Forewords from the Head

Dear DoCS:

Hard to believe, but another year is winding down. If you are like I am, you are already focused on the programs for the new trainees, even as we celebrate the accomplishments of the finishing students, interns, residents, graduate students and post-docs. Having met with the faculty members to hear their plans, I can assure you we have a busy and exciting year ahead. The revised curriculum, new teaching methods, big research plans and leadership development were all in the mix of things to plan for and accomplish. For now, let’s take a moment to reflect on what you have done. Year One of the revised curriculum happened with relatively few bumps. Many people participated in and enjoyed the small group teaching. The 4th year rotation observed competencies were piloted by a number of rotations. The medicine group found common ground as they developed a basic medicine course. Dentistry found a home in the course work! In research, the department PIs had 70 external research projects for a total of $3,206,631 and 7 TSAs for a total of $347,471. You are very collaborative: when you look at all our external projects, the number jumps to 95 projects and $7,327,641. We all know how busy and productive the hospital has been. Low stress handling was deliberately introduced throughout the hospital. Your efforts and dedication to being the best are always appreciated by our clients and their animals. Finally, we added some great new people: Dr. Mowat, Drs. Chris and Darcy Adin, Dr. Westermeyer, Dr. Synder, Dr. Elfenbein, Dr. Royal, Dr. Scharf, Kaitlin Haney, Mari-Wells Hedgpeth, Amanda Hanley, Diana Courtright, Laura Ruterbories, Karen Marcus, Michelle Nauerth, … I am sure I am missing someone. Happy summer and don’t forget to come to the ice cream celebration.

--Lizette

Faculty & Staff Updates

New Employees-
- Dr. Ashley Brandes – Clinical Assistant Professor of Medical Oncology - August 31, 2015
- Dr. Tara Harrison – Clinical Assistant Professor in Exotic Animal Medicine – July 20, 2015
- Dr. Sara Lyle – Associate Professor of Theriogenology – July 6, 2015
John Freund – Research Specialist with Dr. Liara Gonzalez - June 29, 2015
Dr. Alessio Vigani - Clinical Assistant Professor of Small Animal Emergency Critical Care and Extracorporeal Medicine – June 29, 2015
Alexa King – Research Specialist in the Clinical Studies Core – June 1, 2015
Kaitlin Haney – Research Technician with Barb Hegarty – May 11, 2015
Dr. Freya Mowat – Assistant Professor of Ophthalmology – March 30, 2015
Dr. Christopher Adin- Associate Professor of Small Animal Soft Tissue and Oncologic Surgery – January 26, 2015
Michelle Nauerth – Research Assistant with Dr. Johanna Elfenbein – January 26, 2015
Dr. Darcy Adin- Clinical Assistant Professor of Cardiology – January 26, 2015
Dr. Hans Westermeyer – Assistant Professor of Ophthalmology - January 20, 2015
Mari-Wells Hedgpeth –Assessment and Testing Manager - January 15, 2015
Amanda Hanley – Student Clinical Skills Lab Technician – January 5, 2015

Departing Faculty and Staff–
Dr. Mike Whitacre – Retiring June 30, 2015
Dr. Vanessa Grunkemeyer – June 30, 2015
Dr. Betsy Coffman – May 15, 2015
Baoyan An – May 30, 2015
Rose Caspar – May 25, 2015
Caroline Meek – April 29, 2015
Jennifer Sollinger – April 20, 2015
Ashwini Poopal – April 2, 2015
Patricia Faw – Retired April 1, 2015
Fonda Martin – Retired January 1, 2015

Faculty Recruitment Updates
An offer has been made for the Assistant Professor of Equine Primary Care position.
We are in the process of recruiting for a Research Assistant Professor in Small Animal Medicine.

Awards/Congratulations
(December 2014-May 2015)

Dr. Adam Birkenheuer received the University of Florida, College of Veterinary Medicine Alumni Achievement Award, 2014.

Dr. Anthony Blikslager was nominated for Alumni Association Distinguished Graduate Professorship, 2015.

Dr. Johanna Elfenbein received the University of Florida Outstanding Young Alumni Award May 23, 2015.

Dr. Liara Gonzalez received the Distinguished Mid-Atlantic PREP/IMSD Research Symposium Award 2015.

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

Congratulations to Lyndy Harden, Research Assistant, for being a 2015 CVM Awards for Excellence Winner.

Dr. Bruce Keene was named the Jane Lewis Seaks Distinguished Professor for Companion Animal Medicine, December 2014.

Dr. Freya Mowat recently received the National Society for Phi Zeta Award for best resident manuscript (Basic Science). Mowat FM, Gornik KR, Dinculescu A, Boye SL, Hauswirth WW, Petersen-Jones SM, Bartoe JT. Tyrosine capsid-mutant AAV vectors for gene delivery to the canine retina from a subretinal or intravitreal approach. Gene Therapy 2014; 21(1):96-105.

Dr. Mowat was also awarded the American Association of Veterinary Clinicians Resident of the Year Award 2015.
Dr. Valery Scharf passed the ACVS boards.

Congratulations to Drs. Lauren Schnabel and Rich Redding for passing the American College of Veterinary Sports Medicine and Rehabilitation boards.

Dr. Barbara Sherman - NCSU Libraries "Fabulous Faculty" Series, 2014.

---

**Grants Received**

(December 2014-May 2015)

**Banovic F**, Jacobs ME, **Olivry T** (Co-I), Baeumer W. Diluted sodium hypochlorite (bleach) in dogs: antiseptic efficacy, local tolerability, and effect on skin barrier function and inflammation. (American College of Veterinary Dermatology [ACVD]) $19,948.

**Birkenheuer A**. Prospective comparison of two treatment options for Cytaxzoonosis. 01/01/2014-12/31/2015 (University of Missouri-Columbia, Prime- Winn Feline Foundation) $3,918.


**Blikslager AT**. Center for gastrointestinal biology and disease. 02/20/2015-11/30/15 (UNC Chapel Hill, Prime-National Institutes of Health) $59,604.

**Blikslager AT**, Davis JL, **Fogle C**. Flunixin or firocoxib in postoperative colic patients. 04/01/2015-03/31/2017 (Grayson Jockey Club Research Foundation, Inc.) $122,601.

**Gilger BC**, Schnabel LV, Sherman AB. Effect of bone marrow-derived mesenchymal stem cells and stem cell supernatant on equine corneal wound healing in vitro. 01/31/2015-06/30/2016 (ACVO Vision for Animals Foundation) $5,000.


**Hauck ML**. COTC020: Evaluation of orally administered mTOR inhibitor Rapamycin in dogs with osteosarcoma. 04/01/2015-03/31/2016 (Morris Animal Foundation) $15,898.


**Lascelles BDX** (PI). Monoclonal Antibody Clinical Research Pain Program Development. 04/21/2015 to 10/20/2016 (Nexvet) $189,989

**Lascelles BDX** (PI), Fogle J, **Tuohy J**, Petty C. Nanoparticle therapy inhibits canine osteosarcoma growth by stimulating anti-tumor immunity. 04/01/2015-03/31/2016 (American College of Veterinary Surgeons Foundation) $25,000.

**Yuan W** (PI), **Marcellin-Little DJ** (co-PI), Harrysson OLA. 3D printing of a highly efficient biofuel-cell for electricity generation powering implantable medical devices. January 2015 (2-year grant) (NCSU CALS and CVM Collaborative Grants Program) $140,036.

**Mathews KG**, Seiler GS. Fluoroscopic and ultrasonographic evaluation of diaphragmatic motion in dogs affected by gastric dilatation-volvulus. 2015 (Collie Health Foundation) $3,888.

**Olby N**. Investigation of quantitative trait loci and sensory thresholds in chiari-like malformations and syringomyelia in Cavalier King Charles Spaniels. 01/01/2015-12/31/2015 (American Kennel Club Canine Health Foundation, Inc.) $37,530.


Sherman BL, Gruen ME (NCSU-Co PI), MacLean E (Duke University, awardee), Stanton Foundation (Direct sponsor: Duke University, subcontract), The roles of oxytocin and vasopressin in canine aggression. 01/01/15-12/31/16, $5500 to CSC.

Stoskopf MK. Marine magnetic resonance facility cryogen conservation and sustainability. 05/01/15-04/30/16 (NC Biotechnology Center) $72,500.

Testing Service and Clinical Trial Agreements (December 2014-May 2015)

Gilger BC. In vitro and in vivo evaluation of the sustained drug delivery of an antibody. 04/01/15-03/31/16 (I-novion, Inc.) $46,126.

Books and Papers Published (December 2014-May 2015)


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])

Fox PR, Oyama MA, Rush JE for the NT-proBNP Field Trial Study Group: Nguyenba TP, Bulmer BJ, Cunningham SM, Kellihan HB, Gordon SG, Lefbom BK, *DeFrancesco TC, MacGregor JM, Lehmkuhl LB, Stepien RL, Brown WA. Relationship of plasma N-terminal
pro-brain natriuretic peptide (NT-proBNP) concentrations to heart failure classification and cause of respiratory distress in the dog using a second generation ELISA assay. J Vet Intern Med 2015;29:171-179. (*Primary study liaison at NCSU for multicenter study, contributed cases and assisted in data collection and interpretation of findings)


Royal KD, Guskey TR. A case for differentiated grades. Med Sci Educ, Online First, available at:
In the News

Dr. Ed Breitschwerdt was the featured guest in an in-depth BBS Internet Radio program discussion on Bartonella and infectious diseases, January 8, 2015.

A release and web page posting by Morris Animal Foundation highlighted feline cardiology study by Dr. Teresa DeFrancesco, December 2014.

Dr. Duncan Lascelles was quoted in a Veterinary Practice News article entitled “More Options for Bad Joints in Aging Pets,” March 2, 2015.

Dr. Lascelles was also quoted in two MJINews (Marijuana Investor News) articles entitled “Animal Pharma’s Brave New World” and “Puppy Uppers and Doggie Downers: Marijuana Safe for Pets?” January 2015.

Drs. Greg Lewbart and Craig Harms were referenced and credited with pioneering a surgical procedure for securing a prosthetic eye in a koi in a recent article about a rockfish surgery at the Seattle Aquarium. The Seattle Times article was syndicated and appeared in numerous newspapers nationwide, January 7, 2015.

Dr. Denis Marcellin-Little was quoted in a Mosaic Science article entitled “Walking on all fours: the world of animal prostheses,” May 19, 2015.

Dr. Marcellin-Little also participated in a video series “What You Don’t Know About Osteoarthritis” and "Top Three Myths about..."
Dr. Karen Muñana was quoted in an article in *JAVMA News* about the possibility that collar-based activity trackers might be helpful in studying canine epilepsy and perhaps evaluating treatments for epileptic patients, December 17, 2014.

Computer-assisted canine communication research involving Dr. Barbara Sherman and colleagues at the College of Engineering was featured in a *PBS NewsHour* report and in a feature article in the News & Observer.

Dr. Jock Tate was recently named Master of the hunt with the Moore County Hounds.

**Tick bites of news from the VBDDL** - (Google "NCSU ticklab" to find us on the web.)

This past year, the VBDDL developed a quantitative PCR (qPCR) for improved detection and discrimination of spotted fever and typhus group *Rickettsia* spp. in diagnostic samples. Since converting to the new qPCR, the VBDDL has detected *R. rickettsii* (Rocky Mountain spotted fever) in 6 dogs; *R. amblyommii* in an *A. amblyomma* tick; and *R. honei* in a human sample from Australia! Historically, the window of opportunity to detect rickettsial pathogens in blood by PCR has been short and many veterinarians have opted to rely upon serology over PCR. This spring, the Vector-borne Disease Diagnostic Lab (VBDDL) is pleased to note more referring veterinarians selecting the more comprehensive panels that bundle serology and molecular testing for dogs and cats. With more Comprehensive Panels being run by the VBDDL, coupled with improvements in our PCR methods, we are pleased to note that, recently, 3 *Rickettsia felis* infections have yorkbeen detected in dogs! The *R.felis* exposures seem to be coming out of the Caribbean and southeastern US states. We can’t thank our clients enough for giving us the chance to contribute to the health of our companion animals by requesting comprehensive testing!

--Barbara Hegarty

**Post-doc, Graduate Student & Resident News**

**Dr. Jocelin Blake**, Small Animal Surgery Resident, finished her Master’s Degree in Specialized Veterinary Medicine (MSpVM) on May 9, 2015. (Advisors: Drs. Kyle Mathews and Simon Roe)

**Dr. Joanne Tuohy**, passed the ACVS boards. (Co-advisor: Dr. Lascelles)

This Spring Dr. Megan Schreeg received a UGSA Outstanding TA Award (Excellence in Laboratory Teaching) for her work as a TA for the Department of Biological Sciences in 2014. (Advisor: Dr. Adam Birkenheuer)

From Dr. Barbara Sherman: Congratulations to Jill Orlando, and many thanks to the coauthors and our colleagues for their contributions to the completion and publication of this study. It is a significant contribution to clinical feline management and welfare. Orlando JM, Case BC, Thomson AE, Griffith E, Sherman BL. Use of oral trazodone for sedation in cats: a pilot student. *J Feline Med Surg* 2015; 1-7. (Advisor: Dr. Sherman)

**Dr. Britta Martel** started as a post-doc on March 30th. Dr. Martel is from Copenhagen, Denmark. She will be working for the next 2 years to develop a model of subchronic experimental canine atopic dermatitis. (Advisor: Dr. Olivry)

**Dr. Margaret Gruen** received the Leroy Coggins Graduate Student Fellowship Award, April 2015. (Advisor: Dr. Lascelles)

**Dr. Keara Boss** produced the following publications (Advisor: Dr. Marlene Hauck):


Drs. Nandhu Balakrishnan and Barbara Qurollo produced the following 2014 publications under the direction of Dr. Ed Breitschwerdt:


Dr. Woodruff, cardiology resident, was awarded a White Coat of Excellence - $10K donation to foundation. (Advisor: Dr. DeFrancesco)
**Personal News**

**Eva Cook** became a first-time aunt on June 4, 2015, to Tallulah Elizabeth Rouse, she’ll be called “Lucy.”

**Dr. Duncan Lascelles** will be starring in a blockbuster release this Fall titled “Vetopia”. Duncan's character Dr. Drew Little leads a team of seemingly ordinary fashion challenged veterinarians on a secret quest to vanquish an underground society of evil malcontents known as "The Alodynians". Vexed by his personal struggles with self awareness, Dr. Little ultimately learns to control his inner emotions and the burgeoning super-powers of his team, but will it be too Little too late? Rated R for strong language and partial nudity.

Dr. Duncan Lascelles AKA: Dr. Drew Little pictured in center.

**Dr. Kyle Mathews** reports recently winning 10 bucks on a scratch-off lottery ticket.

**Dr. Barbara Sherman’s** daughter, Diana, will be entering a Master’s program in anthropology at the University of Alabama in August 2015.

**Dr. Abi Taylor** and husband welcomed a baby girl, Annabel Rosalind Taylor, on Friday, January 16, 2015, 2:45am, 6lb 11oz.

Drs. Slava Eroshin and Liz Lennon welcomed a baby boy, Atau Eugene Lennon, on February 26, 2015, 8 lbs, 20.5".

Sarah Wall and husband welcomed baby girl Anna Claire in May 8, 2015, 5lb12oz, 19".

---

10
Who Am I

Diana Courtright, Clinical Skills Laboratory Supervisor
Diana joined the Department of Clinical Sciences in December 2014 as a Clinical Skills Laboratory Supervisor. She received her Associate of Science degree in Veterinary Technology from Medaille College in Buffalo, NY. She has spent the last 5 years as a Licensed Veterinary Technician in the Western New York area working with both small animal and exotic patients. She has also worked with horses in the past and has spent time volunteering at a Therapeutic Riding Center. She enjoys spending time with and taking pictures of her Papillon ("Fondue") and domestic longhaired cat ("Lollipop") in her free time.

Amanda Hanley, Medical Laboratory Technician
"Hello, my name is Amanda Hanley and I joined the Department of Clinical Sciences as a Medical Laboratory Technician in January of 2015. I work closely in the Clinical Skills Laboratory assisting the teaching surgery laboratories for the second and third year veterinary students. Before joining the NCSU CVM community, I lived in the small beach town of Narragansett in Rhode Island. There I worked as both a veterinary assistant at a small general practice and a technician assistant at a 24-hour emergency and critical care facility. I graduated from Worcester Polytechnic Institute with a Bachelor of Science degree in 2013. Moving to North Carolina was a big step for me, considering I have lived in Rhode Island for the majority of my life. The change in scenery and friendliness of everyone in North Carolina has been such a refreshing experience. I have wanted to be a veterinarian for as long as I can remember and I hope to be a veterinary student at NCSU CVM in the near future. I live with my two pups, Phoebe and Brody who keep me more than occupied-- we spend most of our free time exploring the woods." --Amanda

Kaitlin Haney, Research Technician
Hi, my name is Kaitlin Haney, and I joined the Dept of Clinical Sciences as a full-time research technician for Dr. Breitschwerdt's lab on May 11, 2015. During my undergraduate years, I worked as a work-study student in LAR and DoCS. I graduated from NC State University with a major in Animal Science and a minor in Agriculture Business Management on May 9, 2015.

I am originally from the mountains of NC. I have a 3-year-old Border Collie/Dalmatian mix, an 11-year-old cat, and a 4-year-old Quarter Horse mare. I enjoy riding and training horses in my free time, and am currently training my mare for barrel racing. I also love reading and writing when I can find time.

I am very excited to have joined the DoCS full-time, and look forward to my time here! --Kaitlin
**Mari-Wells Hedgpeth, Assessment and Testing Manager**

Mari-Wells joined the Department of Clinical Sciences on January 15, 2015, as an Assessment and Testing Manager. She holds a Master's degree in Educational Psychology, Measurement and Evaluation from the University of North Carolina at Chapel Hill, and a Bachelor's degree in French literature (major) and cultural anthropology (minor) from Sweet Briar College in Virginia. Mari-Wells offers fifteen years of educational experience with eight years of experience in higher education assessment. Her work has focused on assessment design, item development, and web-based test administration within the field of medical education. She has assisted with implementation of new delivery systems, project management, item banking, and assessment policy. Mari-Wells also offers expertise in developing quality items and item reviews by conducting workshops. Her research interests include item quality as well validity and reliability. She is able to communicate well with various assessment stakeholders from students, faculty, administration and oversight committees. Mari-Wells and her husband Kevin are currently the guardians of two awesome pets, Russell (a 7-year old YoLhasa, yorkie-lhasa apso mix), and ElsieBelle (a 5-year old mackerel tabby). In their free time they enjoy traveling.

**Alexa King, Research Specialist (submitted by Janet Bogan)**

Alexa is the new Clinical Studies Core (CSC) Coordinator. Many of you may already know Alexa from her former position as an Intermediate Care Veterinary Technician in the Terry Center. She holds a degree in Biology from Saint Vincent College, Latrobe, PA. In addition to her extensive veterinary technical skills, Alexa has experience with conducting and monitoring clinical research trials within the CVM. She also has a background in teaching Science as a middle school teacher with the Johnston County school system.

Alexa and her husband share their home with two cats (Xander and Conner) and two pit bulls (Peyton and Wyatt). Her hobbies include gardening and trips to the beach.

She is excited to join the Clinical Studies Core and DoCS family, and looks forward to assisting with clinical trials. Be sure to congratulate her on joining the CSC when you see her!

---

Tonya Lee, Newsletter Editor

Next Issue: Fall/Winter 2015