Nolan, M., DVM, Assistant Professor, Radiation Oncology
Risselada, M., DVM, Assistant Professor, Small Animal Soft Tissue and Oncologic Surgery
Royal, K., PhD, MSED, Assistant Professor, Educational Assessment and Outcomes
Schnabel, L., DVM, Assistant Professor, Equine Surgery
Westermeyer, H., DVM, Assistant Professor, Ophthalmology

Clinical Assistant, Clinical Associate, Clinical Professor
Adin, D., DVM, Clinical Assistant Professor, Cardiology
Coffman, E.A., DVM, MS, Clinical Assistant Professor, Theriogenology
Dunning, D., DVM, MS, DPH, Clinical Assoc Prof & Director, Animal Welfare/Ethics/Public Policy Program, Interim Assoc Dean, Advancement
Early, P., DVM, Clinical Associate Professor, Neurology
Eroshin, S., DVM, Clinical Assistant Professor, Dentistry
Ferris, K.K., DVM, BS, Clinical Assistant Professor, General Practice
Fogle, C., DVM, Clinical Associate Professor, Equine Surgery
Gieger, T., DVM, Clinical Assistant Professor, Radiation Oncology
Gines, A., DVM, Clinical Assistant Professor, Small Animal Orthopedic Surgery
Grunkemeyer, V., DVM, Clinical Assistant Professor, Avian
Harrell, K.A., DVM, Clinical Assistant Professor, Small Animal Internal Medicine
Marks, S.L., BVSc, MS, Clinical Professor, Small Animal Internal Medicine & Associate Dean/Director VHC
Murphy, K. M., DVM, Clinical Assistant Professor, Dermatology
Musulin, S., DVM, Clinical Assistant Professor, Emergency/Critical Care
Prange, T., DVM, Clinical Assistant Professor, Equine Surgery
Redding, W.R., DVM, MS, Clinical Professor, Equine Surgery
Scharf, V., DVM, MS, Clinical Assistant Professor, Small Animal Soft Tissue Surgery
Sherman B.S., PhD, DVM, MS, Clinical Professor, Animal Behavior
Snyder, A., DVM, MBS, Clinical Assistant Professor, General Practice
Stevens, B., DVM, Clinical Assistant Professor, General Practice
Taylor, A., DVM, Clinical Assistant Professor, General Practice
Tou, S., DVM, Clinical Assistant Professor, Cardiology

Research Assistant, Associate, Professor
Gonzalez, L., Research Assistant Professor
Kennedy-Stoskopf, S., Research Professor, Aquatics, Wildlife & Zoo Medicine
Maggi, R.G., Research Associate Professor, Small Animal Internal Medicine
Sheats, M.K., Research Assistant Professor

Visiting Assistant Professor, Clinical Veterinarian, Visiting Clinical Instructor, Research Associate Postdoc, and EPA Professional
Adrian, D., Research Associate, CCMTR (Lascelles)
Balakrishnan, N., Postdoc Research Scholar, Internal Medicine (Breitschwerdt)
Banovic, F., Postdoc Research Scholar, Dermatology (Olivry)
Bogan, J., Research Associate, CCMTR/Clinical Services (Lascelles)
Breen, T., Research Assistant, Neurology (Olby)
Butler, R., Postdoc Research Associate, Comparative Pain Research (Lascelles)
Case, B., Research Assistant, Small Animal Surgery (Lascelles)
Druley, Gail, Research Associate (Taylor)
Harden, L., Research Assistant, Clinical Studies Core (Lascelles)
Hegarty, B., Research Associate, Small Animal Internal Medicine (Breitschwerdt)
Jin, Younggeon, Research Associate Postdoc, Equine Surgery (Blikslager)
Knazovicky, D., Research Assistant, Small Animal Surgery (Lascelles)
Linnhean, R.M., Visiting Asst. Professor, Aquatics, Wildlife & Zoo Medicine
Martel, B., Research Scholar Postdoc, Dermatology (Olivry)
Nauerth, M., Research Assistant, Equine Medicine (Elfenbein)
Pridgen, T., Research Associate, Equine Surgery (Blikslager)
Qurollo, B., Research Associate Postdoc (Breitschwerdt)
Sharoff, V., Research Assistant, Oncology (Gutter)
Stauffer, S., Research Assistant, Small Animal Internal Medicine (Gookin)

Adjunct Professor, Associate Professor, Assistant Professor
Abrams, Frank, Assoc Status, Professor Emeritus Bio & Ag Engineering, Ortho Surgery
Adams, Allison, Adjunct Assistant Professor, Cardiology
Aklulu, Nigatu, Adjunct Professor, Equine (working with Dean Lunn on project)
Ames, Marisa, Adjunct Associate Professor, Cardiology
Atkins, C.E., Professor Emeritus, Cardiology
Atlee, Barbara, Adjunct Assistant Professor, Dermatology
Baden, Daniel, Adjunct Professor, Aquatics, Wildlife & Zoo Medicine
Baker, Shannon, Adjunct Assistant Professor, Aquatics, Wildlife & Zoo Medicine
Barker, Piers, Adjunct Professor, Cardiology
Bergl, Richard, Adjunct Lecturer, Aquatics, Wildlife and Zoo Medicine
Bowman, Karl, Associate Professor Emeritus, Equine Surgery
Brown, Virginia, Adjunct Associate Professor, Special Species Medicine
Burkett, Richard, Adjunct Assistant Professor, Avian Medicine
Chang, Sha, Adjunct Associate Professor, Radiation Oncology
Chanoit, Guillaume, Adjunct Assistant Professor, Small Animal Surgery
Chappell, Kim, Adjunct Assistant Professor, Clinical Studies/Dermatology
Chinnadurai, Sathya, Adjunct Assistant Professor, Aquatics, Wildlife & Zoo Medicine
Coffler, Natalie, Adjunct Assistant Professor, Aquatics, Wildlife & Zoo Medicine
Deresienski, Diane, Adjunct Asst Professor, Aquatics, Wildlife & Zoo Medicine
Devoe, Ryan, Adjunct Assistant Professor, Aquatics, Wildlife & Zoo Medicine
DeYoung, David, Adjunct Professor, Small Animal Surgery
Dombrowski, Daniel, Adjunct Lecturer, Aquatics, Wildlife & Zoo Medicine
Dye, Janice, Adjunct Associate Professor, Internal Medicine
Eckerman-Ross, Christine, Adjunct Assistant Professor, Nondomestic Avian Medicine
Edling, Thomas, Adjunct Assistant Professor, Aquatics, Wildlife & Zoo Medicine
Eward, Cindy, Adjunct Assistant Professor, Small Animal Surgery
Edward, William, Adjunct Assistant Professor, Small Animal Surgery
Falk, Ronald, Adjunct Professor, Small Animal Internal Medicine
Flanigan, Gerrard, Adjunct Assistant Professor, Behavior Medicine
Ford, Richard, Professor Emeritus, Small Animal Internal Medicine
Frazier, Matthew, Adjunct Assistant Professor, Equine Medicine
Gardner, Sarah, Adjunct Associate Professor, Equine Medicine
Gee, Melanie, Adjunct Assistant Professor, Aquatics, Wildlife & Zoo Medicine
Grafinger, Michael, Adjunct Assistant Professor, Aquatics, Wildlife & Zoo Medicine
Godfrey, Matthew, Adjunct Associate Professor, Aquatics, Wildlife & Zoo Medicine
Hammer, Douglas, Adjunct Associate Professor, Occup. Health/Zoonotic Disease
Harling, David, Adjunct Assistant Professor, Ophthalmology
Haulena, Martin, Adjunct Assistant Professor, Aquatics, Wildlife & Zoo Medicine
Hennessy, Catharine, Adjunct Assistant Professor, Equine Medicine and Surgery
Hinshaw, Jeff, Adjunct Status, Associate Professor, Zoology and Aquatic Medicine
Hoglund, Don, Adjunct Associate Professor, Equine Medicine
Holmes, Elaine, Adjunct Assistant Professor, Small Animal Surgery
Howard, James, Adjunct Professor, Neurology
Hutchins, Rae, Adjunct Assistant Professor, Internal Medicine
Johnson, Daniel, Adjunct Assistant Professor, Aquatics, Wildlife & Zoo Medicine
Kornegay, Joe, Adjunct Professor, Neurology
Labens, Raphael, Adjunct Assistant Professor, Equine Surgery
Larsen, Scott, Adjunct Assistant Professor, Aquatics, Wildlife & Zoo Medicine
Leonatti, Stacey, Adjunct Assistant Professor, Aquatics, Wildlife & Zoo Medicine
Levine, David, Adjunct Professor, Small Animal Surgery
Loeffler, Ingrid, Adjunct Assistant Professor, Avian Medicine
Loomis, Michael, Adjunct Associate Professor, Zoological Medicine
Mansmann, Richard, Professor Emeritus, Equine Surgery
Matthews, Charles, Adjunct Professor, Equine Surgery
McCashin, Frederick, Adjunct Clinical Professor, Equine Medicine and Surgery
McMullen, Richard, Adjunct Assistant Professor, Ophthalmology
Monteiro-Riviere, Nancy, Professor Emerita, Dermatology and Toxicology
Montgomery, Keith, Adjunct Assistant Professor, Ophthalmology
Mozzachio, Kristie, Adjunct Assistant Professor, Aquatics, Wildlife & Zoo Medicine
Mulcahy, Daniel, Adjunct Associate Professor, Aquatics, Wildlife & Zoo Medicine
Norton, John, Adjunct Associate Professor, Laboratory Animal Medicine
Norton, Terry, Adjunct Assistant Professor, Zoological Medicine
Powers, Lauren, Adjunct Assistant Professor, Avian Medicine
Preston, Gloria, Adjunct Associate Professor, Small Animal Internal Medicine
Ruslander, David, Adjunct Assistant Professor, Oncology
Sabin, Leilani, Adjunct Assistant Professor, Cardiology
Schopler, Robert, Adjunct Assistant Professor, Avian Medicine
Scott, David, Adjunct Assistant Professor, Avian Medicine
Sharp, Nicholas, Adjunct Associate Professor, Neurology
Shuler, Jack, Adjunct Assistant Professor, Equine Health Program
Sifers, Thomas, Adjunct Assistant Professor, Internal Medicine, Intensive Care Unit
Sigmon, Betsy, Adjunct Assistant Professor, Internal Medicine
Simpson, Wendy, Adjunct Assistant Professor, Internal Medicine
Sontakke, Sushama, Adjunct Assistant Professor, Internal Medicine/Microbiology
Spodnick, Gary, Adjunct Assistant Professor, Surgery
Stroud, Cheryl, Adjunct Assistant Professor, Aquatics, Wildlife & Zoo Medicine
Taylor, Bryan, Adjunct Assistant Professor, Equine Surgery
Taylor, Karen, Adjunct Assistant Professor, Aquatics, Wildlife & Zoo Medicine
Tocidowski, Mary Ann, Adjunct Assistant Professor, Aquatics, Wildlife & Zoo Medicine
Trumpatori, Brian, Adjunct Assistant Professor, Small Animal Surgery
Tuttle, Allison, Adjunct Assistant Professor, Aquatics, Wildlife & Zoo Medicine
Vasbinder, Mary-Ann, Adjunct Assistant Professor, Laboratory Animal Medicine
Wheeler, Simon, Adjunct Professor, Small Animal Surgery
Williams, Cathy, Adjunct Assistant Professor, Aquatics, Wildlife & Zoo Medicine
Williams, Laurel, Adjunct Professor, Oncology
Wood, Michael, Adjunct Assistant Professor, Internal Medicine
Zalutsky, Michael, Adjunct Associate Professor, Oncology

Support Staff
An, Baoyan, Research Technician – Olby
Beaston, Joy, Department Accountant – DoCS Administration
Bradley, Julie, Research Technician – Breitschwerdt/Hegarty
Broadhurst, Heather, Research Technician – Harms
Casper, Rose, Research Specialist – Hauck
Cook, Eva, Executive Assistant – DoCS Administration
Courtright, Diana, Medical Laboratory Technician - Mathews
Dunston, Stan, Research Specialist – Olivy
Faw, Patricia, Research Specialist – Hegarty
Hammond, Sarah, Research Technician – Kedrowicz
Hanley, Amanda, Medical Laboratory Technician - Mathews
Harris, Tonya, Research Specialist – Vaden
Hedgpeth, Marl-Wells, Assessment and Testing Manager - Royal
Holmes, Jennifer, Research Specialist – Hess
Klein, Allison, Research Specialist – DeFrancesco
Residents – House Officers
Aicher, Kathleen, Small Animal Medicine
Arkans, Matthew, Radiation Oncology
Atiee, Genna, Small Animal Medicine
Beachler, Theresa, Theriogenology
Blake, Jocelyn, Small Animal Surgery
Brandes, Ashley, Oncology
Bray, Kathryn, Neurology
Cannizo, Sarah, Zoological Medicine
Castel, Aude, Neurology
Cavanaugh, Amanda (Mandy), Emergency/Critical Care
Curto, Elizabeth (Liz), Ophthalmology
Devine, Lauren, Small Animal Medicine
Gerding, Joseph (Joey), Ophthalmology
Gjeltema, Jenessa, Zoological Medicine
Greene, Laura, Small Animal Medicine
Kapler, Meredith, Small Animal Surgery
Kelsey, Krista, Radiation Oncology
Laprais, Aurore, Dermatology
Long, Erin, Emergency/Critical Care
Martin, Colleen, Oncology
Mastromauro, Michael, Oncology
McDonald-Lynch, Mischa, Small Animal Surgery
McKelvey, Katherine (Kat), Theriogenology
McLaughlin, Christopher (Chris), Emergency/Critical Care
Orlando, Jillian (Jill), Animal Behavior
Phillips, Brianne, Zoological Medicine
Pritchard, Jessica (Jess), Small Animal Medicine
Reina-Doreste, Yamir, Cardiology
Reynor, Claudia, Equine Surgery
Saetra, Tonje, Equine Medicine
Sherman, Amanda, Ophthalmology
Shrauner, Benjamin (Ben), Equine Surgery
Tham, Heng Leet (Ben), Dermatology
Thompson, Elizabeth, Small Animal Surgery
Tomas, Andrea, Small Animal Surgery
Waldran, Rennie, Neurology
Walton, Rebecca, Emergency/Critical Care
Ward, Jessica, Cardiology
Wiley, Claire, Clinical Investigator
Williams, Morika, Laboratory Animal Medicine
Winston, Jenessa, Clinical Investigator
Woodruff, Kathleen (Kate), Cardiology

Interns
Adamovicz, Laura, Exotic Animal Medicine Service
Alexander, Kimberly, Small Animal Rotating
Carroll, Hillary, Equine Medicine & Surgery
Chandler, Alyssa, Small Animal Rotating
Enders, Brittany, Small Animal Rotating
Hallman, Brianna, Oncology
Haraschak, Jenica, Small Animal Rotating
Lim, Ji-Hey, Small Animal Rotating
Lobar, Hillary, Equine Medicine & Surgery
Nixon, Britton, Equine Medicine & Surgery
Otamendi, Arturo, Small Animal Rotating
Pan, Po-ching (Lydia)
Parkinson, Lily, Small Animal Rotating
Sampson, Courtney, Small Animal Rotating
Shelnutt, Leslie, Small Animal Rotating
Trenholme, Heather (Nicole), Emergency/Critical Care
Wolf-Ringwall, Amber, Small Animal Rotating

Graduate Students
Beachler, Theresa, CBS (Bailey)
Bemebenek-Bailey, Stasia, Fisheries Wildlife and Conservation Biology (Stoskopf)
Berglund, Alix, CBS (Schnabel)
Blake, Jocelin, Specialized Vet Medicine (Roe)
Boss, Mary-Keara, CBS (Hauck)
Buchheit, Teresa, CBS (Jones)
Dinh, Phuong-Uyen, CBS (Jones)
Ferguson, Sylvia, CBS (Jones)
Friedenberg, Steven, CBS (Meurs)
Gruen, Margaret, CBS (Lascelles)
Kapatos, Alex, CBS (Hess)
Kouprianov, Vassili, CBS (Jones)
Kruger, Leandi, CBS (Blikslager)
Lewis, Melissa, CBS (Olby)
McKelvey, Katherine, CBS (Bailey)
Medlin, Emily, CBS (Jones)
Messenger, Kristen, CBS (Jones)
Nemec, Paige, CBS (Jones)
Niernuth, Jennifer, Fisheries Wildlife and Conservation Biology (Stoskopf)
Pattanaranangs, Rattapan, Fisheries Wildlife and Conservation Biology (Stoskopf)
Pritchard, Jessica, CBS (Birkenheuer)
Ray, Cara, CBS (Jones)
Rivera Serrano, Efain, CBS (Jones)
Rousse, Courtney, CBS (Jones)
Schreeg, Megan, CBS (Birkenheuer)
Slifer, Zachary, CBS (Jones)
Till, Rebecca, CBS (Jones)
Tuohy, Joanne, CBS (Lascelles)
Watson, Victoria, CBS (Gookin)
Departmental Bibliography for 2014-2015

1. Original research articles published in peer-reviewed journals


*Bizikova P, Olivry T, Mamo L, Dunston SM. Serum auto-antibody profiles of IgA, IgE and IgM in canine pemphigus foliaceus. Vet Dermatol 2014;25:471-e75. (*First and corresponding author*)


Bradley JM, Mascarelli PE, Trull CL, Maggi RG, *Breitschwerdt EB. Bartonella henselae* infections in an owner and two Papillion Dogs exposed to Tropical Rat Mites (*Ornithonyssus bacoti*). Vector Borne Zoonotic Dis 2014;14:703-709. (*corresponding author, 1st author technician*)


*Breitschwerdt EB, Hegarty BC, Qurollo BA, Saito TB, Maggi RG, Blanton LS, Bouyer BH. Intravascular persistence of *Anaplasma platis, Ehrlichia chaffeensis*, and *Ehrlichia ewingii* DNA in the blood of a dog and two family members. Parasit Vectors 2014;7:298. (*corresponding author*)


Davis JL, Kruger K, LaFevers DH, Barlow BM, Schirmer JM, Breuhaus BA. Effects of quinapril on angiotensin converting enzyme and plasma renin activity as well as pharmacokinetic parameters of quinapril and its active metabolite, quinaprilat, after intravenous and oral administration to mature horses. Equine Vet J 2014; 46(6): 729–733.


Ward JL, *DeFrancesco TC, Tou SP, Atkins CE, Griffith EH, Keene BW. Complication rates associated with transvenous pacemaker implantation in dogs with high-grade atrioventricular block performed during versus after normal business hours. J Vet Intern Med 2015;29:157-163. (*Contributed cases and data to clinical cohort and assisted with interpretation of findings [TCD] Senior and corresponding author; conceived and designed study for resident project – this study is part of the human factors safety initiative [BWK])


at NCSU for multicenter study, contributed cases and assisted in data collection and interpretation of findings [TCD]; Provided case management and editorial input [BWK])


Pinto NI, Gilger BC. Spectral-domain optical coherence tomography (SD-OCT) evaluation of the cornea, retina, and optic nerve in normal horses Vet Ophthalmol 2014;17(Suppl1):140-148. (*Corresponding author)


Christiansen EF, Mitchell JM, *Harms CA, Stoskopf MK. Sedation of red porgy (Pagrus pagrus) and black sea bass (Centropristis striata) using ketamine, dexmedetomidine and midazolam delivered via intramuscular injection. J Zoo Aquarium Res 2014;2:62-68. (cover photo) (*Contributor to data collection, analysis, and writing, resident mentee first author)


Reina-Doreste Y, Stern JA, *Keene BW, Tou SP, Atkins CE, DeFrancesco TC, Ames MK, Hodge TE, Meurs KM. Case-control study of the effects of pimobendan on survival time in cats with hypertrophic cardiomyopathy and congestive heart failure. J Am Vet Med Assoc 2014;245(5):534-539. (*Provided the study idea and design, along with writing, statistical and editorial input to Drs Reina (who was an employee looking for an internship when the study was done) and Dr. Stern (who was our resident when the study was done [BWK]; Dr. Stern is corresponding author because he is now an asst prof at UC Davis in a tenure track position; contributed cases and data to study cohort [SPT])


Maggi RG, *Birkenheuer AJ, Hegarty BC, Bradley JM, Levy MG, Breitschwerdt EB.
Comparison of serological and molecular panels for diagnosis of vector-borne diseases in dogs. Parasit Vectors 2014;7:127. (*Assisted with study design, execution, data interpretation and manuscript preparation [AJB]; Corresponding author [EBB])


grant monies, assisted with all surgeries, data collection, and with manuscript preparation. Corresponding author; First Author Trainee)


surgical technique with Drs Foster and Gerard to implant ultrafiltration probes in the intestine of steers)


**Schnabel LV,** Abratte CM, Schimenti JC, Felippe MJB, Cassano JM, Southard TL, Cross JA, Fortier LA. Induced pluripotent stem cells (iPSCs) have similar immunogenic and more potent immunomodulatory properties compared to bone marrow-derived stromal cells in vitro. Regen Med 2014;9(5):621-635.


**Sherman BL, Gruen ME, Case BC,** Foster ML, **Fish RE,** Lazarowski L, DePuy V, Dorman DC. A test for the evaluation of emotional reactivity in Labrador retrievers used for explosives detection. J Vet Behav 2015;10:94-102. (*Proposed and led the design of the experiments and the behavior research team, first author [BLS] co-author [REF]*)


Tolbert MK, **Stauffer SH,** *Gookin JL.* Cysteine protease activity of feline *Trichomonas foetus* promotes adhesion-dependent cytotoxicity to intestinal epithelial cells. Infect Immun 2014;82:2851-2859. (*Corresponding author. First author graduate student*)


2. Case Reports in peer-reviewed journals


3. Research review articles, medical consensus statements in peer-reviewed journals


Cook VL, *Blikslager AT. Should we use NSAIDs in Critically Ill Horses? J Vet Emerg Crit Care 2015;25:76-88. (*Co-wrote the paper)


4. Refereed articles - pedagogy or extension-related


5. Research abstracts


Sherrill MK, DeClue AE, Outi HK, Thomas JE, Reichard MV, **Birkenheuer AJ**, Outi HK, Cohn LA. Infestation by *Amblyomma americanum* on Cats Leads to Increased Leukocyte Phagocytosis. American College of Veterinary Internal Medicine, Nashville, TN, June 2014.

Sherrill MK, DeClue AE, Outi HK, Thomas JE, Reichard MV, **Birkenheuer AJ**, Outi HK, Cohn LA. Alterations in Lymphocyte and Monocyte Populations in Response to Infestation of *Amblyomma americanum* on Cats. American College of Veterinary Internal Medicine, Nashville, TN, June 2014.


Hoyt K, Chandrashekar R, **Breitschwerdt EB**, Lappin MR. *Anaplasma phagocytophilum* and *Borrelia burgdorferi* antibodies in naturally exposed cats in Maine. Annual Forum of the American College of Veterinary Medicine, Nashville, TN, June 4-7, 2014.

**Breuhaus BA**. Thyroid hormone and thyrotropin concentrations and responses to TRH in horses with PPID compared to age-matched normal horses. Proc. Equine Geriatric Workshop II and 3rd Equine Endocrine Summit, 2014;7.

**Breuhaus BA**. Thyroid hormone concentrations in aging horses. Proc. Equine Geriatric Workshop II and 3rd Equine Endocrine Summit, 2014;44.


Fox PR, Oyama MA, Rush JE, Nguyenba TP, **DeFrancesco TC**, Lehmkuhl LB, Kellihan HB, Bulmer B, Gordon SG, Cunningham S, MacGregor J, Stepien RL, Lefbom B, **Adin D**, Brown

Gerding JC, Gilger BC, Clode AB, Montgomery K. Ocular angiosarcoma in an American Miniature Horse. American College of Veterinary Ophthalmologists, Fort Worth, TX, October 2014.


Gonzalez LM, Stranahan L, Blikslager AT. Mucosal stem cells are decreased in horses with large colon volvulus. American College of Veterinary Surgeons. San Diego, CA, 2014. (oral presentation)


Gonzalez LM, Stranahan LW, Blikslager AT. The proliferative pool of stem cells is decreased by large colon volvulus in horses. 11th International Equine Colic Research Symposium, Dublin, Ireland, 2014. (poster presentation)
Kinnin LS, Gonzalez LM, Blikslager AT. Stem cells are retained in reduced number in equine strangulated small intestine. 11th International Equine Colic Research Symposium, Dublin, Ireland, 2014. (oral presentation)

Gonzalez LM, Magness ST, Lund PK, Blikslager AT. Intestinal epithelial cells expressing biomarkers of crypt base columnar or reserve stem cells show differential resistance to ischemia-reperfusion injury. Digestive Disease Week, Chicago, IL, 2014. (poster presentation)


Stranahan LW, Gonzalez LM, Blikslager AT. Reduction in the number of progenitor and stem cells in cases of large colon volvulus. Annual CVM Research Forum and Litwack Lecture, Raleigh, NC, 2014. (Awarded first place, veterinary student oral presentation)

*Gookin JL, Harvey A. A model for understanding regulatory control of plasma volume and osmolality. Experimental Biology, San Diego CA; April 28, 2014 (poster). (*Corresponding author)


Gruen ME, Case BC, Foster ML, Fish RE, Lazarowski L, Dorman DC. Sherman BL. The Use of an Open Field Model to Assess Sound-Induced Fear and Anxiety Associated Behaviors in Labrador Retrievers., Canine S & T Workshop, Department of Defense. Raleigh, NC, July 29-August 1, 2014.


Willcox J, Hammett-Stabler C, Hauck M. Vitamin D levels in dogs with osteosarcoma were not significantly different compared to controls. Oral presentation at the Veterinary Cancer Society Annual Meeting, St. Louis, MO, Oct. 9-11, 2014.


Hess PR, Gojanovich GS, Holmes JC. Harnessing Cellular and Molecular Interactions in Autoimmunity Session Eradication of surface MHC class Ia expression in an insulinoma cell clone by TALEN-mediated gene deletion prevents recognition by diabetogenic CD8+ T cells. J Immunol 2014;192:200.22 (Presented at AAI Forum, Pittsburgh, PA)

Jin Y, Pridgen TA, Blikslager AT. Lubiprostone reduces murine colitis principally in a ClC-2-dependent manner. Digestive Disease Week, Chicago, IL, 2014. (Late Breaking Abstract)


Knazovicky D, Freire M, Case B, Jiamachello K, Lascelles BDX. Efficacy of canine anti-nerve growth factor antibody for the alleviation of degenerative joint disease-associated pain in dogs. NC State College of Veterinary Medicine Annual Research Forum, April 4, 2014. (Won Certificate of Achievement)


Smith EJ, Marcellin-Little DJ, Harrysson OLA, Griffith EH. Geometry of the canine humerus. 2015 NCSU Graduate Student Research Symposium, March 2015.


Couto K, Mathews K, Hauck M. Post-operative adjuvant chemotherapy in dogs with primary lung tumors: a retrospective study. Oral presentation at the Veterinary Cancer Society annual meeting, St. Louis, MO, October 9-11, 2014.


Cerda-Gonzalez S, Olby NJ, Griffith EH. Relationship between dorsal C1-C2 compression (dural band) and clinical signs/syringomyelia cavalier King Charles spaniels. JVIM 2014.


Telford, CR, Salmon JH, Gilger BC. Synergistic effect of once daily topical 0.03% bimatoprost and 0.5% timolol maleate on intraocular pressure reduction in normal beagles. Association for Research in Vision and Ophthalmology Annual Meeting, Orlando, FL, May 2014.


Berglund AK, Schnabel LV, Long JM, King KA, Poole EJ. TGF-β2 decreases surface expression of MHC-I on equine bone marrow-derived mesenchymal stromal cells. 13th Annual Meeting ISSCR 2015.

Berglund AK, Schnabel LV, Long JM, King KA, Poole EJ. TGF-β2 decreases surface expression of MHC-I on equine bone marrow-derived mesenchymal stromal cells. 60th Annual Meeting ORS 2014.

Schnabel LV, Abratte CM, Schimenti JC, Felippe MJB, Cassano JM, Southard TL, Fortier LA. Induced pluripotent stem cells have superior immunomodulatory properties to bone marrow derived stem cells. 60th Annual Meeting ORS 2014.

Schnabel LV, Abratte CM, Schimenti JC, Felippe MJB, Cassano JM, Southard TL, Fortier LA. Induced pluripotent stem cells have superior immunomodulatory properties to bone marrow derived stem cells. 12th Annual Meeting ISSCR 2014.

Sherman BL, Gruen ME, Case BC, Foster ML, Fish RE, Lazarowski L, Dorman DC. Evaluation of a test for emotional reactivity in Labrador retrievers used for explosives detection, Canine S & T Workshop, Department of Defense, Raleigh, NC, July 29-August 1, 2014.

Wagner A, Sherman B. Heart rate as an indicator of thunderstorm phobia in dogs. Poster Presentation, Merial-NIH Veterinary Scholars Symposium Cornell University College of Veterinary Medicine, Ithaca NY, August 1-3, 2014.

Jiamachello K, **Thomson A, Gruen M, Lascelles BDX.** Questionnaire based evaluation of factors influencing owner participation in clinical research with cats. NC State College of Veterinary Medicine Annual Research Forum, April 4, 2014.


**Tomas A, Pultorak EL, Gruen ME, Breitschwerdt EB, Lascelles BDX.** Relationship between degenerative joint disease, pain and *Bartonella* spp. seroreactivity in domesticated cats. Annual Forum of the American College of Veterinary Medicine, Nashville, TN, June 4-7, 2014.


Grillis BS, Dickerson J, **Thomas BS, Breitschwerdt EB,** Olivier AK. Rocky Mountain spotted fever: One household, two lap dogs. American College of Veterinary Pathologists Annual Meeting, Atlanta, GA, November 8-12, 2014.


6. Books and Book Chapters


**Birkenheuer AJ.** Cytauxzoonosis. Merial. 2015.


**Breitschwerdt EB.** What you don’t know can kill you. Sick! Curious Tales of Pests and Parasites We Share with Animals. Stone EA, Dewey C. editors, Published by Ontario Veterinary College, 2014; 187-191.


Glaus TM, Keene BW: Herz-Kreislauf Erkrankungen. In Krankheiten der Katze, Lutz H, Kohn B, Forterre F (eds), 5th edition, Enke Verlag, Stuttgart, DE, 2015; 541-562 (Chapter 22 of German Feline Medicine text, covering heart diseases of cats, in German)


Bonagura JD, Keene BW. Drugs for the Treatment of Heart Failure in Dogs. In Bonagura JD and Twedt (eds) *Current Veterinary Therapy XV*, Elsevier, 2014;762-771.


7. Invited and contributed research presentations


Beachler TM, *Bailey CS*, Sper RB, Buchanan CN, Borst L, McKeveley KA. Uterine artery blood flow and arterial diameter correlate closely with gestational age in the mare. Clin Theriogenology. Accepted March 2014. (*Corresponding author, first-author trainee*)

Birkenheuer AJ. Vector Borne Diseases. 11th MERIAL Symposium on Parasitosis & Arthropod-Borne Diseases Palermo Italy, October 22-23, 2014. (1 hour)


Breuhaus BA. Thyroid hormone and thyrotropin concentrations and responses to TRH in horses with PPID compared to age-matched normal horses. Presented at the Dorothy Havemeyer Equine Geriatric Workshop II and the 3rd Equine Endocrine Summit, 2014.

Breuhaus BA. Thyroid hormone concentrations in aging horses. Presented at the Dorothy Havemeyer Equine Geriatric Workshop II and the 3rd Equine Endocrine Summit, 2014.


Gonzalez LM. Reserve intestinal epithelial stem cells show increased resistance to ischemia-reperfusion injury. University of North Carolina, Chapel Hill, NC, February 2015.


Gookin J. The pig as a model for research in gastroenterology. 2014 Swine in Biomedical Research Conference, Raleigh, NC, July 8, 2014.


Gruen ME, Case BC, Foster ML, Rish RE, Lazarowski L, Dorman DC. Sherman BL. The Use of an Open Field Model to Assess Sound-Induced Fear and Anxiety Associated Behaviors in Labrador Retrievers., Canine S & T Workshop, Department of Defense. Raleigh, NC, July 29-August 1, 2014.
Hawkins EC. Function testing in unsedated dogs with muscular dystrophy. Veterinary Comparative Respiratory Society Meeting, Kennett Square, PA, October 28, 2014. (no proceedings)

http://www.hopkinsmedicine.org/neurology_neurosurgery/education/conferences/blaustein/


Maggi RG. Comparison between serological and molecular panels for the diagnosis of vector-borne infectious diseases in dogs. 9th Canine Vector-Borne Diseases (CVBD) Symposium. Lisbon, Portugal, April 2014.

Mariani CL. Canine Meningoencephalitis: What Do We Know? Proceedings of the 32nd Annual Forum of the American College of Veterinary Internal Medicine, Nashville, TN, 2014.


Schnabel LV. Development of safe and efficacious allogeneic bone marrow-derived mesenchymal stem cells for “off-the-shelf” applications. UNC School of Dentistry, Chapel Hill, NC, November 4, 2014.


Schnabel LV. Burroughs Wellcome Fund Becoming Faculty Workshop: A short course on launching a scientific career, Ithaca, NY, July 31-August 2, 2014. (*Invited faculty leader*)

8. Non-peer reviewed continuing education review papers/articles

Davis JL. Straight from the Horse’s Mouth: Antibiotics, Antifungals, Antivirals. Veterinary Practice News. September 2014. [Quoted in].

Lunn KF. Canine leptospirosis. Veterinary Team Brief, 2014; 2:24-32.


9. Continuing education lectures with proceedings given to professional audiences


Bailey CS. Placentitis – Diagnostic and treatment tools for the high risk mare. FECAVA, November 2014.

Bailey CS. Cancer risk associated with spay status of bitches. 3rd Annual Symposium on Canine Reproduction at NC State, October 2014.

Birkenheuer AJ. Internal Medicine and Vector Borne Diseases. NCASAM Sanford NC, November 5, 2014. (7 hours)

Birkenheuer AJ. Vector Borne Diseases. 11th MERIAL Symposium on Parasitosis & Arthropod-Borne Diseases Palermo Italy, October 22-23, 2014. (1 hour)

Birkenheuer AJ. Internal Medicine and Vector Borne Diseases. SEVC, Barcelona Spain, October 17, 2014. (4 hours)

Birkenheuer AJ. Internal Medicine and Vector Borne Diseases. NCASAM Asheville NC, October 8-10, 2014. (8 hours)

Birkenheuer AJ. Vector Borne Diseases. ACVIM ACE course, Las Vegas, September 20, 2014. (3 hours)

Birkenheuer AJ. Internal Medicine and Vector Borne Diseases. TGAVC, Boca Raton FL, September 19, 2014. (7 hours)

Birkenheuer AJ. Vector Borne Diseases. ECVIM, Mainz Germany, September 3, 2014. (1 hour)

Birkenheuer AJ. Vector Borne Diseases. AVMA, Denver CO July 25, 2014. (2 hours)

Birkenheuer AJ. Internal Medicine and Vector Borne Diseases. CVC Washington DC, May 10, 2014. (7 hours)

Birkenheuer AJ. Vector Borne Diseases. AAHA webinar April 24, 2014. (1 hour)

Birkenheuer AJ. Vector Borne Diseases. WVC February 2014. (1 hour)

Birkenheuer AJ. Vector Borne Diseases. NAVC January 2014. (1 hour)

Bizikova P. Recent update on selected autoimmune and immune-mediated skin diseases. 3rd International Webinar Vet Virtual Congress 2015.

Blikslager AT. Understanding Dressage and common injuries in the dressage horse. NCVC, Raleigh, NC, November 2014.


Breitschwerdt EB. Serological and molecular diagnoses, treatment and prevention of Vector Borne Infectious Diseases and Public Health (10 hours), 131st Annual Meeting of the New Jersey Veterinary Association, Florham Park, New Jersey, March 7-8, 2015.

Breitschwerdt EB. Vector Borne Infectious Diseases and Public Health. Midwest Veterinary Conference, Columbus, OH, February 21, 2015. (4 hours)


Breitschwerdt EB. Diagnosis, Treatment and Prevention of Infectious Diseases, 5 hours of lecture, 2014 Potomac Regional Veterinary Conference, Baltimore, MD, November 7-9, 2014.


Breitschwerdt EB. Infectious Diseases. California Veterinary Medical Association Annual Conference, Palm Springs, CA, October 11-12, 2014. (8 lecture hours)
Breitschwerdt EB. Bartonellosis: One Health Perspectives on an Emerging Infectious Disease. Wadsworth Center, New York State Health Department, Albany, NY, October 1, 2014.

Breitschwerdt EB. Infectious Diseases. Southwest Veterinary Conference, Fort Worth, Texas, September 25-28, 2014. (7 lecture hours)

Breitschwerdt EB. Course Instructor. ACVIM Small Animal Internal Medicine Infectious Diseases, Las Vegas, Nevada, September 19-21, 2014.

Breitschwerdt EB. Emergency, Critical Care and Infectious Diseases. 20th International Veterinary Emergency and Critical Care Symposium, Indianapolis, IN, September 10-14, 2014.

Breitschwerdt EB. Feline and Human Bartonellosis: Emerging Infectious Diseases. International Conference on Feline Health, University of California at Davis, Davis, CA, September 5-7, 2014

Breitschwerdt EB. Vector Borne Infectious Diseases in North America: Clinical and Zoonotic Implications. Cleveland, Ohio, August 26, 2014.

Breitschwerdt EB. Marie Bashir Institute, Clinicians, Causation and Infectious Diseases. Sydney, Australia, August 20, 2014.

Breitschwerdt EB. Charles Sturt University, Bartonellosis: One Health Perspectives on an Emerging Infectious Disease. Wagga Wagga, Australia, August 13, 2014.

Breitschwerdt EB. Flea and Tick-Borne Infectious Diseases of Zoonotic Importance In North America: Lessons Learned. One Health Symposium Charles Sturt University, Wagga Wagga, August 12. 2014

Breitschwerdt EB. Flea and Tick-Borne Infectious Diseases of Zoonotic Importance In North America: Lessons Learned, Elizabeth Macarthur Agricultural Institute, New South Wales, August 6, 2014

Breitschwerdt EB. Flea and Tick-Borne Infectious Diseases of Zoonotic Importance In North America: Lessons Learned. University of Sydney, Camden Campus, August 5. 2014

Breitschwerdt EB. Beveridge Lecture, University of Sydney, Bartonellosis: One Health Perspectives on an Emerging Infectious Disease. Sydney, Australia, August 1, 2014.

Breitschwerdt EB. Keynote Address, Bartonellosis: One Health Perspectives on an Emerging Infectious Disease. Australian Society for Infectious Diseases, Zoonoses Meeting, Brisbane, Australia, July 25, 2014.


Breitschwerdt EB. Neurobartonellosis: Implications for Animal and Human Health. Annual Forum of the American College of Veterinary Medicine, Nashville, TN, June 4-7, 2014


Davidson M. Post graduate course in veterinary ophthalmology. Autonomous University of Barcelona, February 2015. (6 hours)

Davidson M. ACVO Basic Science Course, June-July 2014.


Davis JL. NSAIDs: uses and adverse effects. Presented at the Annual Meeting of the Indiana Veterinary Medical Association, February 2015, Indianapolis, IN. Published in the Proceedings of the Indiana Veterinary Medical Association Conference, 2015.


What’s new in antimicrobials. Presented at the Sun n Fun Veterinary Conference, May 2014, Myrtle Beach, SC. Published in the Proceedings of the Sun n Fun Veterinary Conference, 2014.

Corticosteroids: uses and adverse effects. Presented at the Sun n Fun Veterinary Conference, May 2014, Myrtle Beach, SC. Published in the Proceedings of the Sun n Fun Veterinary Conference, 2014.

NSAIDs: Uses and adverse effects. Presented at the Sun n Fun Veterinary Conference, May 2014, Myrtle Beach, SC. Published in the Proceedings of the Sun n Fun Veterinary Conference, 2014.

Alternative anti-inflammatory and analgesic medications. Presented at the Sun n Fun Veterinary Conference, May 2014, Myrtle Beach, SC. Published in the Proceedings of the Sun n Fun Veterinary Conference, 2014.

Diagnosis and treatment of neurologic disease. Presented at the Sun n Fun Veterinary Conference, May 2014, Myrtle Beach, SC. Published in the Proceedings of the Sun n Fun Veterinary Conference, 2014.

Diagnosis and treatment of muscle disease. Presented at the Sun n Fun Veterinary Conference, May 2014, Myrtle Beach, SC. Published in the Proceedings of the Sun n Fun Veterinary Conference, 2014.

Diagnosis and treatment of endocrine disease. Presented at the Sun n Fun Veterinary Conference, May 2014, Myrtle Beach, SC. Published in the Proceedings of the Sun n Fun Veterinary Conference, 2014.

Diagnosis and treatment of ocular disease. Presented at the Sun n Fun Veterinary Conference, May 2014, Myrtle Beach, SC. Published in the Proceedings of the Sun n Fun Veterinary Conference, 2014.
Degernes L. Wild avian triage – making the tough decisions. NCVC, Raleigh, NC, October 2014. (electronic proceedings)

Degernes L. Emergency stabilization of avian patients. NCVC, Raleigh, NC, October 2014. (electronic proceedings)

Degernes L. GI diseases in parrots – a case-based approach to diagnosis and treatment. AVMA Convention, Denver, CO, July 2014. (electronic proceedings)

Degernes L. Companion birds: common household toxins and treatment options. AVMA Convention, Denver, CO, July 2014. (electronic proceedings)

Degernes L. Emergency and critical care medicine for avian patients. AVMA Convention, Denver, CO, July 2014. (electronic proceedings)

Degernes L. Waterfowl medicine – common infectious and non-infectious diseases. AVMA Convention, Denver, CO, July 2014. (electronic proceedings)


DeFrancesco TC. Updates in the management of heart failure – Cat. Proceedings of the Southern Veterinary Conference, Birmingham, AL, August 7, 2014.


DeFrancesco TC. How would you manage these cardiology cases. Proceedings of the Southeast Veterinary Conference. Myrtle Beach, SC, June 25, 2014.

Early P. Advanced Spinal Stabilization Surgery Laboratory (SOP) March 2015 UC Davis, (8 hours) Presenter and Surgical Instructor

Early P. Society Critical Care Medicine January 2015, Phoenix, AZ Topics in Neurology (4 hours) Presenter

Early P. NYS 2014 Spring Conference, Rye, NY. Topics in Neurology (6 hours) Presenter

Eroshin V. Complications in Dentistry and Oral Surgery. NCVC in Technician section, September 2014. (1 hour)

Eroshin V. Dentistry Emergency and Triage. NCVC in Technicians section, September 2014. (1 hour)

Eroshin V. Emergencies in Dentistry: Common Presentations. VMF for general practitioners, October 2014. (1 hour)

Geiger T. Tumors of the Lower Urinary Tract. Mississippi State Veterinary Medical Association Meeting, February 2015. (1 hour)

Geiger T. Canine and Feline Mast Cell Tumors. Mississippi State Veterinary Medical Association Meeting, February 2015 (1 hour)

Geiger T. Canine and Feline Osteosarcoma. Mississippi State Veterinary Medical Association Meeting, February 2015. (1 hour)

Geiger T. Multimodality Treatment of Brain Tumors. Mississippi State Veterinary Medical Association Meeting, February 2015. (1 hour)


Gookin JL. Update on feline Tritrichomonas foetus infection. IAMS/Ohio State University Gastrointestinal Health Symposium. Columbus, OH, October 2014.


Hansen B. Complications of analgesic therapy. Greater Baltimore Veterinary Medical Association, Baltimore MD, February 19, 2015. (1.5 hours)
Hansen B. How are you? (sickness syndrome). Greater Baltimore Veterinary Medical Association, Baltimore MD, February 19, 2015. (1.5 hours)

Hansen B. Interactions between analgesia and physiological events in critical illness. Greater Baltimore Veterinary Medical Association, Baltimore MD, February 19, 2015. (1.5 hours)

Hansen B. Pharmacological management of pain. Greater Baltimore Veterinary Medical Association, Baltimore MD, February 19, 2015. (1.5 hours)

Hansen B. A systematic approach to shock syndrome. Georgia Veterinary Medical Association annual meeting, Atlanta, November 8, 2014. (1 hour)

Hansen B. Evaluation and monitoring of emergency and critically ill patients. Georgia Veterinary Medical Association annual meeting, Atlanta, November 8, 2014. (1 hour)

Hansen B. Fluid therapy. Georgia Veterinary Medical Association annual meeting, Atlanta, November 8, 2014. (1 hour)

Hansen B. Management of acute pain. Georgia Veterinary Medical Association annual meeting, Atlanta, November 8, 2014. (1 hour)

Hansen B. Initial assessment and monitoring of emergency and critically ill patients. Upstate Veterinary Conference, Greenville SC, October 26, 2014. (1 hour)

Hansen B. Approach to respiratory emergencies. Upstate Veterinary Conference, Greenville SC, October 26, 2014. (1 hour)

Hansen B. Recognition and management of shock syndrome. Upstate Veterinary Conference, Greenville SC, October 26, 2014. (1 hour)

Hansen B. Management of acute pain. Upstate Veterinary Conference, Greenville SC, October 26, 2014. (1 hour)

Hansen B. Fluid therapy. Upstate Veterinary Conference, Greenville SC, October 26, 2014. (1 hour)

Hansen B. Complications of analgesic therapy in the critically ill patient. IVECCS 2014, Indianapolis, September 10-14, 2014. (1 hour)


Hansen B. Pain and behavioral consequences of SIRS. IVECCS 2014, Indianapolis, September 10-14, 2014. (1 hour)

Hansen B. Analgesia Workshop. IVECCS 2014, Indianapolis, September 10-14, 2014. (4 hour laboratory, course leader)

Hansen B. Initial assessment and monitoring of emergency and critically ill patients. Central Veterinary Conference, Kansas City, August 25, 2014. (1 hour)
Hansen B. Auscultation and thoracic ultrasound examination of the respiratory emergency patient. Central Veterinary Conference, Kansas City, August 25, 2014. (1 hour)

Hansen B. Severe sepsis and septic shock. Central Veterinary Conference, Kansas City, August 25, 2014. (1 hour)

Hansen B. Laboratory evaluation in critical illness. Central Veterinary Conference, Kansas City, August 25, 2014. (1 hour)


Hansen B. Fluid therapy (Part 2). Central Veterinary Conference, Kansas City, August 25, 2014. (1 hour)

Hansen B. Initial evaluation of the emergency/critical care patient. First Flight Veterinary Conference, Kitty Hawk, NC, May 17-18, 2014. (1.5 hour)

Hansen B. Stabilization of respiratory emergency patients. First Flight Veterinary Conference, Kitty Hawk, NC, May 17-18, 2014. (1.5 hour)

Hansen B. A systematic approach to management of shock syndrome. First Flight Veterinary Conference, Kitty Hawk, NC, May 17-18, 2014. (1.5 hour)

Hansen B. Laboratory evaluation in acute/critical illness. First Flight Veterinary Conference, Kitty Hawk, NC, May 17-18, 2014. (1.5 hour)

Hansen B. Computer assisted approaches to fluid therapy. First Flight Veterinary Conference, Kitty Hawk, NC, May 17-18, 2014. (1.5 hour)

Hansen B. Management of pain in acute injury and illness. First Flight Veterinary Conference, Kitty Hawk, NC, May 17-18, 2014. (1.5 hour)


Hansen B. Using computers to customize fluid therapy plans. Central Veterinary Conference East, Washington, DC, May 8-9, 2014. (1 hour)

Hansen B. Laboratory evaluation in critical illness. Central Veterinary Conference East, Washington DC May 8-9, 2014. (1 hour)

Hansen B. Severe sepsis and septic shock. Central Veterinary Conference East, Washington DC May 8-9, 2014. (1 hour)

Hansen B. Methods of respiratory system support. Central Veterinary Conference East, Washington DC May 8-9, 2014. (1 hour)
Hansen B. Approach to the respiratory emergency patient. Central Veterinary Conference East, Washington DC May 8-9, 2014. (1 hour)


Hansen B. Fluid therapy tips and tricks. Central Veterinary Conference East, Washington DC May 8-9, 2014. (1 hour)


Kedrowicz AA, Moga J. Communicating about adverse events. Presented at the annual meeting of the North Carolina Veterinary Conference, Raleigh, NC, 2014.


Moga J, Kedrowicz AA. Conflict management scenarios lab. Presented at the annual meeting of the North Carolina Veterinary Conference, Raleigh, NC, 2014.


Keene B. Year in Review: Cardiac catheterization. ACVIM Forum Specialist Program, Proceedings 2014 ACVIM.

Keene B. Patient Safety during Cardiac Intervention ACVIM Forum Specialist Program, Proceedings 2014 ACVIM.

Lascelles BDX. Assessment of acute perioperative pain and chronic musculoskeletal pain in the cat: A Practical Solution for Use in the Clinic. Presentation at Winn Feline Foundation Session, AAHA, Tampa, FL, March 12, 2015.


Lascelles BDX. Risk-Benefit decision making in the long term use of NSAIDs for canine osteoarthritis. Presentation at South Carolina Association of Veterinarians 2014 Southeast Veterinary Conference, Myrtle Beach, SC, June 22, 2014.


Lascelles BDX. Decision making in preventing and treating hip dysplasia in the young dog. Presentation at 25th AMVQ Congress, Montreal, April 26-27, 2014.


Lewbart GA. Advances in aquatic invertebrate medicine. Regional Aquatics Workshop (RAW), Wilmington, NC, April 23, 2014.
Lunn KF. Top Ten Tips to help the Busy Practitioner find Information Online, North Carolina Veterinary Conference, Raleigh, NC, 1 hour presentation, co-presenter with Kris Alpi.


Nolan MW. Advances in Radiation Oncology: What the referring veterinarian needs to know. 2014 Veterinary Medical Forum, Raleigh, NC, November 12, 2014.


Olby N. This was a new laboratory that I organized. Organization involved the loan of specific scopes for visualization as well as neurosurgical tools and coordinating the speakers. I attended the laboratory, set up the surgical stations, worked with the sponsors and introduced the speakers. Hypophysectomy: A surgical solution to pituitary masses. Las Vegas, NV, September 18, 2014.

Olby N. Cluster seizures and status epilepticus. St Petersburg, Russia, November 14–16, 2014.

Olby N. Degenerative myelopathy. St Petersburg, Russia, November 14–16, 2014.

Olby N. Disc disease: the old, the new and the future. St Petersburg, Russia, November 14–16, 2014.


Olby N. Three hands on laboratories covering skull approaches, and a variety of approaches and stabilization techniques of the spine. Advanced Techniques in Neurosurgery, Las Vegas, NV, September 19–21, 2014.

Olby N. Degenerative diseases and genetic testing: what the neurologist should know. Basic Neuroscience and Advanced Clinical Neurology (Brain Camp), Bologna, Italy, July – August 2014.

Olby N. Active learning: Degenerative diseases and genetic testing. Basic Neuroscience and Advanced Clinical Neurology (Brain Camp), Bologna, Italy, July – August 2014.


Olby N. Pathophysiology of Acute Spinal Cord Injury II. Basic Neuroscience and Advanced Clinical Neurology (Brain Camp), Bologna, Italy, July – August 2014.

Olby N. Acute and chronic spinal cord compression: a critical approach to different surgical techniques. Basic Neuroscience and Advanced Clinical Neurology (Brain Camp), Bologna, Italy, July – August 2014.

Olby N. Active learning: clinical cases interactive sessions. Basic Neuroscience and Advanced Clinical Neurology (Brain Camp), Bologna, Italy, July – August 2014.

Olby N. Cerebellar cortical degeneration. Basic Neuroscience and Advanced Clinical Neurology (Brain Camp), Bologna, Italy, July – August 2014.


Olivry T. Update on canine autoimmune skin diseases. Central-East European Conference, University of Zagreb, Zagreb, Croatia, September 2014.

Olivry T. Treatment of atopic dermatitis in dogs. Central-East European Conference, University of Zagreb, Zagreb, Croatia, September 2014.

Olivry T. Diagnosis of atopic dermatitis in dogs. Central-East European Conference, University of Zagreb, Zagreb, Croatia, September 2014.

Olivry T, Linder KE. The stratum corneum: from biology to pathology. 27th Annual Congress of the European Society of Veterinary Dermatology/European College of Veterinary Dermatology, Salzburg, Austria, 2014.


Prange T, Dynamic Endoscopy in Horses with Upper Respiratory Disease, 19th North Carolina Veterinary Conference, Raleigh, NC, October 31, 2014.

Redding WR. The pitfalls of diagnostic analgesia of the foot. Annual Meeting of ACVS, October 2014.

Redding WR. The use of newer imaging techniques in the foot. Annual Meeting of ACVS, October 2014.
Redding WR. Diagnostic Analgesia in Lameness Examination, Suspensory Ligament Injuries, Injuries to the Carpus, What has MRI Taught us about the Fetlock; NEAEP, Virginia Beach, September 2014.

Redding WR. Advanced Imaging and the Lameness Examination, Diagnosis and Treatment of Musculoskeletal Injuries in the Horse, FAEP Ocala, FL, November 2014.

Redding WR. Diagnostic Analgesia in Lameness Examination & Lameness in the Three Day Eventer; NCVC Raleigh, NC, October 2014.


Schnabel LV. Regenerative medicine in equine orthopedics. Veterinary Medical Forum, April 30, 2014.


Stoskopf MK. American College of Animal Welfare Short Course. Animals in Entertainment, 2014


Tate LP. Diagnosis and treatment of tumors of the head and neck of the equine. NCVC Proceedings 2014, November 2014.
Vaden SL. The ABCs of FLUTD. North Carolina Veterinary Medical Association, District 4, Continuing Education Series. Durham, NC, April 2015.


10. Continuing education lectures without proceedings given to professional audiences


Bailey CS. Management of mares in infectious endometritis (bacterial and fungal). FECAVA, 2014

Birkenheuer AJ. Vector Borne Diseases. Merial Atlanta GA, July 31, 2014. (1 hour)

Birkenheuer AJ. Vector Borne Diseases. Bayer Atlanta GA, July 30, 2014. (2 hours)


Birkenheuer AJ. Vector Borne Diseases. Merial Charlotte, NC, April 24, 2014. (1 hour)


Birkenheuer AJ. Vector Borne Diseases. Bayer Atlanta, GA, April 29, 2014. (2 hours)

Birkenheuer AJ. Vector Borne Diseases. Bayer Wichitah Falls, TX, April 22, 2014. (2 hours)

Birkenheuer AJ. Vector Borne Diseases. Bayer Orlando March 3, 2014. (2 hours)

Blikslager AT. Differential diagnosis of impaction colic in horses. Haramaya University College of Veterinary Medicine, Debre Zeyt, Ethiopia, November 2014.

Blikslager AT. Management of chronic and non-healing wounds. Haramaya University College of Veterinary Medicine, Debre Zeyt, Ethiopia, November 2014.


DeFrancesco TC. Lab Instructor. Abdominal fluid assessment by sonography for trauma (AFAST) and thoracic fluid assessment by sonography for trauma (TFAST) wet lab. International Veterinary Emergency and Critical Care Conference, Indianapolis, IN, September 11, 2014


Degernes L. Introduction to Companion Animal Medicine. Hong Kong Veterinary Association, Hong Kong, China, May 2014.

Degernes L. Emergency and Critical Care Medicine for Parrots. Hong Kong Veterinary Association, Hong Kong, China, May 2014.

Early PJ. Russia Small Animal Veterinary Association, Novosibirsk, Russia, November 2014. Topics in Neurology. (3 days-20 hours of content) (Presenter/Instructor)

Early PJ. Advanced Spinal Surgery (All European Participants), University of Glasgow, Glasgow, Scotland, October 2014. (20 hours), (Presenter and Surgical Instructor)

Early PJ. Decompressive Spinal Surgery Laboratory, University of Pennsylvania, Philadelphia, PA, 2014 Winter. (2 days) (Surgical Instructor)

Early PJ. Advanced Spinal Surgery, Oquendo Center, Las Vegas, NV, July 2014. (20 hours) (Presenter and Surgical Instructor)

Early PJ. Decompressive Spinal Surgery Laboratory, University of Pennsylvania, Philadelphia, PA, 2014 Spring. (2 days) (Surgical Instructor)

Eroshin V. Dental Emergencies at VCA SFVS - seminar for general practitioners on staff, 2014. (1 hour)

Eroshin V. Dental Emergencies at the University of Florida CVM – seminar for faculty, HO and staff, 2014. (1 hour)

Eroshin V. Dental Emergencies at the University of Tennessee CVM – seminar for faculty, HO and staff, 2014 (1 hour)

Fogle C. Colic in Foals - When to Cut and How to Prevent Adhesions,” American College of Veterinary Surgeons Annual Conference, panel discussion, San Diego, 2014.

Fogle C. Field Colic Ultrasound”, Equine Health Symposium 2015, RDVM audience.

Fogle C. Dynamic Endoscopy Demonstration”, NCVMA wetlab, February 2015.

Hanel R. Trauma M&M; Imaging in the ER. Inaugural ACVECC Veterinary Committee on Trauma (VetCOT) Veterinary Trauma & Critical Care Conference, Caesar’s Palace, Las Vegas, NV, 2015.
Hanel R, DeFrancesco T. Clot Busters: Management of Thromboembolic Complications with Canine Immune-Mediated Hemolytic Anemia (Hanel) and Feline Aortic Thromboembolism (DeFrancesco). NCSU College of Veterinary Medicine, Raleigh, NC, 2015. (2 hours)

Hanel R. Management of diabetic ketoacidosis. Veterinary Medical Forum, NCSU College of Veterinary Medicine, Raleigh, NC, 2015.


Hanel R. Approach to respiratory emergencies, Parts I & II. New Hampshire Veterinary Medical Association Spring Conference, Portsmouth, NH, 2014. (2 hours)

Hanel R. Case-based approach to respiratory distress (2 hours). New Hampshire Veterinary Medical Association Spring Conference, Portsmouth, NH, 2014.

Hanel R. Emergent resuscitation and fluid therapy made easy. New Hampshire Veterinary Medical Association Spring Conference, Portsmouth, NH, 2014. (2 hours)


Hanel R. The ABCs of triage. New Hampshire Veterinary Medical Association Spring Conference, Portsmouth, NH, 2014.

Hanel R. What’s the point of point-of-care? New Hampshire Veterinary Medical Association Spring Conference, Portsmouth, NH, 2014.


Hanel R. To clot or not to clot: what are current thoughts? New Hampshire Veterinary Medical Association Spring Conference, Portsmouth, NH, 2014.


Harms CA. Program committee and session co-chair for Health and Rehabilitation session, Southeast Regional Sea Turtle Meeting, Jekyll Island, GA, February 4-7, 2015.


Harms CA. Session Planner/Chair, Veterinary Session, Regional Aquatics Workshop, Wilmington, NC, April 23, 2014.

Harrell K. Issue and concerns facing the LGBTQ Community: A Veterinary Perspective. (panel discussion) NCVC, November 1, 2014.
Harrell K. So the only complaint is lethargy. What next? NCSU student companion animal case discussion, November 2014.

Harrell K. The mysterious case of the yellow cat. NCSU SVECCS case discussion, October 2014.

Harrell K. Cool medicine cases. NCSU clinical pathology residents, May 2014.

Harrell K. Cats are not small dogs-updated. NAVLE Board review for NCSU seniors, Fall 2014.


Hauck ML. Feline Lymphoma. 20th Annual Veterinary Sportsmen Society Meeting, Yakutat, AK, August 10-17, 2014.


Kedrowicz AA, Schoenfeld-Tacher R. Cultivating Cultural Competence: An Investigation of Faculty and Students’ Cultural Intelligence. Presented at the annual meeting of the American Association of Veterinary Medical Colleges, Washington, DC, 2015.


Kedrowicz AA. Delivering Presentations with Confidence. Presented at the National Veterinary Accreditation Program Module Delivery Certification Course. Little Rock, AR, 2015.

Kedrowicz AA. Building Effective PowerPoint presentations. Presented at the National Accreditation Program Module Delivery Certification Course, Little Rock, AR, 2015.


Kedrowicz AA. Delivering Presentations with Confidence. National Veterinary Accreditation Program Module Delivery Certification Course, Raleigh, NC, 2014.


Keene B. Challenging Cardiopulmonary Cases: Interactive Discussion. Academy of Veterinary Cardiology, January 19, 2015.
Keene B. Acute Management of Chronic Heart Failure. Meet the Professor Luncheon, January 19, 2015.


Marcellin-Little DJ. Canine degenerative joint disease: inflammation or degeneration? Hill’s Global Symposium, April 2015.


Marcellin-Little DJ. Epidemiology of feline osteoarthritis. ACVS Surgical Summit, San Diego, CA, October 2014.

Marcellin-Little DJ. Custom orthopedic implants for cats. ACVS Surgical Summit, San Diego, CA, October 2014.


Mariani CL. Neurology Rounds – Is it Neurologic or Orthopedic? Preston Animal Hospital, Morrisville, NC, 2015. (2 hours)

Mariani CL. Interactive Neurology Case Extravaganza. CVC San Diego, San Diego, CA, 2014. (1 hour).


Mathews KG, Stanley B, Fulton I, Ducharme N. Laryngeal neuropathy in small and large animals – can we learn from each other? Panel discussion. ACVS Symposium 2014.

Prange T, Dynamic Endoscopy in Horses – Laboratory and Demo for Veterinarians, 2015 Equine Health Symposium, College of Veterinary Medicine, NCSU, Raleigh, NC, March 1, 2015.

Schnabel LV. Therapeutic stem cells in the horse: limited scientific evidence vs. apparently unlimited clinical applications (Cutting-edge panel). American College of Veterinary Surgeons 2014 Surgery Summit, San Diego, CA, October 18, 2014.

11. Continuing education presentations given to lay audiences


Bailey CS. Diseases of intact and castrated males. Raleigh Shetland Sheepdog Club, April 2015.


DeFrancesco TC. Common heart diseases in dog and cats. NC State University Vet Camp – gateway camp for underprivileged middle school students. NCSU-CVM, June 17, 2014.

Early P. Representative for NCSU CVM at 1 primary school career days. Typical visit includes oral presentations and table/poster presentations, 3-4 contact hours per visit.

Fish RE. Lectures/tours for CCCC Vet Tech students and NCA&T SAVE students, 2014.

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 21-22, 2015.


Harms CA. Plastic Paradise movie screening, expert panel member, co-sponsored by NC Coastal Federation, Rialto, Raleigh, NC, August 26, 2014, audience of 110 general public (adults and some students).


Harms CA. Brad Sneeden Marine Science Academy, 40 Carteret County middle school students, sea turtle comparative anatomy laboratory, June 23, 2014.


Harms CA. Harker’s Island Middle School, 18 8th grade science students, bottlenose dolphin necropsy demonstration, January 15, 2014.


Lewbart GA. Fish anatomy lab (~20 students). NCSU-CVM Student Parent Workshop, 2014.

Lunn K. Poodles and Possibilities: Seed Funding in Endocrine Discovery, Center for Comparative Medicine and Translational Research, NCSU CVM, February 2015. (adult lay audience)

Marcellin-Little DJ. Science night, Ligon Middle School (K-12, Wake County Public School).

Marcellin-Little DJ. Animal Adaptations, Sanford Creek Elementary (K-12, Wake County Public School).

Marcellin-Little DJ. Science Day, Hunter Elementary School (K-12, Wake County Public School).

Nolan MW. Triangle Area Professional Pet Sitters, 1 hr lecture, April 9, 2014.

Prange T: Upper Airway Endoscopy in the Horse, 3 H Veterinary Service, New Hill, NC (Presentation for clients and veterinarians of 3H veterinary services)

Prange T: Skin Tumors in the Horse, 2015 Equine Health Symposium, NCSU CVM, March 1, 2015. (horse owners)

Sherman BL. Decoding your dog. NCSU Libraries “Fabulous Faculty” Lecture, NCSU College of Veterinary Medicine, September 4, 2014.

Sherman BL. Our connection to animals, Kindred Companions Ceremony Speaker, NC State College of Veterinary Medicine, September 9, 2014.

Snyder A. Participated in Undergraduate Animal Science Career Expo on NCSU main campus, 2014.

Snyder A. Navigating Your First Job – offered two career seminars to CVM students and house officers.

Stevens B. Open House live spay demonstration, then Preventive Care display with the Companion Animal Group, 2014.

12. Bulletins, booklets and other education media

Eroshin V. Designed and built a large poster on dentistry for Open House 2014 and 2015.

Nolan MW. Developed 4 brochures which have been published on our website (www.ncstatevets.org/radiation) to teach pet owners about Bladder & Prostate Cancer, Bone Cancer, Brain Tumors, and Nasal Cancer
Wrote a clinical guide to radiation therapy planning using the new linear accelerator, for internal use within the Radiation Oncology section at NCSU.

Nolan MW. Wrote clinical protocols for internal use within the Radiation Oncology section at NCSU, regarding IM/IGRT for canine lower urinary tract, and SRT for brain tumors. Have shared these documents with radiation oncologists at outside institutions who are developing SRT/IMRT programs.

Nolan MW. Wrote a handbook for trainees (house officers and students) on the clinical Radiation Oncology service. Developed several organizational documents for use within the Radiation Oncology service (RT planning request form, Phone consultation form)

Nolan MW. Developed the Portal Dosimetry program at NC State, to improve resident training in IMRT quality assurance testing, and as a cost-savings measure for the Veterinary Hospital (included: organizing for Dr. Justus Adamson to commission PD and train me in its use; helping Jim Brawley sell our old QA device {MapCheck 2) to a 3rd party for $16,000; writing a document to allow all clinicians and therapists to easily run and analyze a PD QA plan; trained relevant personnel in use of PD QA).

Scharf VF. Revised/updated client handouts for Soft Tissue and Oncologic Surgery Service.

13. Works prepared and distributed through electronic media


Breitschwerdt EB. Bartonella species as an Occupational Risk for Veterinary Workers, Video Series, Companion Animal Parasite Council, Filmed Fort Worth, TX, September 25, 2014,
Breitschwerdt EB. Vector Borne Infectious Diseases, Interview, Dog World November 2014.

Breitschwerdt EB. Ticks, Fleas, and Mystery Disease. The People’s Pharmacy, August 30, 2014.


Breitschwerdt EB. Webinar, Canine and Feline Bartonellosis: Diagnostic and Treatment Considerations. IDEXX Laboratories, Internal Medicine, Clinical and Anatomic Pathologists Consultation Service, June 25, 2014.


Breitschwerdt EB. Canine Vector Borne Diseases Case Presentation Reviews, World-wide Webinar, 6 languages, over 3000 attendees, Barcelona, Spain, March 20, 2014.

Hansen B. Maintained and updated clinical calculators and procedures instructions for the ECC page on ncstatevets.org.

14. Copyrighted software or educational material (not covered elsewhere)


15. Copyrights awarded, invention disclosures, patents awarded

Goodell HP, Gilger BC. Precision Robotic Injector with Sensory Feedback: for Ocular Applications. NCSU invention disclosure Case #14148; submitted February 2014.

16. Awards and other contributions (teaching, research, prizes/competitions, extension, service)

Birkenheuer A. Received the University of Florida College of Veterinary Medicine Alumni Achievement Award, 2014.

Blikslager AT. Nominated for Alumni Association Distinguished Graduate Professorship, 2015.

Breitschwerdt EB. Interview and publication in NCSU Results Magazine, September 2014.

Breitschwerdt EB. Reappointment, Adjunct Professor of Medicine, Duke University Medical Center, July 1, 2014.
Dr. Kate Woodruff, cardiology resident, awarded a White Coat of Excellence - $10K donation to foundation. (DeFrancesco T, mentor)

Degernes L. Received 3 extension awards last year - 1) Outstanding Extension Service Award; 2) induction into the Academy of Outstanding Faculty Engaged in Extension; and 3) 2014 Alumni Association Outstanding Extension and Outreach Award.

Elfenbein JR. University of Florida College of Veterinary Medicine Outstanding Young Alumni Award 2015.

Fogle C. Recipient of Large Animal Faculty Member of the Year Award, 2014.

Gonzalez L. Distinguished Mid-Atlantic PREP/IMSD Research Symposium Award recipient, 2015.

Gonzalez L. Veterinary Leadership Conference Scholarship, American Veterinary Medical Association, 2015.

Gonzalez L. American Association of Equine Practitioners Equus Foundation Research Fellow Scholarship, 2014.

Gonzalez L. Monica Menard Award for Excellence in Veterinary Pathobiological Research, North Carolina State University, 2014.

Gonzalez L. University Graduate Student Association Award for Conferences, North Carolina State University, 2014.

Gookin J. Zoetis Award for Veterinary Research Excellence, April 2014.

Hansen B. Recipient of the Ira M. Zaslow Distinguished Service Award at the September 2014 meeting of the Veterinary Emergency and Critical Care Society.

Harms CA. National Oceanic and Atmospheric Administration, Southeast United States Marine Mammal Stranding Network award in recognition of North Carolina State University, College of Veterinary Medicine, Center for Marine Sciences and Technology, for excellence in responding to stranded marine mammals during the 2013-2014 mid-Atlantic bottlenose dolphin Unusual Mortality Event.

Hawkins EC. ACVIM Distinguished Service Award, June 5, 2014.

Keene B. Keynote speaker for the 100th Anniversary Meeting of the Japanese Society of Veterinary Cardiology, 2014.

Musulin S. 2014 Young Achiever Award (granted by Auburn University to outstanding alumni)

Olivry T. Appointed “Visiting Professor of Dermatology” at Harvard Medical School and “Visiting Scientist” at the Massachusetts General Hospital Cutaneous Biology Research Center.

Prange T. 2014 SCAAEP Equine Clinician of the Year.

Prange T. Inducted into the Psi Chapter of Phi Zeta by faculty vote.
Qurollo B. Received the DoCS postdoctoral scientist award (Mentor: Ed Breitschwerdt)

Redding WR. Achieved Diplomate status in the American College of Veterinary Sports Medicine and Rehabilitation (ACVSMR), 2015.

Royal K. Position as Editor of Rasch Measurement Transactions (RMT) renewed.

Schnabel LV. Achieved Diplomate status in the American College of Veterinary Sports Medicine and Rehabilitation (ACVSMR), 2015.
### 17. Submitted Grants

**NORTH CAROLINA STATE UNIVERSITY**

Proposals Submitted for the Period April 01, 2014 to March 31, 2015 by College and Department

department is (Department of Clinical Sciences) (PI department only); revised proposals suppressed; pre-proposals suppressed; internal projects suppressed

<table>
<thead>
<tr>
<th>Project ID</th>
<th>Investigator(s)</th>
<th>PI Department</th>
<th>Direct Sponsor</th>
<th>Amount</th>
<th>Type</th>
<th>Category</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013-3002</td>
<td>Birkhueser,  Ada Bronchick, Edward &amp; Prichard, Jessica</td>
<td>Department of Clinical Sciences</td>
<td>Boehringer Ingelheim Vetmedica, Inc. (BI VI)</td>
<td>$100,000</td>
<td>Supplement</td>
<td>Training</td>
<td>Prospective Comparison of Two Treatments Options for Cystinosis</td>
</tr>
<tr>
<td>2015-0169</td>
<td>Birkhueser, Ada Prichard, Jessica</td>
<td>Department of Clinical Sciences</td>
<td>University of Missouri - Columbia (Winn Animal Foundation)</td>
<td>$3,918</td>
<td>New</td>
<td>Research</td>
<td>B-Cell Activating Factor: Linking the Pathophysiology of Immune-Mediated Thrombocytopenia in Dogs to Improved Disease Identification and Treatment</td>
</tr>
<tr>
<td>2015-2247</td>
<td>Birkhueser, Ada &amp; Prichard, Jessica</td>
<td>Department of Clinical Sciences</td>
<td>University of Wisconsin - Madison (Morris Animal Foundation)</td>
<td>$971</td>
<td>New</td>
<td>Research</td>
<td>A Randomized Controlled Trial of the Benefit of Royal Canin Anallergen Veterinary Diet in Dogs with Spontaneous Preterm Chicken Hyperreactivity</td>
</tr>
<tr>
<td>2014-0529</td>
<td>Brubova, Petra &amp; Olszy, Thaddeus</td>
<td>Department of Clinical Sciences</td>
<td>Royal Canin R &amp; R</td>
<td>$1,200</td>
<td>Supplement</td>
<td>Research</td>
<td>Early Detection of Sepsis in Equine Intestinal Obstruction</td>
</tr>
<tr>
<td>2015-0795</td>
<td>Bickelhager, Anthony &amp; Prichard, Jessica</td>
<td>Department of Clinical Sciences</td>
<td>Claydon Jockey Club Research Foundation, Inc.</td>
<td>$122,600</td>
<td>New</td>
<td>Research</td>
<td>Function of Porcine Probiotic in Postoperative Colonic Patients</td>
</tr>
<tr>
<td>Year</td>
<td>Name</td>
<td>Department of Clinical Sciences</td>
<td>Institution</td>
<td>Amount</td>
<td>Type</td>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>--------------------</td>
<td>--------------------------------</td>
<td>--------------------------------------------------</td>
<td>---------</td>
<td>--------</td>
<td>-----------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>2015-2015</td>
<td>Bilalager, Anthony</td>
<td>Department of Clinical Sciences</td>
<td>Michigan State University (National Institutes of Health (NIH))</td>
<td>$42,809</td>
<td>New</td>
<td>Research Neuro-immune Mechanisms in Early Life Stress-Induced Gastrointestinal Disease</td>
<td></td>
</tr>
<tr>
<td>2006-0543</td>
<td>Breitwieser, Edward Corian, Maria Dunn, Pedro</td>
<td>Joint Dept. Department of Clinical Sciences</td>
<td>IDEXX Laboratories, Inc.</td>
<td>$56,050</td>
<td>Supplement</td>
<td>Research Clinical Manifestations of Dogs with Co-Infections and Co-Exposures to Vector-Borne Pathogens</td>
<td></td>
</tr>
<tr>
<td>2015-1430</td>
<td>Breitwieser, Edward Quirino, Barbara</td>
<td>Department of Clinical Sciences</td>
<td>Wem Feline Foundation</td>
<td>$24,000</td>
<td>New</td>
<td>Research Feline Vector-Borne Disease in Cats with Acute Onset Fever</td>
<td></td>
</tr>
<tr>
<td>2015-1916</td>
<td>Breitwieser, Edward</td>
<td>Department of Clinical Sciences</td>
<td>Biogal Galed Labs</td>
<td>$8,400</td>
<td>TSA</td>
<td>Public Service/Extension Testing of Canine blood samples with PCR Kit provided by sponsor</td>
<td></td>
</tr>
<tr>
<td>2015-0184</td>
<td>Davis, Jennifer</td>
<td>Department of Clinical Sciences</td>
<td>Morris Animal Foundation</td>
<td>$37,619</td>
<td>New</td>
<td>Research Pharmacokinetics, Behavioral Effects and Adverse Effects of Tramadol in Adult Huskies</td>
<td></td>
</tr>
<tr>
<td>2015-1956</td>
<td>Early, Peter Munara, Karen</td>
<td>Department of Clinical Sciences</td>
<td>PetPace LTD</td>
<td>$0</td>
<td>New</td>
<td>Other</td>
<td>Music as an add-on therapy for refractory canine epilepsy: A pilot study</td>
</tr>
<tr>
<td>2015-0524</td>
<td>Elshabein, Jihann</td>
<td>Department of Clinical Sciences</td>
<td>National Institutes of Health (NIH)</td>
<td>$571,350</td>
<td>New</td>
<td>Research Functional Distortion of the Retina St-85 of Salmonella Typhimurium</td>
<td></td>
</tr>
<tr>
<td>2013-3035</td>
<td>Gilger, Brian</td>
<td>Department of Clinical Sciences</td>
<td>C.T. Development Switzerland SARL</td>
<td>$15,389</td>
<td>TSA</td>
<td>Public Service/Extension Ocular toxicology in rabbits</td>
<td></td>
</tr>
<tr>
<td>2013-3035</td>
<td>Gilger, Brian</td>
<td>Department of Clinical Sciences</td>
<td>C.T. Development Switzerland SARL</td>
<td>$4,376</td>
<td>TSA</td>
<td>Public Service/Extension Ocular toxicology in rabbits</td>
<td></td>
</tr>
<tr>
<td>2013-3035</td>
<td>Gilger, Brian</td>
<td>Department of Clinical Sciences</td>
<td>C.T. Development Switzerland SARL</td>
<td>$10,611</td>
<td>TSA</td>
<td>Public Service/Extension Ocular toxicology in rabbits</td>
<td></td>
</tr>
<tr>
<td>2014-2323</td>
<td>Gilger, Brian</td>
<td>Department of Clinical Sciences</td>
<td>Zoetis, LLC</td>
<td>$26,588</td>
<td>New</td>
<td>Research Impact of Equine Recurrent Uveitis (ERU) on Horse Owners</td>
<td></td>
</tr>
<tr>
<td>2014-2411</td>
<td>Gilger, Brian</td>
<td>Department of Clinical Sciences</td>
<td>Syngenta (National Institutes of Health (NIH))</td>
<td>$263,908</td>
<td>New</td>
<td>Research Reduction of Corneal Fibrosis and Improved Healing After Injury</td>
<td></td>
</tr>
<tr>
<td>2015-0750</td>
<td>Gilger, Brian</td>
<td>Department of Clinical Sciences</td>
<td>Clearside BioMedical, Inc.</td>
<td>$29,800</td>
<td>TSA</td>
<td>Public Service/Extension Testing of compound in porcine model of ocular inflammation</td>
<td></td>
</tr>
<tr>
<td>2015-0877</td>
<td>Gilger, Brian</td>
<td>Department of Clinical Sciences</td>
<td>UNC - UNC Chapel Hill (Retina Research Foundation (RRF))</td>
<td>$17,618</td>
<td>New</td>
<td>Research AAV Gene Delivery Following Superiorchoidal Injection in a Rabbit Model</td>
<td></td>
</tr>
<tr>
<td>2015-1290</td>
<td>Gilger, Brian Schubel, Lauren Sherman, Amanda</td>
<td>Department of Clinical Sciences</td>
<td>AUCO Vision for Animals Foundation</td>
<td>$5,000</td>
<td>New</td>
<td>Research Effect Of Bone Marrow-derived Mesenchymal Stem Cells And Stem Cell Supernatant On Equine Corneal Wound Healing In Vivo</td>
<td></td>
</tr>
<tr>
<td>2015-1834</td>
<td>Gilger, Brian</td>
<td>Department of Clinical Sciences</td>
<td>UNC - UNC Chapel Hill (National Institutes of Health (NIH))</td>
<td>$181,374</td>
<td>New</td>
<td>Research Allele-Specific Honing Endonuclease Gene Editing in adRP Mice Using Self-Complementary AAV</td>
<td></td>
</tr>
<tr>
<td>2015-1907</td>
<td>Gilger, Brian</td>
<td>Department of Clinical Sciences</td>
<td>Clearside BioMedical, Inc.</td>
<td>$20,346</td>
<td>TSA</td>
<td>Public Service/Extension Evaluation of sponsor therapeutic on a model of avitamin in pigs</td>
<td></td>
</tr>
<tr>
<td>2014-3082</td>
<td>Gonzalez, Laura Bilalager, Anthony</td>
<td>Department of Clinical Sciences</td>
<td>UNC - UNC Chapel Hill (National Institute of Diabetes and</td>
<td>$29,907</td>
<td>New</td>
<td>Research Center for Gastrointestinal Biology Disease</td>
<td></td>
</tr>
<tr>
<td>Project Identifier</td>
<td>Principal Investigator(s)</td>
<td>Institution(s)</td>
<td>Grant Amount</td>
<td>Award Type</td>
<td>Description</td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------------</td>
<td>---------------------------</td>
<td>-------------------------------------------------------------------------------</td>
<td>--------------</td>
<td>------------</td>
<td>----------------------------------------------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>104</td>
<td>Gonzales, Liana</td>
<td>Department of Clinical Sciences</td>
<td>$608,175</td>
<td>New Research</td>
<td>Intestinal Stem Cell Responses to Invasive Injury in a Large Animal Model</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2011-0920</td>
<td>Godin, Jody</td>
<td>Joint Dept. Department of Clinical Sciences</td>
<td>$5,000</td>
<td>Supplement</td>
<td>Merial Veterinary Scholars Program (Summer 2014)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2011-0920</td>
<td>Jones, Samuel, Matthew</td>
<td>Joint Dept. Department of Clinical Sciences</td>
<td>$20,000</td>
<td>Supplement</td>
<td>Merial Veterinary Scholars Program (Summer 2014)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2014-2649</td>
<td>Godin, Jody</td>
<td>Procter &amp; Gamble Co.</td>
<td>$10,000</td>
<td>TSA</td>
<td>Public Service/Extension</td>
<td>Measure of pharmaceutical permeability across alimentary tract</td>
<td></td>
</tr>
<tr>
<td>2015-2233</td>
<td>Haefele, Rita</td>
<td>Joint Coll. Department of Clinical Sciences</td>
<td>$71,800</td>
<td>New Research</td>
<td>Identifying the Mechanistic Cause for Genetic Predispotion to Gallbladder Mucocele Formation in Dogs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2014-2333</td>
<td>Birkenhauer, Adam</td>
<td>Morris Animal Foundation</td>
<td>$2,500</td>
<td>New Research</td>
<td>Use of Thromboembolography for Monitoring Unfractionated Heparin Therapy in Normal Canines</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2014-2763</td>
<td>McLaughlin, Christopher</td>
<td>Joint Coll. Department of Clinical Sciences</td>
<td>$9,450</td>
<td>New Research</td>
<td>Thromboemboligraphic Monitoring of the Effect of Unfractionated Heparin Therapy in Healthy Dogs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2015-0776</td>
<td>DeFrancisco, Teresa</td>
<td>Department of Clinical Sciences</td>
<td>$23,284</td>
<td>New Research</td>
<td>Early Use of Tissue Plasminogen Activator for Thrombolysis in Feline Aortic Thromboembolism</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2015-0884</td>
<td>Papich, Craig</td>
<td>Department of Clinical Sciences</td>
<td>$3,700</td>
<td>New Research</td>
<td>Pharmacokinetics of Enrofloxacin and its Metabolite Ciprofloxacin in the Green Sea Urchin (Stronglyomostoma droebachiensis) Following Intracardiac and Bath Administration</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2014-2721</td>
<td>Haack, Marlene</td>
<td>Department of Clinical Sciences</td>
<td>$29,468</td>
<td>New Research</td>
<td>Prospective, Multicentre, Randomised, Double-Blind, Placebo-controlled, Parallel Groups, Phase 3 Study to</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project Code</td>
<td>Name</td>
<td>Department</td>
<td>Institution</td>
<td>Fund</td>
<td>Type</td>
<td>Status</td>
<td>Description</td>
</tr>
<tr>
<td>--------------</td>
<td>------</td>
<td>------------</td>
<td>-------------</td>
<td>------</td>
<td>------</td>
<td>--------</td>
<td>-------------</td>
</tr>
<tr>
<td>2014-2721</td>
<td>Hauke, Marlene</td>
<td>Department of Clinical Sciences</td>
<td>AB Science</td>
<td>$6,683</td>
<td>Supplement</td>
<td>Research</td>
<td>Compare Efficacy and Safety of Maitral to Placebo in the Treatment of Grade 2-3 Non-Resectable Mast Cell Tumors in Dogs Not Previously Treated by Chemotherapy (other than Corticosteroids) or Radiotherapy</td>
</tr>
<tr>
<td>2014-2721</td>
<td>Hauke, Marlene</td>
<td>Department of Clinical Sciences</td>
<td>AB Science</td>
<td>$36,262</td>
<td>Supplement</td>
<td>Research</td>
<td>Prospective, Multicentre, Randomised, Double-Blind, Placebo-controlled, 2-Parallel Groups, Phase 3 Study to Compare Efficacy and Safety of Maitral to Placebo in the Treatment of Grade 2-3 Non-Resectable Mast Cell Tumors in Dogs Not Previously Treated by Chemotherapy (other than Corticosteroids) or Radiotherapy</td>
</tr>
<tr>
<td>2015-1222</td>
<td>Hauke, Marlene</td>
<td>Department of Clinical Sciences</td>
<td>Osunma Pharmaceutical AB</td>
<td>$69,602</td>
<td>New</td>
<td>Other</td>
<td>A Randomized, Masked, Placebo Controlled Field Study to Determine Efficacy and Safety of Paced Vet® in Dogs with Non Resectable Mammary Carcinoma of Stage III-V</td>
</tr>
<tr>
<td>2015-1905</td>
<td>Hauke, Marlene</td>
<td>Department of Clinical Sciences</td>
<td>Morris Animal Foundation</td>
<td>$15,898</td>
<td>New</td>
<td>Research</td>
<td>COTCO26: Evaluation of Orally Administered mTOR Inhibitor Rapamycin in Dogs with Osteosarcoma</td>
</tr>
<tr>
<td>2015-1504</td>
<td>Heess, Paul Thorne, Jeffrey</td>
<td>Joint Coll.</td>
<td>Department of Clinical Sciences</td>
<td>Winn Feline Foundation</td>
<td>$17,962</td>
<td>New</td>
<td>Research</td>
</tr>
<tr>
<td>2015-2219</td>
<td>Heess, Paul</td>
<td>Department of Clinical Sciences</td>
<td>Morris Animal Foundation</td>
<td>$64,464</td>
<td>New</td>
<td>Research</td>
<td>Quantitative Assessment of Minimal Residual Disease Kinetics During CHOP Chemotherapy of Canine T-cell Lymphoma via Next-Generation TCRVβ Sequencing</td>
</tr>
<tr>
<td>2008-2206</td>
<td>Jones, Samuel</td>
<td>Department of Clinical Sciences</td>
<td>National Institutes of Health (NIH)</td>
<td>6-354,130</td>
<td>Supplement</td>
<td>Research</td>
<td>Interdisciplinary Biomedical Research Training Program</td>
</tr>
<tr>
<td>2012-0816</td>
<td>Jones, Samuel Sheets, Mary</td>
<td>Department of Clinical Sciences</td>
<td>National Institutes of Health (NIH)</td>
<td>So</td>
<td>NIH Progress Report</td>
<td>Research</td>
<td>Targeting the Marcks-Family Proteins to Inhibit Neutrophil Migration</td>
</tr>
<tr>
<td>Year</td>
<td>Applicant</td>
<td>Department of Clinical Sciences</td>
<td>Institution/Foundation</td>
<td>Amount</td>
<td>Approval Status</td>
<td>Type</td>
<td>Research Description</td>
</tr>
<tr>
<td>--------</td>
<td>-----------</td>
<td>---------------------------------</td>
<td>-------------------------</td>
<td>---------</td>
<td>----------------</td>
<td>------</td>
<td>----------------------</td>
</tr>
<tr>
<td>2014-2474</td>
<td>Jones, Samuel</td>
<td>Department of Clinical Sciences</td>
<td>National Institutes of Health (NIH)</td>
<td>$354,130</td>
<td>New</td>
<td>Research</td>
<td>Interdisciplinary Biomedical Research Training Program</td>
</tr>
<tr>
<td>2015-1772</td>
<td>Keone, Bruce</td>
<td>Department of Clinical Sciences</td>
<td>University of Pennsylvania (American College of Veterinary Internal Medicine)</td>
<td>$4,363</td>
<td>New</td>
<td>Research</td>
<td>Effect of 5-salbutamolamine on Myocardial Hypertrophy in Cats with Hypertrophic Cardiomyopathy</td>
</tr>
<tr>
<td>2014-1154</td>
<td>Larocello, Duncan</td>
<td>Department of Clinical Sciences</td>
<td>Novartis Animal Health Inc.</td>
<td>$1,280</td>
<td>Supplement</td>
<td>Research</td>
<td>Evaluation of the Efficacy and Safety of Olsiro (olmesol) Tablets Versus Placebo using Activity Monitors in Cats with Chronic Muscular-Skeletal Disorder, a Randomized, Blinded Clinical Trial</td>
</tr>
<tr>
<td>2014-2880</td>
<td>Larocello, Duncan</td>
<td>Department of Clinical Sciences</td>
<td>PetPace LTD</td>
<td>$0</td>
<td>New</td>
<td>Research</td>
<td>Gaining Experience with PetPace Collars</td>
</tr>
<tr>
<td>2014-3073</td>
<td>Larocello, Duncan Meltzer, Elizabeth</td>
<td>Department of Clinical Sciences</td>
<td>Aratana Therapeutics, Inc.</td>
<td>$192,207</td>
<td>New</td>
<td>Research</td>
<td>A Drug Finding Study of ATX-003 in Cats Undergoing Unilateral Osteotomy (COD)</td>
</tr>
<tr>
<td>2015-0219</td>
<td>Larocello, Duncan Vaden, Shelly Mesinger, Kristen Oron, Margaret Griffith, Emily</td>
<td>Joint Coll.</td>
<td>Department of Clinical Sciences</td>
<td>Winn Feline Foundation</td>
<td>$22,815</td>
<td>New</td>
<td>Research</td>
</tr>
<tr>
<td>2015-1080</td>
<td>Larocello, Duncan Pogge, Jonathan Tho, Joanne</td>
<td>Joint Dept.</td>
<td>Department of Clinical Sciences</td>
<td>American College of Veterinary Surgeons</td>
<td>$25,000</td>
<td>New</td>
<td>Research</td>
</tr>
<tr>
<td>2015-2360</td>
<td>Larocello, Duncan</td>
<td>Department of Clinical Sciences</td>
<td>Cyte Therapeutics, Inc (National Institutes of Health (NIH))</td>
<td>$44,835</td>
<td>New</td>
<td>Research</td>
<td>An Anatomically Relevant Osteochondral Implant for Treatment of Hip Osteonecrosis</td>
</tr>
<tr>
<td>2015-2033</td>
<td>Lovett, Gregory Harms, Craig Christian, Larry</td>
<td>Department of Clinical Sciences</td>
<td>NC Department of Environment &amp; Natural Resources (DENR)</td>
<td>$4,000</td>
<td>Supplement</td>
<td>Public Service/Extension</td>
<td>Veterinary Medical Services Rendered to the North Carolina Museum of Natural Sciences</td>
</tr>
<tr>
<td>2015-0648</td>
<td>Luna, Katharine Royal PhD, Kenneth Schoenfeld, Regina</td>
<td>Joint Dept.</td>
<td>Department of Clinical Sciences</td>
<td>American College of Veterinary Internal Medicine Foundation</td>
<td>$27,000</td>
<td>New</td>
<td>Research</td>
</tr>
<tr>
<td>2014-2703</td>
<td>Maggi, Ricardo Brentschneider, Edward</td>
<td>Department of Clinical Sciences</td>
<td>University of Minnesota (National Institutes of Health (NIH))</td>
<td>$205,215</td>
<td>New</td>
<td>Research</td>
<td>Bartonella spp. Biofilms Play a Major Role in Chronic Disease</td>
</tr>
<tr>
<td>2015-1247</td>
<td>Maggi, Ricardo</td>
<td>Department of Clinical Sciences</td>
<td>UNC - Appalachian State University</td>
<td>$3,975</td>
<td>TSA</td>
<td>Public Service/Extension</td>
<td>Tick Testing (n=103) for Intracellular pathogens</td>
</tr>
<tr>
<td>2015-1654</td>
<td>Marcellina Little, Dennis Horn, Timothy</td>
<td>Joint Coll.</td>
<td>Department of Clinical Sciences</td>
<td>DePuy Synthes</td>
<td>$50</td>
<td>New</td>
<td>Research</td>
</tr>
<tr>
<td>Project ID</td>
<td>Principal Investigator(s)</td>
<td>Department</td>
<td>Collaboration</td>
<td>Award Amount</td>
<td>Type of Support</td>
<td>Project Title</td>
<td></td>
</tr>
<tr>
<td>-----------</td>
<td>--------------------------</td>
<td>------------</td>
<td>---------------</td>
<td>--------------</td>
<td>----------------</td>
<td>---------------</td>
<td></td>
</tr>
<tr>
<td>2015-1905</td>
<td>Mathews, Kyle&lt;br&gt;Seiler, Gabriela</td>
<td>Department of Clinical Sciences</td>
<td>Collie Health Foundation</td>
<td>$3,888</td>
<td>New Research</td>
<td>Fluoroscopic and Ultrasonographic Evaluation of Diaphragmatic Motion in Dogs Affected by Gastric Dilatation-Volvulus</td>
<td></td>
</tr>
<tr>
<td>2015-0944</td>
<td>Munna, Karen</td>
<td>Department of Clinical Sciences</td>
<td>University of Minnesota (National Institutes of Health (NIH))</td>
<td>$44,414</td>
<td>New Research</td>
<td>Topiramate in Canine Status Epilepticus (SI): Translational trial for Human SE</td>
<td></td>
</tr>
<tr>
<td>2015-2256</td>
<td>Munna, Karen&lt;br&gt;Eraly, Peter</td>
<td>Department of Clinical Sciences</td>
<td>Morris Animal Foundation</td>
<td>$104,511</td>
<td>New Research</td>
<td>Use of Accelerometry to Detect Seizure Activity in Dogs with Idiopathic Epilepsy</td>
<td></td>
</tr>
<tr>
<td>2014-3022</td>
<td>Nolan, Michael&lt;br&gt;Gieger, Tracy</td>
<td>Department of Clinical Sciences</td>
<td>Immunolight LLC</td>
<td>$74,620</td>
<td>New Research</td>
<td>Immunolight Therapy for Canine Malignancies: A Feasibility Study</td>
<td></td>
</tr>
<tr>
<td>2015-0050</td>
<td>Olby, Natasha</td>
<td>Department of Clinical Sciences</td>
<td>American Kennel Club Canine Health Foundation, Inc.</td>
<td>$78,786</td>
<td>New Research</td>
<td>Investigation of Quantitative Trait Loci and Sensory Thresholds in Chiari-like Malformations and Syringomyelia in Cavalier King Charles Spaniels</td>
<td></td>
</tr>
<tr>
<td>2015-2236</td>
<td>Olby, Natasha&lt;br&gt;Simp, Cory&lt;br&gt;Dunning, Dianne&lt;br&gt;Munna, Karen&lt;br&gt;Eraly, Peter&lt;br&gt;Munna, Karen</td>
<td>Department of Clinical Sciences</td>
<td>Morris Animal Foundation</td>
<td>$124,173</td>
<td>New Research</td>
<td>The Effect of Post-Operative Rehabilitation on Recovery from Acute Thoracolumbar Intervertebral Disc Herniations</td>
<td></td>
</tr>
<tr>
<td>2015-2261</td>
<td>Olby, Natasha</td>
<td>Department of Clinical Sciences</td>
<td>Triangle Community Foundation</td>
<td>$5,000</td>
<td>New Research</td>
<td>Quantification of Sensory Thresholds in Cavalier King Charles Spaniel Dogs with Chiari-like Malformation</td>
<td></td>
</tr>
<tr>
<td>2015-1245</td>
<td>Olivry, Thierry</td>
<td>Department of Clinical Sciences</td>
<td>LEO Pharma A/S</td>
<td>$266,096</td>
<td>TSA</td>
<td>Testing of novel anti-inflammatory drugs in a dog allergy model</td>
<td></td>
</tr>
<tr>
<td>2015-1645</td>
<td>Olivry, Thierry&lt;br&gt;Baumert, Wolfgang</td>
<td>Department of Clinical Sciences</td>
<td>LEO Pharma A/S</td>
<td>$81,035</td>
<td>New Research</td>
<td>Testing of Novel Anti-Allergic Drugs in a Dog Model of Acute Atopic Dermatitis</td>
<td></td>
</tr>
<tr>
<td>2015-1695</td>
<td>Olivry, Thierry</td>
<td>Department of Clinical Sciences</td>
<td>LEO Pharma A/S</td>
<td>$173,335</td>
<td>New Research</td>
<td>Post-doctoral Fellowship to Study Experimental Mite-induced Atopic Inflammation in the Skin of Mite-Sensitized Dogs</td>
<td></td>
</tr>
<tr>
<td>2014-0454</td>
<td>Schnabel, Lauren</td>
<td>Department of Clinical Sciences</td>
<td>National Institutes of Health (NIH)</td>
<td>$647</td>
<td>Supplement</td>
<td>Equine IPS Cells and Their Ability to Enhance Tendon Regeneration In Vivo</td>
<td></td>
</tr>
<tr>
<td>2014-0454</td>
<td>Schnabel, Lauren</td>
<td>Department of Clinical Sciences</td>
<td>National Institutes of Health (NIH)</td>
<td>50</td>
<td>NIH Progress Report</td>
<td>Equine IPS Cells and Their Ability to Enhance Tendon Regeneration In Vivo</td>
<td></td>
</tr>
<tr>
<td>2015-0587</td>
<td>Schnabel, Lauren</td>
<td>Department of Clinical Sciences</td>
<td>Cornell University (National Institutes of Health (NIH))</td>
<td>$45,978</td>
<td>New Research</td>
<td>Immunocompetency and the Niche Environment in Mesenchymal Stem Cell Transplantation</td>
<td></td>
</tr>
<tr>
<td>2015-0410</td>
<td>Sherman, Barbara</td>
<td>Department of Clinical Sciences</td>
<td>Duke University (The Stanton Foundation)</td>
<td>$5,973</td>
<td>New Other</td>
<td>Roles of Oxytocin and Vasopressin in Canine Aggression</td>
<td></td>
</tr>
<tr>
<td>2014-3141</td>
<td>Stockkopf, Michael&lt;br&gt;Harrison, Craig&lt;br&gt;Lewbart, Gregory&lt;br&gt;Kennedy-</td>
<td>Department of Clinical Sciences</td>
<td>NC Department of Environment &amp; Natural Resources (DENR)</td>
<td>$149,512</td>
<td>New Public Service/Extension</td>
<td>Aquarium Health Management (2014-2015)</td>
<td></td>
</tr>
<tr>
<td>Project Number</td>
<td>PIs</td>
<td>Department</td>
<td>Funding Source</td>
<td>Budget</td>
<td>Status</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>----------------</td>
<td>-----</td>
<td>------------</td>
<td>----------------</td>
<td>--------</td>
<td>--------</td>
<td>------</td>
<td>-------------</td>
</tr>
<tr>
<td>2015-0191</td>
<td>Stockopf, Suzanne, Michael Harms, Craig Nienath, Jennifer Bembenek-Dulley, Susannah</td>
<td>Department of Clinical Sciences</td>
<td>University of California - Davis (California State Department of Fish and Wildlife)</td>
<td>$10,720</td>
<td>New</td>
<td>Research</td>
<td>Crude Oil and Dispersant Impacts on Hatching Loggerhead Sea Turtles (Caretta caretta)</td>
</tr>
<tr>
<td>2015-0992</td>
<td>Stockopf, Michael Gansaitik, Michael Harms, Craig Eggleton, David Gomez, Shawn</td>
<td>Joint Coll. Department of Clinical Sciences</td>
<td>National Science Foundation (NSF)</td>
<td>$312,631</td>
<td>New</td>
<td>Research</td>
<td>Nanoparticle: Metabolic Dynamics of Physiologic Responses of Bivalves</td>
</tr>
<tr>
<td>2015-1011</td>
<td>Stockopf, Michael</td>
<td>Department of Clinical Sciences</td>
<td>NIC Biotechnology Center</td>
<td>$72,500</td>
<td>New</td>
<td>Facilities</td>
<td>Marine Magnetic Resonance Facility: Oxygen Conservation and Sustainability</td>
</tr>
<tr>
<td>2015-0389</td>
<td>Suter, Steven</td>
<td>Department of Clinical Sciences</td>
<td>Aratana Therapeutics, Inc.</td>
<td>$6,353</td>
<td>TSA</td>
<td>Public Service/Extension</td>
<td>Screening various tumor tissues with 3 different antibodies</td>
</tr>
<tr>
<td>2015-0601</td>
<td>Suter, Steven</td>
<td>Department of Clinical Sciences</td>
<td>Animal Clinical Investigation, LLC (ACI)</td>
<td>$116,281</td>
<td>New</td>
<td>Other</td>
<td>A Multicenter, Randomized, Placebo-Controlled Study of AT-005 in Combination with Clop Chemotherapy in the Treatment of Canine Intermediate and High-Grade T-Cell Lymphomas</td>
</tr>
<tr>
<td>2015-2184</td>
<td>Suter, Steven</td>
<td>Department of Clinical Sciences</td>
<td>Morris Animal Foundation</td>
<td>$62,726</td>
<td>New</td>
<td>Research</td>
<td>Proof of Tington of the Tyrosine Kinase Inhibitors, Toceranib Phosphate and Masitinib, Against Canine Lymphoid Malignancies</td>
</tr>
<tr>
<td>2015-2217</td>
<td>Suter, Steven</td>
<td>Department of Clinical Sciences</td>
<td>Puppy Up Foundation</td>
<td>$63,888</td>
<td>New</td>
<td>Research</td>
<td>Proof of Tington of the Tyrosine Kinase Inhibitors Toceranib Phosphate (Palladium) and Masitinib Masitinib (Keravet) against Canine Lymphoid Malignancies</td>
</tr>
<tr>
<td>2014-1941</td>
<td>Vaden, Shelly</td>
<td>Department of Clinical Sciences</td>
<td>Elanco Animal Health</td>
<td>$0</td>
<td>TSA</td>
<td>Public Service/Extension</td>
<td>Samples of urine and blood from cats with kidney disease</td>
</tr>
<tr>
<td></td>
<td>Department of Clinical Sciences (195001)</td>
<td></td>
<td></td>
<td>$8,368,500</td>
<td>84</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>COLLEGE OF VETERINARY MEDICINE Total</td>
<td></td>
<td></td>
<td>$8,368,500</td>
<td>84</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Grand Total</td>
<td></td>
<td></td>
<td>$8,368,500</td>
<td>84</td>
<td>78 projects</td>
<td></td>
</tr>
</tbody>
</table>

Return to Report Menu
18. Awarded Grants

<table>
<thead>
<tr>
<th>Project ID</th>
<th>Investigator(s)</th>
<th>PI Department</th>
<th>Direct Sponsor</th>
<th>Amount</th>
<th>Type</th>
<th>Category</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013-2007</td>
<td>Burkarder, Adam</td>
<td>Department of Clinical Sciences</td>
<td>Boehringer Ingelheim Vetmedica, Inc (BIVD)</td>
<td>$50,000</td>
<td>Supplement</td>
<td>Training</td>
<td>Boehringer Ingelheim Vetmedica Post-Doctoral Scholar 2013</td>
</tr>
<tr>
<td>2014-0529</td>
<td>Baskova, Petra</td>
<td>Department of Clinical Sciences</td>
<td>Royal Canin R &amp; D</td>
<td>$1,380</td>
<td>Supplement</td>
<td>Research</td>
<td>A Randomized Controlled Trial of the Benefit of Royal Canin Anallergenic Veterinary Diet in Dogs with Spontaneous Protein Allergy Hypersensitivity</td>
</tr>
<tr>
<td>2014-0234</td>
<td>Bildinger, Anthony</td>
<td>Department of Clinical Sciences</td>
<td>Sanomi Pharma America, Inc. Formerly Sociamo Pharmaceuticals, Inc.</td>
<td>$99,312</td>
<td>New</td>
<td>Research</td>
<td>Lubiprostone Stimulation of Stem Cell Recovery in Hypoxic Enterocytes</td>
</tr>
<tr>
<td>2005-0584</td>
<td>Breitendorfer, Eduard</td>
<td>Department of Clinical Sciences</td>
<td>IDEXX Laboratories, Inc.</td>
<td>$56,410</td>
<td>Supplement</td>
<td>Research</td>
<td>Clinical Manifestations of Dogs with Co-Infestations and Co-Exposure to Vector-Borne Pathogens</td>
</tr>
<tr>
<td>2015-1916</td>
<td>Breitendorfer, Eduard</td>
<td>Department of Clinical Sciences</td>
<td>Bristol Galed Labs</td>
<td>$8,400</td>
<td>TSA</td>
<td>Public Service/Extension</td>
<td>Testing of Canine Blood samples with PCR Kit provided by sponsor</td>
</tr>
<tr>
<td>2014-1715</td>
<td>Brezina, Babetta</td>
<td>Department of Clinical Sciences</td>
<td>U.S. Equine Federation</td>
<td>$25,600</td>
<td>New</td>
<td>Research</td>
<td>Activation of the Renin-Angiotension-Aldosterone System in Horses with Mitral or Aortic Valve Regurgitation</td>
</tr>
<tr>
<td>2012-0525</td>
<td>Ziffrein, Johann</td>
<td>Department of Clinical Sciences</td>
<td>National Institutes of Health (NII)</td>
<td>$315,759</td>
<td>New</td>
<td>Research</td>
<td>Functional Disruption of the Bosporus St-S of Salmonella Typhiiniosis</td>
</tr>
<tr>
<td>2013-0385</td>
<td>Gilger, Brian</td>
<td>Department of Clinical Sciences</td>
<td>C.T. Development Switzerland 4SAEL</td>
<td>$15,389</td>
<td>TSA</td>
<td>Public Service/Extension</td>
<td>Ocular Toxicology in Rabbits</td>
</tr>
<tr>
<td>2013-0385</td>
<td>Gilger, Brian</td>
<td>Department of Clinical Sciences</td>
<td>C.T. Development Switzerland 4SAEL</td>
<td>$15,389</td>
<td>TSA</td>
<td>Public Service/Extension</td>
<td>Ocular Toxicology in Rabbits</td>
</tr>
<tr>
<td>2013-0385</td>
<td>Gilger, Brian</td>
<td>Department of Clinical Sciences</td>
<td>C.T. Development Switzerland 4SAEL</td>
<td>$15,389</td>
<td>TSA</td>
<td>Public Service/Extension</td>
<td>Ocular Toxicology in Rabbits</td>
</tr>
<tr>
<td>Year</td>
<td>Project Title</td>
<td>Principal Investigator(s)</td>
<td>Department/College</td>
<td>Sponsoring/Supporting Organization</td>
<td>Amount ($)</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>--------</td>
<td>-------------------------------------------------------------------------------</td>
<td>------------------------------------</td>
<td>-------------------------------------</td>
<td>------------------------------------</td>
<td>------------</td>
<td>-------</td>
<td>------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>2014-2323</td>
<td>Impact of Equine Recurrent Uveitis (ERU) on Horse Owners</td>
<td>Gilger, Brian</td>
<td>Department of Clinical Sciences</td>
<td>Zoetis, LLC</td>
<td>$28,832</td>
<td>New</td>
<td>Research</td>
</tr>
<tr>
<td>2015-0750</td>
<td>Testing of compound in peritoneal model of cancer inflammation</td>
<td>Gilger, Brian</td>
<td>Department of Clinical Sciences</td>
<td>Cleurside Biomedical, Inc.</td>
<td>$29,800</td>
<td>TSA</td>
<td>Research</td>
</tr>
<tr>
<td>2015-1298</td>
<td>Effect Of Bone Marrow-derived Mesenchymal Stem Cells And Stem Cell Suppressor On Equine Corneal Wound Healing In Vivo</td>
<td>Gilger, Brian, Schnabel, Lauren, Sherman, Amanda</td>
<td>Department of Clinical Sciences</td>
<td>AVCO Vision for Animals Foundation</td>
<td>$5,000</td>
<td>New</td>
<td>Research</td>
</tr>
<tr>
<td>2015-1907</td>
<td>Evaluation of sponsors therapeutic on a model of uveitis in pigs</td>
<td>Gilger, Brian</td>
<td>Department of Clinical Sciences</td>
<td>Cleurside Biomedical, Inc.</td>
<td>$20,346</td>
<td>TSA</td>
<td>Research</td>
</tr>
<tr>
<td>2014-3082</td>
<td>Center for Gastrointestinal Biology Disease</td>
<td>Gonzalez, Lisar, Bublitzger, Anthony</td>
<td>Department of Clinical Sciences</td>
<td>UNC - UNC Chapel Hill (National Institute of Diabetes and Digestive and Kidney Diseases)</td>
<td>$35,000</td>
<td>New</td>
<td>Research</td>
</tr>
<tr>
<td>2011-0029</td>
<td>Merial Veterinary Scholars Program (Summer 2014)</td>
<td>Gookin, Jody, Jones, Samuel, Meus, Kathryn, Dorman, David</td>
<td>Joint Dept. Department of Clinical Sciences</td>
<td>Merial, Inc. formerly Merial Limited</td>
<td>$5,000</td>
<td>Supplement</td>
<td>Research</td>
</tr>
<tr>
<td>2014-1616</td>
<td>Enteropathogenic E. Coli infection in Kittens Evidenced for a Pathogenic Role in Diarrheal Death and Protective Effect of Probiotics</td>
<td>Gookin, Jody</td>
<td>Department of Clinical Sciences</td>
<td>Winn Feline Foundation</td>
<td>$22,011</td>
<td>New</td>
<td>Research</td>
</tr>
<tr>
<td>2014-2649</td>
<td>Measure of pharmaceutical permeability across alimentary</td>
<td>Gookin, Jody</td>
<td>Department of Clinical Sciences</td>
<td>Procter &amp; Gamble Co.</td>
<td>$10,000</td>
<td>TSA</td>
<td>Public Service/Extension</td>
</tr>
<tr>
<td>2014-2303</td>
<td>Use of Thromboelastography for Monitoring Unfractionated Heparin Therapy in Normal Canines</td>
<td>Hand, Rita, McLaughlin, Christopher, Motsinger-Rief, Allison, Dorman, David, Marks, Steven</td>
<td>Joint Coll. Department of Clinical Sciences</td>
<td>NC Veterinary Medical Foundation, Inc. (Firestone Canine Research Foundation)</td>
<td>$2,500</td>
<td>New</td>
<td>Research</td>
</tr>
<tr>
<td>2015-0776</td>
<td>Early Use of Tissue Plasminogen Activator for Thrombolyis in Feline Aortic Thrombembolism</td>
<td>Hand, Rita, DeFrancesco, Teresa</td>
<td>Department of Clinical Sciences</td>
<td>Ohio State University (Morris Animal Foundation)</td>
<td>$10,280</td>
<td>New</td>
<td>Research</td>
</tr>
<tr>
<td>2014-1359</td>
<td>Investigator Initiated STUDY PROTOCOL Anti-TNF Monoclonal Antibody + CHOP Chemotherapy in Dogs with B-Cell Lymphoma</td>
<td>Haack, Marlene, Brandes, Ashley</td>
<td>Department of Clinical Sciences</td>
<td>Novartis Animal Health Inc.</td>
<td>$65,428</td>
<td>New</td>
<td>Research</td>
</tr>
<tr>
<td>2014-2721</td>
<td>Prospective, Multicentre, Randomised, Double-Blind</td>
<td>Haack, Marlene</td>
<td>Department of Clinical</td>
<td>AB Science</td>
<td>$29,468</td>
<td>New</td>
<td>Research</td>
</tr>
<tr>
<td>Date</td>
<td>Principal Investigator(s)</td>
<td>Department</td>
<td>Institution</td>
<td>Budget</td>
<td>Type</td>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>------------</td>
<td>---------------------------</td>
<td>--------------------</td>
<td>----------------------</td>
<td>--------------</td>
<td>---------</td>
<td>-----------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>2014-2721</td>
<td>Hanock, Marlene</td>
<td>Department of Clinical Sciences</td>
<td>AB Science</td>
<td>$16,352</td>
<td>Supplement</td>
<td>Research Placebocontrolled, 2-Parallel Groups, Phase 3 Study to Compare Efficacy and Safety of Mammalian to Placebo in the Treatment of Grade 2-3 Non-Resectable Mast Cell Tumors in Dogs Not Previously Treated by Chemotherapy (other than Corticosteroids) or Radiotherapy</td>
<td></td>
</tr>
<tr>
<td>2014-2721</td>
<td>Hanock, Marlene</td>
<td>Department of Clinical Sciences</td>
<td>AB Science</td>
<td>$36,202</td>
<td>Supplement</td>
<td>Research Prospective, Multicentre, Randomised, Double-Blind, Placebocontrolled, 2-Parallel Groups, Phase 3 Study to Compare Efficacy and Safety of Mammalian to Placebo in the Treatment of Grade 2-3 Non-Resectable Mast Cell Tumors in Dogs Not Previously Treated by Chemotherapy (other than Corticosteroids) or Radiotherapy</td>
<td></td>
</tr>
<tr>
<td>2014-2232</td>
<td>Hess, Paul</td>
<td>Department of Clinical Sciences</td>
<td>Morris Animal Foundation</td>
<td>$45,887</td>
<td>New</td>
<td>Research Development of an MHC class I tetramer to study virus- and tumor-specific CD8+ T-cell responses in dogs</td>
<td></td>
</tr>
<tr>
<td>2012-0816</td>
<td>Jones, Samuel</td>
<td>Department of Clinical Sciences</td>
<td>National Institutes of Health (NIH)</td>
<td>$126,900</td>
<td>Continuation</td>
<td>Research Targeting the Marked-Family Proteins to Inhibit Neutrophil Migration</td>
<td></td>
</tr>
<tr>
<td>2014-1597</td>
<td>Jones, Samuel</td>
<td>Department of Clinical Sciences</td>
<td>American Heart Association</td>
<td>$50,000</td>
<td>New</td>
<td>Research MARCKS as a Therapeutic Target for Neutrophil Injury in Cardiovascular Disease</td>
<td></td>
</tr>
<tr>
<td>2014-2474</td>
<td>Jones, Samuel</td>
<td>Department of Clinical Sciences</td>
<td>National Institutes of Health (NIH)</td>
<td>$72,025</td>
<td>New</td>
<td>Research Interdisciplinary Biomedical Research Training Program</td>
<td></td>
</tr>
<tr>
<td>2014-1184</td>
<td>Lacelle, Duncan</td>
<td>Department of Clinical Sciences</td>
<td>Novartis Animal Health Inc.</td>
<td>$1,280</td>
<td>Supplement</td>
<td>Research Evaluation of the Efficacy and Safety of Onaron (robenacoxib) Tablets Versus Placebo using Activity Monitors in Cats with</td>
<td></td>
</tr>
<tr>
<td>Project ID</td>
<td>Principal Investigator(s)</td>
<td>Department of Clinical Sciences</td>
<td>Funding Agency</td>
<td>Amount</td>
<td>Type</td>
<td>Area of Research</td>
<td></td>
</tr>
<tr>
<td>-------------</td>
<td>-------------------------------------------</td>
<td>---------------------------------</td>
<td>------------------------------</td>
<td>--------</td>
<td>----------</td>
<td>----------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>2015-0218</td>
<td>Larocelli, Duncan Vaden, Shelly Messenger, Kristen Green, Margaret Griffith, Emily</td>
<td>Joint Coll.</td>
<td>Winn Feline Foundation</td>
<td>$22,815</td>
<td>New</td>
<td>Research Study: Chronic Musculo-Skeletal Disorder, a Randomized, Blinded Clinical Trial</td>
<td></td>
</tr>
<tr>
<td>2011-2033</td>
<td>Lewbart, Gregory Harms, Craig Christian, Larry</td>
<td>Department of Clinical Sciences</td>
<td>NC Department of Environment &amp; Natural Resources (DENR)</td>
<td>$4,000</td>
<td>Supplement</td>
<td>Public Service/Extension: Evaluation of Inflammatory Mediator Profile in Osteoarthritis with Pain Associated with Naturally-Occurring Degenerative Joint Disease</td>
<td></td>
</tr>
<tr>
<td>2014-1756</td>
<td>Lewbart, Gregory Harms, Craig Christian</td>
<td>Department of Clinical Sciences</td>
<td>NC Department of Environment &amp; Natural Resources (DENR)</td>
<td>$60,000</td>
<td>New</td>
<td>Public Service/Extension: Veterinary Medical Services Rendered to the North Carolina Museum of Natural Sciences</td>
<td></td>
</tr>
<tr>
<td>2015-0618</td>
<td>Luna, Katherine Royal PhD, Kenneth Schoenfeld, Regina</td>
<td>Joint Dept.</td>
<td>American College of Veterinary Integrative Medicine Foundation</td>
<td>$27,000</td>
<td>New</td>
<td>Research Study: ACVIM Foundation Fellowship in Advanced Clinical Training</td>
<td></td>
</tr>
<tr>
<td>2015-1247</td>
<td>Maggi, Ricardo</td>
<td>Department of Clinical Sciences</td>
<td>UNC - Appalachian State University</td>
<td>$3,975</td>
<td>TSA</td>
<td>Public Service/Extension: Tick Testing (n=103) for intracellular pathogens</td>
<td></td>
</tr>
<tr>
<td>2014-3022</td>
<td>Nolan, Michael Diego, Tracy</td>
<td>Department of Clinical Sciences</td>
<td>Immunolight LLC</td>
<td>$69,723</td>
<td>New</td>
<td>Research Study: Immunolight Therapy for Canine Malignancies: A Feasibility Study</td>
<td></td>
</tr>
<tr>
<td>2015-0650</td>
<td>Olby, Natasha</td>
<td>Department of Clinical Sciences</td>
<td>American Kennel Club Canine Health Foundation, Inc.</td>
<td>$37,530</td>
<td>New</td>
<td>Research Study: Investigation of Quantitative Tmt. Loci and Sensory Thresholds in Chiar-like Malformations and Syringomyelia in Cavalier King Charles Spaniels</td>
<td></td>
</tr>
<tr>
<td>2015-1245</td>
<td>Olivry, Thierry</td>
<td>Department of Clinical Sciences</td>
<td>LEO Pharma A/S</td>
<td>$266,096</td>
<td>TSA</td>
<td>Public Service/Extension: Testing of novel antiallergic drugs in a dog allergy model</td>
<td></td>
</tr>
<tr>
<td>2015-1695</td>
<td>Olivry, Thierry</td>
<td>Department of Clinical Sciences</td>
<td>LEO Pharma A/S</td>
<td>$173,335</td>
<td>New</td>
<td>Research Study: Post-doctoral Fellowship to Study Experimental Murine-induced Atopic Inflammation in the Skin of Mite-sensitized Dogs</td>
<td></td>
</tr>
<tr>
<td>2014-0415</td>
<td>Schabbel, Lauren</td>
<td>Department of Clinical Sciences</td>
<td>National Institutes of Health (NIH)</td>
<td>$647</td>
<td>Supplement</td>
<td>Research: Equine iPS Cells and Their Ability to Enhance Tendon Regeneration In Vivo</td>
<td></td>
</tr>
<tr>
<td>2014-0454</td>
<td>Schabbel, Lauren</td>
<td>Department of Clinical Sciences</td>
<td>National Institutes of Health (NIH)</td>
<td>$126,088</td>
<td>Continuation</td>
<td>Research: Equine iPS Cells and Their Ability to Enhance Tendon Regeneration In Vivo</td>
<td></td>
</tr>
</tbody>
</table>
Intramural Grants Awarded

**NCSU Grants**

**Bailey S.** Identification of equine uterine fluid characteristics which inhibit TMS and comparison of TMS, TMS and Rifampin or Penicillin and Gentamicine in uterine fluid ex vivo. 2015, $24,606.

**Elfenbein J.** Role of phophonate utilization in enteric salmonellosis. 2015, $25,000.

**Gookin J.** Proof of disease causation of EPEC in kittens has translational benefits for improving survival in children. 2015, $10,000.

**Lascelles D.** Analysis of activation of phenotypically-distinct neuronal populations in a novel mouse model of fear-conditioned analgesia. 2015, $19,723.

**Nolan M.** Pilot study: Examining the feasibility of a mouse model for radiation-induced pain and itch. 2015 $24,413.

**Mariani CL** (PI), **Early PJ** (Co-I), **Munana KR** (Co-I), **Olby NJ** (Co-I). Creation of a blended, team-based course module for teaching clinical neurology to veterinary students. 2014, $2,648.

**Olby N.** Laber EB, Sawicki GS. Relationship between gait analysis, MRI findings and response to potassium channel blockade in chronically paralyzed dogs: a personalized medicine pilot study. 2015 (NCSU Research and Innovation See Funding Program) $24,340.

**Risselada M.** In vivo assessment of elution and safety of locally instilled carboplatin in Pluronic F127 in the perineal subcutaneous in a rodent model. 2015, $22,714.

**Suter S.** Proof of target of the tyrosine kinase inhibitors, toceranib phosphate (Palladia) and masatinib mesylate (Kinavet), against canine lymphoid malignancies. 2015, $12,580.

**NCSU-CVM Department of Clinical Sciences Grants**

Kelsey K (PI), Nolan M, Gieger T, Lascelles BDX. A placebo controlled pilot study of NSAID use in dogs with acute radiation induced dermatitis. 2015 (Department of Clinical Sciences Veterinary Practice Plan) $3,000.
19. Currently Active Grants

Search Results (57 projects)

department is Department of Clinical Sciences (PI department only), project is currently active.

Project ID: Descending order

Create a New Query  Jump to a Project  Go to Record  Return to Main Menu

<table>
<thead>
<tr>
<th>Project ID</th>
<th>Title</th>
<th>Investigator(s)</th>
<th>PI Department</th>
<th>Sponsor</th>
<th>Status</th>
<th>Amount Awarded/ Contract Number</th>
<th>Current Award Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1951)</td>
<td>COT 020: Evaluation of Oraly Administered TOR Inhibitor Rapticyn in Dogs with Osteosarcoma</td>
<td>Hauck, Marlene L.</td>
<td>Department of Clinical Sciences</td>
<td>Morris Animal Foundation</td>
<td>Awarded</td>
<td>$12,898.00 D142A-507 (8.0% - D - A)</td>
<td>04/01/2015 through 03/31/2016</td>
</tr>
<tr>
<td>(1952)</td>
<td>Post-doctoral Fellowship to Study Experimental MS-induced Atopic Inflammation in the Skin of Mice-Sensitized Dogs</td>
<td>Clary, Thiriry J.</td>
<td>Department of Clinical Sciences</td>
<td>LEO Pharma A/S</td>
<td>Awarded</td>
<td>$173,325.00 02 through 03/30/2015</td>
<td>$51.5% - E -</td>
</tr>
<tr>
<td>(1953)</td>
<td>Testing of Novel Anti-Allergic Drugs in a Dog Model of Atopic Dermatitis</td>
<td>Clary, Thiriry J., Farnon, Wolfgang</td>
<td>Department of Clinical Sciences</td>
<td>LEO Pharma A/S</td>
<td>Awarded</td>
<td>$81,035.00 01 through 03/30/2017</td>
<td>$51.5% - E -</td>
</tr>
<tr>
<td>(1954)</td>
<td>Effect Of Bone Marrow-derived Mesenchymal Stem Cells And Stem Cell Supersaturation on Epidermal Wound Healing In Vitro</td>
<td>Gilger, Eitan C., Schade, Lauren V., Shearn, Amanda B</td>
<td>Department of Clinical Sciences</td>
<td>AVCO Vision for Animals Foundation</td>
<td>Awarded</td>
<td>$5,000.00 VAF-2015-04 (0.0% - A)</td>
<td>07/31/2015 through 06/30/2016</td>
</tr>
<tr>
<td>(1955)</td>
<td>Early Use of Tissue Plasmogen Activator for Thrombosis in Pulmonary Aortic Thrombotic Thrombosis</td>
<td>Hazel, Rita DeFrancisco, Teresa C</td>
<td>Department of Clinical Sciences</td>
<td>Ohio State University (Dana - Morris Animal Foundation)</td>
<td>Awarded</td>
<td>$10,260.00 09/24/2015 (0.0% - D - A)</td>
<td>10/31/2015 through 03/30/2016</td>
</tr>
<tr>
<td>(1956)</td>
<td>ACOVIM Foundation Fellowship in Advanced Clinical Training</td>
<td>Lunn, Katherine Pinna, Royal PhD, Berndt, Doris, Schneid, Regina M</td>
<td>Department of Clinical Sciences</td>
<td>American College of Veterinary Internal Medicine Foundation</td>
<td>Awarded</td>
<td>$27,000.00 14-F2 (0.0% - D - A)</td>
<td>07/31/2016 through 07/15/2016</td>
</tr>
<tr>
<td>(1957)</td>
<td>D SISE-002: Absorption of Single Dose Transdermal Primonab in Healthy Cats</td>
<td>Torn, Sandra Fus-Hui, Woodruff, Kathleen, Dassonne, Gigi S, Fonsch, Mark G.</td>
<td>Department of Clinical Sciences</td>
<td>Morris Animal Foundation</td>
<td>Awarded</td>
<td>$5,250.00 D152E-302 (0.0% - D - A)</td>
<td>09/30/2015 through 09/30/2015</td>
</tr>
<tr>
<td>(1958)</td>
<td>Functional Expression of the Retino St-85 of Salmonella Typhimurium</td>
<td>Blenkinsop, Johanna Rebecca</td>
<td>Department of Clinical Sciences</td>
<td>National Institutes of Health (NIH)</td>
<td>Awarded</td>
<td>$153,759.00 7R08AI107794-1 (0.0% - B -)</td>
<td>07/30/2014 through 05/04/2015</td>
</tr>
<tr>
<td>(1959)</td>
<td>Evaluation of Inflammatory Mediator Profiles in Cats with Pain Associated</td>
<td>Lascelle, Dinna</td>
<td>Department of Clinical Sciences</td>
<td>Winifred Feline Foundation</td>
<td>Awarded</td>
<td>$22,815.00 WZ14-405 (0.0% - B -)</td>
<td>08/14/2014 through 08/14/2014</td>
</tr>
</tbody>
</table>

1 of 6 4/3/2015 11:50 AM
<table>
<thead>
<tr>
<th>Project Title</th>
<th>Principal Investigator(s)</th>
<th>Department of Clinical Sciences</th>
<th>Awarded by</th>
<th>Award Amount(s)</th>
<th>Start Date</th>
<th>End Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>D15EQ-018: Evaluation of Minocycline as a Novel Anti-inflammatory Drug in Horses</td>
<td>Jones, Samuel L., Davis, Jennifer L.</td>
<td>Morris Animal Foundation</td>
<td>Awarded</td>
<td>$15,608.00 (D15EQ-018)</td>
<td>03/01/2015</td>
<td>02/28/2017</td>
</tr>
<tr>
<td>Crude Oil and Dispersant Impacts on Hatching Loggerhead Sea Turtles (Caretta caretta)</td>
<td>Stockopf, Michael K., Harmer, Craig A., Nisworn, Jennifer Nicole Bembenek-Bailey, Stasia</td>
<td>Department of Clinical Sciences</td>
<td>University of California - Davis (Prime-California State Department of Fish and Wildlife)</td>
<td>Awarded</td>
<td>$10,720.00 (201500783-07)</td>
<td>10/01/2014</td>
</tr>
<tr>
<td>Investigation of Quantitative Trait Loci and Sensory Thresholds in Chirp-like Malformations and Syringomyelia in Ceviato King Charles Spaniels</td>
<td>Gilby, Natasha</td>
<td>Department of Clinical Sciences</td>
<td>American Kennel Club Canine Health Foundation, Inc.</td>
<td>Awarded</td>
<td>$37,550.00 (02462)</td>
<td>01/01/2015</td>
</tr>
<tr>
<td>Center for Gastroenterological Biology Disease</td>
<td>Gonzalez, Llani, Biskelager, Anthony T.</td>
<td>Department of Clinical Sciences</td>
<td>UNC - UNC Chapel Hill (Prime-National Institute of Diabetes and Digestive and Kidney Diseases)</td>
<td>Awarded</td>
<td>$85,000.00 (5100090)</td>
<td>12/01/2013</td>
</tr>
<tr>
<td>Immunolight Therapy for Canine Maligancies: A Feasibility Study</td>
<td>Nolan, Michael, Warren, Ginger, Tracy Lyn</td>
<td>Department of Clinical Sciences</td>
<td>Immunolight LLC</td>
<td>Awarded</td>
<td>$69,725.00 (2014-3022)</td>
<td>07/01/2014</td>
</tr>
<tr>
<td>Gaining Experience with PetPace Collars</td>
<td>Lascelles, Duncan</td>
<td>Department of Clinical Sciences</td>
<td>PetPace LTD</td>
<td>Awarded</td>
<td>$0.00 (2014-2830)</td>
<td>12/12/2014</td>
</tr>
<tr>
<td>Prospective, Multi-centre, Randomised, Double-Blind, Placebo-controlled, 2-Parallel Groups, Phase 3 Study to Compare Efficacy and Safety of Maitrinib to Placebo in the Treatment of Grade 2-3 Non-Resectable Metastatic Tumours in Dogs Not Previously Treated by Chemotherapy (other than Corticosteroids) or Radiotherapy</td>
<td>Hauck, Marlene L.</td>
<td>Department of Clinical Sciences</td>
<td>AB Science</td>
<td>Awarded</td>
<td>$82,082.00 (AB07008)</td>
<td>06/26/2014</td>
</tr>
<tr>
<td>Collaborative Research Agreement</td>
<td>Marcellin-Little, Denis J., Harryson, Ola L.</td>
<td>Department of Clinical Sciences</td>
<td>DefPep Synthes</td>
<td>Awarded</td>
<td>$5.00 (2014-2549)</td>
<td>06/13/2014</td>
</tr>
<tr>
<td>Interdisciplinary Biomedical Research Training Program</td>
<td>Jones, Samuel L.</td>
<td>Department of Clinical Sciences</td>
<td>National Institutes of Health (NIH)</td>
<td>Awarded</td>
<td>$72,025.00 (ZT350D01070-06)</td>
<td>09/01/2014</td>
</tr>
<tr>
<td>Year</td>
<td>Project Title</td>
<td>Principal Investigator(s)</td>
<td>Department</td>
<td>Foundation</td>
<td>Awarded</td>
<td>Award Period</td>
</tr>
<tr>
<td>------</td>
<td>---------------</td>
<td>---------------------------</td>
<td>------------</td>
<td>------------</td>
<td>---------</td>
<td>--------------</td>
</tr>
<tr>
<td>2014-2232</td>
<td>Development of an MHC class I tetramer to study virus- and tumor-specific CD8+ T-cell responses in dogs</td>
<td>Hess, Paul R</td>
<td>Department of Clinical Sciences</td>
<td>Morris Animal Foundation</td>
<td>$45,887.00</td>
<td>09/01/2014 through 08/31/2015</td>
</tr>
<tr>
<td>2014-2134</td>
<td>Validation of Efficacy of an Innovative Strategy to Prevent Colonization and Diarrhea Caused by Enteropathogenic E. coli (EPEC) using Host-Derived Commercial Enterococci</td>
<td>Gruenig, Jody L. Bruno-Bacceus, Joseph Jacob, Megan E</td>
<td>Department of Clinical Sciences</td>
<td>NC State Research and Innovation Seed Funding Program</td>
<td>$25,000.00</td>
<td>07/01/2014 through 06/30/2015</td>
</tr>
<tr>
<td>2014-2034</td>
<td>Luteinizing Hormone Stimulation of Stem Cell Recovery in Hypoxic Endothelial Cells</td>
<td>Biakalager, Anthony T.</td>
<td>Department of Clinical Sciences</td>
<td>Sandoz Pharma America Inc.</td>
<td>$90,322.00</td>
<td>05/01/2014 through 04/30/2016</td>
</tr>
<tr>
<td>2014-2028</td>
<td>Pilot Proof Of Principle Evaluation Of The Pain Alleviating Effects Of Subcutaneously Delivered Ns-02 In Cuts Suffering From Degenerative Joint Disease (DJD)-Associated Pain - Task Order #5 (Confidential)</td>
<td>Lascelles, Duncan B., Murnane, Margaret E</td>
<td>Department of Clinical Sciences</td>
<td>Nexvet Biopharma Pty Ltd</td>
<td>$159,027.00</td>
<td>03/31/2014 through 07/31/2015</td>
</tr>
<tr>
<td>2014-1756</td>
<td>Proposal for Veterinary Medical Services Rendered to the NC Museum of Natural Sciences</td>
<td>Lewbart, Gregory A., Harms, Craig A</td>
<td>Department of Clinical Sciences</td>
<td>NC Department of Environment &amp; Natural Resources (DENR)</td>
<td>$60,000.00</td>
<td>07/01/2014 through 06/30/2017</td>
</tr>
<tr>
<td>2014-1715</td>
<td>Activation of the Renin-Angiotensin-Aldosterone System in Horses with Mitral or Aortic Valve Regurgitation</td>
<td>Bremhara, Balvarta A.</td>
<td>Department of Clinical Sciences</td>
<td>US Equestrian Federation</td>
<td>$25,000.00</td>
<td>08/15/2014 through 08/14/2016</td>
</tr>
<tr>
<td>2014-1648</td>
<td>Improving Outcome in Dogs With Glomerular Disease Via Pharmacodynamic-Based Dosing of Enalapril</td>
<td>Vaden, Shelly L.</td>
<td>Department of Clinical Sciences</td>
<td>Morris Animal Foundation</td>
<td>$124,825.00</td>
<td>03/01/2014 through 02/29/2016</td>
</tr>
<tr>
<td>2014-1616</td>
<td>Enteropathogenic E. coli infection in Kitten-Evidence for a Pathogenic Role in Diarrheal Deaths and Protective Effect of Probiotics</td>
<td>Gruenig, Jody L</td>
<td>Department of Clinical Sciences</td>
<td>Winn Feline Foundation</td>
<td>$22,011.00</td>
<td>06/01/2014 through 05/31/2015</td>
</tr>
<tr>
<td>2014-1596</td>
<td>MARCKS as a Therapeutic Target for Nephrotic Injury in Cardiovascular Disease</td>
<td>Jones, Samuel L. Medlin, Emily Gray</td>
<td>Department of Clinical Sciences</td>
<td>American Heart Association</td>
<td>$50,000.00</td>
<td>07/01/2014 through 06/30/2015</td>
</tr>
<tr>
<td>2014-1369</td>
<td>Investigator Initiated STUDY PROTOCOL Anti-CD20 Monoclonal Antibody + CHOP Chemotherapy in Dogs with B-Cell Lymphoma (Confidential)</td>
<td>Hauck, Marlene L. Brandes, Ashley Lynn</td>
<td>Department of Clinical Sciences</td>
<td>Novartis Animal Health Inc.</td>
<td>$65,428.00</td>
<td>11/20/2014 through 11/19/2015</td>
</tr>
<tr>
<td>Year</td>
<td>Title</td>
<td>Lead Investigator(s)</td>
<td>Department</td>
<td>Awarded Amount</td>
<td>Awarded Start Date</td>
<td>Awarded End Date</td>
</tr>
<tr>
<td>------</td>
<td>-----------------------------------------------------------------------</td>
<td>---------------------------------</td>
<td>-------------------------------------</td>
<td>-----------------------------</td>
<td>------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>1950</td>
<td>Pilot Evaluation of the Pain Allieving Effects of Subcutaneously Delivered WV-01 in Canine Osteoarthritis - Task Order #4 (Confidential)</td>
<td>Lascelles, Duncan</td>
<td>Department of Clinical Sciences</td>
<td>$131,706.00 (Task Order #4)</td>
<td>01/01/2014</td>
<td>04/30/2015</td>
</tr>
<tr>
<td>1950</td>
<td>Evaluation of the Efficacy and Safety of Omniform (robenacoxib) Tablets Versus Placebo using Activity Monitors in Cats with Chronic Musculo-skeletal Disorder, a Randomized, Blinded Clinical Trial (Confidential)</td>
<td>Lascelles, Duncan</td>
<td>Department of Clinical Sciences</td>
<td>$345,012.00 (2014-1184)</td>
<td>05/01/2014</td>
<td>04/30/2016</td>
</tr>
<tr>
<td>1950</td>
<td>A Randomized Controlled Trial of the Benefit of Royal Canin Allergenic Veterinary Diet in Dogs with Spontaneous Pruritic Chicken Hypersensitivities</td>
<td>Bisikova, Petra Oblivny, Thierry J.</td>
<td>Department of Clinical Sciences</td>
<td>$28,509.00 (2014-0529)</td>
<td>09/23/2013</td>
<td>06/22/2015</td>
</tr>
<tr>
<td>1950</td>
<td>Equine iPSC Cells and Their Ability to Enhance Tendon Regeneration in Vivo</td>
<td>Schabel, Lauren V</td>
<td>National Institutes of Health (NIH)</td>
<td>$231,935.00 (7K08AR069875-03 REvised (8.0% - B - A)</td>
<td>08/15/2013</td>
<td>04/30/2015</td>
</tr>
<tr>
<td>1950</td>
<td>Sea Turtle Cold Stun Pathogenesis</td>
<td>Stokofil, Michael K.</td>
<td>Department of Clinical Sciences</td>
<td>$18,000.00 (0486,12013)</td>
<td>12/01/2013</td>
<td>11/30/2016</td>
</tr>
<tr>
<td>1950</td>
<td>Angiogenesis Biomarkers in Dogs with Osteoarthritis</td>
<td>Hess, Paul R.; Hallman, Brian; Flye; Williams, Laurel E.; Mobley, Jensen Lynn</td>
<td>Department of Clinical Sciences</td>
<td>$6,818.00 (0.0% - A)</td>
<td>06/01/2013</td>
<td>05/31/2015</td>
</tr>
<tr>
<td>1950</td>
<td>Boehringer Ingelheim Vetmedica Post-Doctoral Scholar 2013</td>
<td>Birkenheuer, Adam Bredemeier, Edward B. Pritchard, Jessica Christine</td>
<td>Department of Clinical Sciences</td>
<td>$100,000.00 (0.0% - A)</td>
<td>08/01/2013</td>
<td>07/31/2015</td>
</tr>
<tr>
<td>1950</td>
<td>Metabolic and Transcriptional Biomarkers of Cholesterol and Lipid Imbalance in Dogs With and Without Diagnosis of a Gallbladder Mucocele</td>
<td>Goodey, Jody L.; Cullen, John M.; Mathews, Kyle G.; Griffith, Emily Hohmeister Seiler, Gabriela S. Lann, Katherine Homa</td>
<td>Department of Clinical Sciences</td>
<td>$135,354.00 (01967 (8.0% - B - A)</td>
<td>01/01/2014</td>
<td>12/31/2015</td>
</tr>
<tr>
<td>1950</td>
<td>Mechanisms of Chloride Channel ClC-2 Mediated Tight Junction Repair</td>
<td>Boklagler, Anthony T.</td>
<td>Department of Clinical Sciences</td>
<td>$127,834.00 (2013-2516)</td>
<td>07/01/2013</td>
<td>05/31/2015</td>
</tr>
<tr>
<td>1950</td>
<td>Master Agreement with LEO Pharma, Inc.</td>
<td>Oblivny, Thierry J.</td>
<td>Department of Clinical Sciences</td>
<td>$0.00 (2013-0969)</td>
<td>10/01/2014</td>
<td>03/30/2015</td>
</tr>
<tr>
<td>1950</td>
<td>Functional Tissue Engineering for Cartilage Repair (Hybrid Composite Scaffolds for Cartilage Tissue Engineering)</td>
<td>Lascelles, Duncan</td>
<td>Department of Clinical Sciences</td>
<td>$501,647.00 (2D48AR055040-02 (51.5% - B - A)</td>
<td>07/24/2013</td>
<td>06/30/2015</td>
</tr>
<tr>
<td>Project ID</td>
<td>Details</td>
<td>Project Title</td>
<td>Investigator(s)</td>
<td>Department</td>
<td>Sponsor</td>
<td>Awarded</td>
</tr>
<tr>
<td>------------</td>
<td>---------</td>
<td>---------------</td>
<td>----------------</td>
<td>------------</td>
<td>--------</td>
<td>---------</td>
</tr>
<tr>
<td>119</td>
<td>Regenerative Medicine Approaches To The Treatment Of Urinary Incontinence</td>
<td>Vadala, Shelly L., Mathews, Kyle G., Pedrahita, Jorge A., Reynolds, Hannah, Manning, Kristin</td>
<td>Department of Clinical Sciences</td>
<td>American Kennel Club Canine Health Foundation, Inc.</td>
<td></td>
<td>$116,184.00</td>
</tr>
<tr>
<td>120</td>
<td>Clinical Study Protocol US/CLI /C635/1101: Evaluation of C635, In Comparison To Benazepril, In Dogs with Heart Failure Caused By Left Ventricular Ventricular Insufficiency (LVVI)</td>
<td>DeFrancesco, Teresa C., Keene, Bruce W., Metars, Kathryn, Montague, Susan, Pri-Hua, Woodruff, Kathleen, Atkin, Clara E., Ames, Marisa, Koya</td>
<td>Department of Clinical Sciences</td>
<td>AlcheraBio LLC (Prime--Ceva Sanvee Animale S.A.)</td>
<td></td>
<td>$48,840.00</td>
</tr>
<tr>
<td>121</td>
<td>MAF Fellowship Training: Evaluation of Central Sensitization Associated with Painful Osteoarthritis in Dogs</td>
<td>Lacasse, Duncan, Crome, Margaret</td>
<td>Department of Clinical Sciences</td>
<td>Morris Animal Foundation</td>
<td></td>
<td>$100,000.00</td>
</tr>
<tr>
<td>122</td>
<td>Prevention of Cytomegalo Virus Infection in Domestic Cats</td>
<td>Barkemuner, Adam, Bird, David M., Levy, Michael G.</td>
<td>Department of Clinical Sciences</td>
<td>ALSAM Foundation</td>
<td></td>
<td>$50,000.00</td>
</tr>
<tr>
<td>123</td>
<td>A Pilot Field Study to Evaluate Efficacy and Toxicity of FPL 25771 in Cats with Degenerative Joint Disease</td>
<td>Lacasse, Duncan, Crome, Margaret</td>
<td>Department of Clinical Sciences</td>
<td>Boehringer Ingelheim Vetmedica, Inc. (BIVI)</td>
<td></td>
<td>$222,945.00</td>
</tr>
<tr>
<td>124</td>
<td>Studies into the Presence of and Measurement of Central Sensitization Associated With Chronic Painful Disease in Dogs: Phase I</td>
<td>Lacasse, Duncan, Crome, Margaret</td>
<td>Department of Clinical Sciences</td>
<td>Boehringer Ingelheim Vetmedica, Inc. (BIVI)</td>
<td></td>
<td>$124,940.00</td>
</tr>
<tr>
<td>125</td>
<td>Targeting the Murine-Family Protein to Inhibit Neutrophil Migration</td>
<td>Jones, Samuel L., Shels, Mary, Katherine</td>
<td>Department of Clinical Sciences</td>
<td>National Institute of Health (NIH)</td>
<td></td>
<td>$356,482.00</td>
</tr>
<tr>
<td>126</td>
<td>Prevention and Treatment of Cytomegalo Virus Infection</td>
<td>Barkemuner, Adam, Bird, David M., Breitning, Michael G., Turigo, Jaime, Lynn, Schell, Elizabeth</td>
<td>Department of Clinical Sciences</td>
<td>ALSAM Foundation</td>
<td></td>
<td>$50,000.00</td>
</tr>
<tr>
<td>127</td>
<td>Evaluation of Pimobendan in Dogs with Cardiomegaly Caused by Proclinical Mitral Valve Disease - EPIC</td>
<td>Kerne, Bruce W., Akins, Clarke E., DeFrancesco, Teresa C., Toa, Sandra</td>
<td>Department of Clinical Sciences</td>
<td>Boehringer Ingelheim Vetmedica, Inc. (BIVI)</td>
<td></td>
<td>$30,650.00</td>
</tr>
<tr>
<td>ID</td>
<td>Details</td>
<td>Project Title</td>
<td>Investigator(s)</td>
<td>Institution</td>
<td>Awarded Amount</td>
<td>Awarded Period</td>
</tr>
<tr>
<td>------</td>
<td>---------</td>
<td>--------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------</td>
<td>--------------------------------------------------</td>
<td>----------------</td>
<td>-------------------------------------</td>
</tr>
<tr>
<td>120</td>
<td></td>
<td>Exposing the &quot;Genomic Landscape&quot; of Canine Soft Tissue Sarcomas</td>
<td>Hanck, Marlene L.</td>
<td>Department of Clinical Sciences</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Validation of a Novel NF-kB Inhibitor in Inflammatory Bowel Disease (previous title: Development of a Novel NF-kB Inhibitor in IBD)</td>
<td>Blakslager, Anthony T.</td>
<td>Department of Clinical Sciences</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Effect of Cranberry Extract on Myelopathy-Associated Urinary Tract Infections</td>
<td>Gilby, Natasha Vauden, Shelly L.</td>
<td>Department of Clinical Sciences</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>The Identification of a Metastatic Signature in Canine Soft Tissue Sarcomas</td>
<td>Hanck, Marlene L.</td>
<td>Department of Clinical Sciences</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Treatment and Prevention of Toxoplasmosis Infections in Domestic Cats</td>
<td>Barkenheuer, Adam Levy, Michael G. Nordone, Shila Kapil Breitweder, Edward B.</td>
<td>Department of Clinical Sciences</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Comparative Medicine and Translational Research Training Program</td>
<td>Jones, Samuel L.</td>
<td>Department of Clinical Sciences</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Clinical Manifestations of Dogs with Co-Infections and Co-Exposures to Vector-Borne Pathogens</td>
<td>Breitweder, Edward B. Correa, Maria T. Diniz, Pedro</td>
<td>Department of Clinical Sciences</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total Amount Awarded: $8,244,757.00
**ADJUNCT AND ASSOCIATE FACULTY ACHIEVEMENTS**

**Dr. Nigatu Aklilu, Adjunct Professor, Equine**

**Presentations**
Experiences from a British based animal charity, the society for the protection of animals abroad (SPANA) in Ethiopia and researches on major infectious diseases of equids in Ethiopia. Staffs of the College of Veterinary Medicine of NCSU and veterinary students (oral presentation)


American College of Veterinary Internal Medicine Forum 2014, Nashville, Tennessee, June 4-7, 2014. (poster presentation)


Experiences from a British based animal charity, the society for the protection of animals abroad (SPANA) in Ethiopia and researches on major infectious diseases of equids in Ethiopia. Staffs of the College of Veterinary Medicine of Liverpool University staffs and veterinary students SPANA, Dr. Andrew Stringer. (oral presentation)


NCSU Delegates: Prof. Paul Lunn, Prof. Anthony Blikslager, Dr. Sid Thakur NCSU veterinary students: Heather Waterman and Caitlyn Redding December 11 -12, 2014: Presentations, discussions with CVMA staffs and researches. December 7 - 23, 2014: Visit to SPANA Ethiopia clinic sites and facilities. (Local facilitator)

Development and production of an effective vaccine against Epizootic Lymphangitis (Histoplasma capsulatum var. farriminosum) in Horses MOU signed between the National Veterinary Institute and the College of Veterinary Medicine and Agriculture of Addis Ababa University, North Carolina State University National Veterinary Institute, College of Veterinary Medicine and Agriculture Liverpool University. (Local Facilitator and Collaborator)

Pus from un-ruptured nodules of equines suspected to be infected with Histoplasma capsulatum var. farrimanosum is submitted to Dr. Andrew Broman, Public Health England National
Reference Laboratory, Myrtle Road, Bristol UK, BS2 8EL MRL containment level 3 laboratory (mycological growth characteristics and diagnostic and treatment mechanisms) There will also be genome sequencing and other works. SPANA, Public Health England National Reference Laboratory. (Local Facilitator and Collaborator)

Dr. Piers Barker, Adjunct Professor, Cardiology

- Currently serves on the Guidelines and Standards and Education Committee and the Council on Pediatric and Congenital Heart Disease of the American Society of Echocardiography. Serves as co-chair of the Pediatric Scientific Sessions this year (2015). Will be chair of the Pediatric Scientific Sessions next year (2016), both for the American Society of Echocardiography.

- Continue to serve as section chief of cardiac imaging for the Division of Pediatric Cardiology at Duke University Medical Center.

Publications

Wisotzkey BL, Hornik CP, Green AS, Barker PC. Comparison of invasive and non-invasive pressure gradients in aortic arch obstruction. Cardiol Young. 2015:Jan20:1-10 (Epub ahead of print)

Abstracts Presented


Dr. Guillaume Chanoit, Adjunct Assistant Professor, Small Animal Surgery

Publications

Award
September 2014: Fellow of the Higher Education Academy (FHEA)

Grants Awarded
Chanoit G (PI), Bowen E. Chemical analysis of cellophane bands used for gradual occlusion of portosystemic shunts, £2,500 Langford Veterinary Services Clinical Research Grants. June 14

Caputo M (PI), Suleiman MS, Tulloh R, Chanoit G. The cardio-protective efficacy of cardioplegic solution supplemented with Sildenafil in neonatal pig model of cardiopulmonary bypass and cardioplegic arrest – British Heart Foundation- £ 209,281 March 2015.

Grants Submitted
Chanoit G (PI), Tarlton J, Kafeniah W. Differentiation of mesenchymal stem cells derived from adipose tissue into cardiac lineage and optimization of cells seeding onto tissue engineered scaffolds BBSRC submitted March 2015.

Cannell M (PI), Chanoit G, Hancox J: Relationship between early and late events in the cardiac cycle as control points of pharmacological intervention £1,203,080, MRC 2015-2020 Programme grant- revised submission January 2015.

Nogaret A., Patton J., Chanoit G. Central Pattern Generator for Cardiac Resynchronization Therapy The Wellcome Trust & the Elizabeth Blackwell Institute for Health Research " research tasters" for veterinarians £30,000- submitted March 2015

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

- Field work in the Galapagos Islands associated with NCSU CVM and UNC and the Center for Galapagos studies assessing the health, baseline blood levels and body condition values on Hawksbill sea turtles, Galapagos sea lions, and Marine iguanas pre-El Nino.

- Zeuterin certified March 2015- certified in an injectable neutering method for male dogs.

- Lecture: "Alternative methods for Canine Spay/ Neuter" given to Teamworks Dog Training meeting in Feb 2015

Dr. Janice Dye, Adjunct Associate Professor, Internal Medicine

Education Outreach for Vet Students:
Host and Organizer for ≈ 40 Visiting NCSU Veterinary Summer Student Scholars (VPS), Presented overview of EPA research and tour of campus, organized speakers/topics including other EPA veterinarians and engineers, June 16, 2014.

Invited Oral Presentations:
Approaches to the Assessment of the Toxicity of Cookstove emissions. NIEHS Workshop on Assessing Exposures and Health Effects Related to Indoor Biomass Fuel Burning, August 2014.


Session Chair:

Poster Presentations:
JA Dye, A Ledbetter, MCJ Schladweiler, D Winsett, UP Kodavanti. Use of flow whole body plethysmography (FWBP) to assess rat strain differential airway responsiveness (AR) and its


**Peer-reviewed Publications:**


**Book Chapter:**

**Dr. Matthew Godfrey, Adjunct Associate Professor, Aquatics, Wildlife & Zoo Medicine**


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

- President, Association of Exotic Mammal Veterinarians
Exotic Companion Mammal Intubation: Lecture and Laboratory (instructor); Exotic Carnivores in Practice: Masterclass (speaker); Correction of a Tortoise (Geochelone sulcata) Shell Deformity Using an External Compression-Distraction Device (speaker), Association of Exotic Mammal Veterinarians & Association of Reptilian and Amphibian Veterinarians Combined Annual Conference, Orlando, FL, October 18-23, 2014.

Critical Rabbit - Renal System (speaker); Exotic Companion Mammal Intubation: Lecture and Laboratory (instructor), Association of Avian Veterinarians Annual Conference, New Orleans, LA, August 2-6, 2014.

**Dr. Joe Kornegay, Adjunct Professor, Neurology**

**Current Research Support:**
Development of a porcine model of Duchenne muscular dystrophy. NIH (NIAMS) (2R44AR061900-02A1). C Rogers, Principal Investigator, Exemplar Genetics, Coralville, IA. Subcontract to Texas A&M University; **JN Kornegay**, Principal Investigator on the Texas A&M subcontract; 10% effort; 12/01/13-11/30/15; $547,196 Total; $406,511 Direct.

Cardiomyopathy in the golden retriever model of muscular dystrophy. Morris Animal Foundation. Fellowship for Dr. Sarah Schneider. 01/01/14-12/31/17; $160,000 Total; $147,200 Direct

Advanced gene therapy for treatment of cardiomyopathy and respiratory insufficiency in Duchenne muscular dystrophy. US Department of Defense (DoD), Congressionally Directed Medical Research Programs (CDMRP), Duchenne Muscular Dystrophy Research Program (DMDRP) Investigator-Initiated Research Award (MD120087). BJ Byrne, Principal Investigator, University of Florida; **JN Kornegay**, Principal Investigator on the Texas A&M University subcontract; 10% effort; 07/01/14-06/30/16; $348,640 Total; $238,794 Direct.

Laminin-111 protein therapy for Duchenne muscular dystrophy. Muscular Dystrophy Association. Burkin DJ, Principal Investigator, University of Nevada-Reno; Subcontract to Texas A&M University pending; **JN Kornegay**, Principal Investigator on the Texas A&M University subcontract; 5% effort (no salary per MDA guidelines); 08/01/12-07/31/15 (A&M Yrs 2 and 3); $112,617 Total; $102,379 Direct

MG53 as a therapeutic protein for treatment of muscular dystrophy. NIH-NIND (S2R44AG060019-02). Cooperative Program in Translational Research Small Business Awards (SBIR [U44]). Norio Takizawa, TRIM-edicine; Subcontract to Texas A&M pending; **JN Kornegay**, Principal Investigator on the Texas A&M subcontract; 10% effort; 01/12/15-12/14/15; $419,315 Total; $288,189 Direct.

DP ARF ultrasound for monitoring muscle degeneration in Duchenne muscular dystrophy. NIH-NIAMS (1R01NS074057-01A1). Gallippi CM, Principal Investigator; University of North Carolina-Chapel Hill; **JN Kornegay**, Co-Investigator; 10% effort; 10/01/11–09/30/16; $2,321,573 Total; $1,486,613 Direct. Subcontract to Texas A&M University (Yrs. 2-5) pending; **JN Kornegay**, Principal Investigator on the Texas A&M University subcontract; 10% effort; 09/01/12-08/31/16; $547,061 Total; $374,699 Direct.

**Publications:**


**Invited Research Presentations:**


Kornegay JN, KR Wagner: Comparative medicine team approach: Muscular dystrophies. One Health: Integrating the Veterinarian Scientist into the Biomedical Research Enterprise. NIH (Office of Research Infrastructure Programs [ORIP]). Bethesda, MD (2015).


Kornegay JN: Biomarkers in dog models of DMD. Relevance for clinical studies Update on standard operating procedures in preclinical research for DMD and SMA Amsterdam, NETHERLANDS (2015).

**Dr. Raphael Labens, Adjunct Assistant Professor, Equine Surgery**

- Promotion to Senior Lecturer in Equine Surgery, University of Edinburgh

**Projects Relevant to NCSU-CVM:**
February/March 2015: “Effect of intra articular gold nanoparticles” ongoing project supported by Drs Lascelles, Blikslager and Gerard and Ms Anna Charlton.

**Funding Received:**
“Utility of dual contrast nanoparticles for imaging of equine cartilage disease” Fiona and Ian Russell Seed Corn (2015) Principal Investigator: Dr Raphael Labens

“Validation of an in vitro assay to predict the in vivo inflammatory potential of intra-articular nanoparticles” Petplan Charitable Trust Pump Priming Award (2014) Principal Investigator: Dr Raphael Labens; Co-Investigator: Dr. Xia Xin-Riu,

**NCSU Conferences:**
2014 BEVA Imaging Panel, at the annual conference, Birmingham, UK

**Dr. David Levine, Adjunct Professor, Small Animal Surgery**


Dr. Richard McMullen Jr., Adjunct Assistant Professor, Ophthalmology

Publications:
*Corresponding author

Scientific Presentations:


Grant Funding:
Braus BK, Deeg C, McMullen Jr RJ, Florin M, Amann B. Investigation of possible autoantigens in horses with immune mediated keratitis (IMMK). European College of Veterinary Ophthalmologists (ECVO), Resident Research Award - 5000,- EUR (Co-I)

Presentations to Lay Audiences:

Dr. Daniel Mulachy, Adjunct Associate Professor, Aquatics, Wildlife & Zoo Medicine

Honors/Awards


Publications

Schmutz, JA, KG Wright, CR DeSorbo, JS Fair, DC Evers, BD Uher-Koch, and DM Mulcahy. Size and retention of breeding territories of yellow-billed loons (Gavia adamsii) in Alaska and Canada. Waterbirds 37(Special Publication 1):53-63.


Dr. Terry Norton, Adjunct Assistant Professor, Zoological Medicine

Invited Presentations
“Common Trends: IACUC Findings During AAALAC Site Visit”, Shanghai Jiao Tong University School of Medicine, Shanghai, China, 2015.

“Laboratory Animal Program Management: An International Perspective”, Shanghai Jiao Tong University School of Medicine, Shanghai, China, 2015.


“Ensuring and Assessing Training and/or Qualifications of Personnel in Animal Care and Use Programs” and ensuring training in occupational health and safety program, virtual International BioConference Live on Laboratory Animal Science, Durham, NC, 2014.


Grants Received
NIH 1G20OD018359-01 Animal Facilities Improvement Grant – “Central Vivarium Sterilizer Installation,” Principle Investigator: John N. Norton, 2014-2015, $500,000. This grant provided funding to replace an aged autoclave in Duke’s Central Vivarium and to reallocate space to define optimal areas for quarantine/isolation, animal receiving, and decontamination of potentially infected caging and equipment from satellite areas.

Proprietary Technical Reports for Toxicology Studies conducted under Good Laboratory Practice regulations:

Publications


Dr. Robert Schopler, Adjunct Assistant Professor, Avian Medicine
- Helped with research on torpor in Dwarf-Lemurs in Madagascar, to be submitted for publication in the near future.
- Mentored 4 veterinary students at the Duke Lemur Center.

Dr. Betsy Sigmon, Adjunct Assistant Professor, Internal Medicine
• Received the Wilford S. Bailey Distinguished Alumnus/Alumna Award, Highest Honor Awarded, Auburn University College of Veterinary Medicine, 2014

---

**Dr. Wendy Simpson, Adjunct Assistant Professor, Equine Surgery**

*Publications*


Gruen ME, Griffith E, Thomson A, **Simpson W**, Lascelles BD. Detection of clinically relevant pain relief in cats with degenerative joint disease associated pain.

---

**Dr. Karen Taylor, Adjunct Assistant Professor, Aquatics, Wildlife & Zoo Medicine**

• Began new position April 6, 2015, as the Attending Veterinarian and Animal Facilities Director in the Health Effects Laboratory Division at CDC/NIOSH in Morgantown, WV.

• Appointed as the National Institute for Occupational Safety and Health (NIOSH) representative to the Interagency Coordinating Committee on the Validation of Alternative Methods (ICCVAM).

• Presentation to the Tri-Rivers Branch of AALAS entitled Laboratory Animal Medicine at a College of Veterinary Medicine, March 12, 2015 at NIOSH, Morgantown, WV.

---

**Dr. Brian Trumpatori, Adjunct Assistant Professor, Small Animal Surgery**

• Promoted to Chief of Surgery, Veterinary Specialty Hospital of the Carolinas.

**Dr. Michael Wood, Clinical Assistant Professor, Small Animal Internal Medicine**

• Accepted a tenure track assistant professor position in small animal internal medicine at the University of Wisconsin School of Veterinary Medicine.