Twenty-Eighth
Annual Research Symposium

March 16, 2017
Blacksburg, Virginia
Welcome
to our
28th Annual Research Symposium

Each year the Virginia-Maryland College of Veterinary Medicine hosts this event to support the College’s mission of providing education to a diverse population of professional and post-graduate students in preparation for careers in the broad areas of veterinary medicine, biomedical sciences, and public health. The event serves to showcase the research of our graduate students and residents from our various graduate and training programs. The MS and Ph.D. degree curriculum operates as a single multi-disciplinary Biomedical and Veterinary Sciences (BMVS) graduate program.
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<td>7:30am</td>
<td>Welcome and Introduction</td>
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<td>7:45am</td>
<td>Keynote Speaker, Dr. Mark Simpson</td>
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<td>8:45am</td>
<td>Oral Session I: Masters Student Presentations</td>
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<td>11:00am</td>
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<td>LUNCH – Commons Area for Registered Participants</td>
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<td>12:45pm</td>
<td>Keynote Speaker, Dr. Andrew Pelling</td>
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<td>Oral Session II: Ph.D. Student Presentations</td>
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<td>3:00pm</td>
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<td>3:45pm</td>
<td>Oral Session III: Ph.D. Student Presentations</td>
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<td>6:00pm</td>
<td>Banquet Registration – The Inn at Virginia Tech</td>
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<td>Banquet Dinner</td>
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<td>Awards Ceremony</td>
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**Oral Presentations & Keynote Speaker - Classroom 102**
*Poster Presentations - CVM Student Lounge*
Dr. R. Mark Simpson is a Senior Scientist in the Laboratory of Cancer Biology and Genetics at the National Cancer Institute's Center for Cancer Research. He is adjunct graduate professor or clinical professor at four colleges of veterinary medicine, and serves as an elected board member and is immediate past president of the Executive Council of the American College of Veterinary Pathologists. Dr. Simpson is a doctor of veterinary medicine graduate of the University of Georgia, Athens. He completed postgraduate clinical training in veterinary pathology and research training leading to a Ph.D. in comparative biomedical science at the Louisiana State University, Baton Rouge. He is specialty board certified by The American College of Veterinary Pathologists. Dr. Simpson was a faculty member and hematopathologist at the North Carolina State University Veterinary Medical Teaching Hospital, Raleigh. Subsequently, he became a staff scientist with the National Institute of Allergy and Infectious Diseases intramural research program, Laboratory of Immunogenetics and the Infectious Diseases Pathogenesis Branch. In May 2001, Dr. Simpson joined the NCI Center for Cancer Research to establish and head the Molecular Pathology Unit, Laboratory of Cancer Biology and Genetics. He is founding director of the NIH Comparative Biomedical Scientist Training Program, an initiative to provide interdisciplinary training for veterinarians, in both diagnostic pathology and human disease-oriented medical research, to increase the synergy for comparative biomedical research interactions. This program is an NCI-administered component of the NIH Graduate Partnership Program and training leads to a Ph.D. and eligibility to certify as a veterinary pathologist.
Award winning Scientist, Professor, Entrepreneur, TED Fellow and TED speaker, Dr. Andrew Pelling has built a career on unapologetic curiosity, creativity and serendipity. Dr. Pelling is a Professor and Canada Research Chair at the University of Ottawa, where he founded and directs a curiosity-driven research lab that brings together Artists, Scientists, Social Scientists and Engineers. The lab uses low-cost, open source materials and methods to explore speculative living technologies of the future. He has, for instance, created human body parts made from plants and grown living skins on LEGOIs – innovations with the potential to replace prohibitively expensive commercial biomaterials. Dr. Pelling is also the co-founder and CTO of Spiderwort Inc, a mission driven company developing open source platforms to enable the widespread and global adoption of biological research in all environments and economic contexts. Most recently, Dr. Pelling co-founded and directs pHacktory, a distributed street-level research lab that amplifies community ideas through a potent mixture of craft, serendipity and curiosity. Dr. Pelling’s work has been in the international media spotlight for many years, with recognition in outlets such as Wired, The Atlantic, OZY, Huffington Post, NPR, Scientific American, Popular Science, BBC, Der Spiegel, Deutsche Welle and others, as well as numerous highlights in the Canadian media and Scientific media. In 2016, he was named a TED Fellow, one of 21 people chosen annually by the TED organization who are considered to be the most disruptive and transformative change-makers in the world.
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<td><strong>Welcome and Introduction</strong>&lt;br&gt;Dr. Ansar Ahmed, Associate Dean for Research and Graduate Studies, VMCVM</td>
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<tr>
<td>7:45am</td>
<td><strong>Keynote Speaker</strong>&lt;br&gt;<em>R. Mark Simpson, DVM, PhD</em>&lt;br&gt;Diplomate and Immediate Past President, The American College of Veterinary Pathologists&lt;br&gt;Head, Molecular Pathology Unit&lt;br&gt;Director, NIH Comparative Biomedical Scientist Training Program&lt;br&gt;Laboratory of Cancer Biology and Genetics&lt;br&gt;Center for Cancer Research, NCI/NIH&lt;br&gt;&lt;br&gt;<strong>Seminar Title:</strong> One health translational research in comparative oncology: A model for clinician scientists</td>
</tr>
<tr>
<td>8:45am</td>
<td><strong>Aherne, Michael</strong>&lt;br&gt;Evaluation of right ventricular function using conventional and real-time 3-dimensional echocardiography in dogs with myxomatous mitral valve disease</td>
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<td>9:00am</td>
<td><strong>Disney, Julia</strong>&lt;br&gt;Tear film lacritin concentrations in dogs with keratoconjunctivitis sicca</td>
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<tr>
<td>9:15am</td>
<td><strong>Monti, Katelynn</strong>&lt;br&gt;Fecal Survey for internal parasites of cats in eastern Virginia</td>
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**SESSION I - CONTINUES**

9:30am  **Jue, Nathaniel**  
Effects of oxygen concentrations on blastocyst formation of in-vitro derived porcine embryo culture

9:45am  **King, Jamie**  
Phase I Clinical Trial of Recombinant Oncolytic Newcastle Disease Virus for Canine Intracranial Meningiomas

10:00am **Groom, Lauren**  
Accuracy of Open MRI for Guiding Injection of the Equine Deep Digital Flexor Tendon within the Hoof

10:15am **Trahan, Richard**  
Effects of three corticosteroids on co-cultures of equine synovium, cartilage and subchondral bone in vitro

10:30am **Wentworth-Morre, Wendy**  
Investigation of a novel modified fixed dose determination protocol for radioiodine treatment of feline hyperthyroidism

10:45am **Williamson, Allan**  
Cardiovascular effects of low and high dose of fentanyl in the isoflurane anesthetized dog: the influence of the anesthetic-sparing effect and the correction of bradycardia

11:00am **Poster Session I: Presentations and Break**

11:45am **LUNCH**  
Commons Area for Registered Participants
**Keynote Speaker**
Andrew Pelling Ph.D
Center for Interdisciplinary Nanophysics
Department of Physics
TED Fellow
University of Ottawa

**Seminar Title:**
*Augmented Biology: A New Frontier Inspired by Cheesy Sci-Fi Movies*

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**12:45pm**

**Keynote Speaker**
Andrew Pelling Ph.D
Center for Interdisciplinary Nanophysics
Department of Physics
TED Fellow
University of Ottawa

**Seminar Title:**
*Augmented Biology: A New Frontier Inspired by Cheesy Sci-Fi Movies*

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**1:45pm**

**Bogers, Sophie**
Optimized Culture of Equine Bone Marrow Derived Mesenchymal Stem Cells for Joint Disease

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**2:00pm**

**Coutermarsh-Ott, Sheryl**
Inflammatory signaling pathways involved in canine histiocytic sarcoma

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**2:15pm**

**Liao, Xiaofeng**
The role of renal infiltrating CD11c+ cells in lupus nephritis

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**2:30pm**

**McKell, Allison**
A temperature-sensitive Lesion in the N-terminal Domain of the Rotavirus Polymerase Affects its Intracellular Localization and Enzymatic Activity

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**2:45pm**

**Menciotti, Giulio**
Three-dimensional echocardiographic comparison of mitral valve morphology in Cavalier King Charles Spaniels to mitral valve morphology in dogs of other breeds
SESSION III - PH.D. STUDENT PRESENTATIONS

3:00pm  Poster Session II: Presentations and Break

Session III
CHAIR: THOMAS BRICKLER

3:45pm  Mu, Qinghui
Antibiotics ameliorate lupus-like disease in mice

4:00pm  Petruzzi, Briana
Polymicrobial Biofilm Formation by Pasteurella multocida and Histophilus somni

4:15pm  Popielarczyk, Tracee
Aligned Nanofiber Topography Directs the Tenogenic Differentiation of Mesenchymal Stem Cells

4:30pm  Saleh, Meriam
The Value of PCR in the Diagnosis of Canine giardiasis

6:00pm  Banquet Registration – The Inn at Virginia Tech

6:30pm  Banquet — The Inn at Virginia Tech

7:00pm  Award Presentations
Graduate Student Awards
Co-Worker Award
2017 Zoetis Research Award
### Poster Presenters

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<td>Cao, Qian</td>
<td>Castellucci, Tammy</td>
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<td>Carr, Susan MS</td>
<td>Chen, Miao</td>
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<td>Catanzaro, Nicholas</td>
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<td>Eden, Kristin</td>
<td>Giangarra, Jenna MS</td>
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<td>Ernst, Marigold</td>
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<td>Hazy, Amanda</td>
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<td>Ledford, Benjamin</td>
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<td>Lehman, Christian, MS</td>
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<td>McDaniel, Dylan</td>
<td>Mercer, Melissa, MS</td>
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<td>Moyer, Christine, MS</td>
<td>Okyere, Benjamin</td>
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<td>Nichols, Anne</td>
<td>Rajpar, Ibtesam</td>
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<td>Qin, Qizhi</td>
<td>Ren, Jingjing</td>
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<td>Ramesh, Ashwin</td>
<td>Seward, Marion, MS</td>
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<td>Rothschild, Daniel</td>
<td>Sheehan, Lauren</td>
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<td>Twitchell, Erica</td>
<td>Villafranca, Maria Cristina</td>
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<td>Waldrop, Stephen</td>
<td>Yugo, Danielle</td>
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### VMCVM/University of Maryland

| Chantal Ama Agbemabiese     | Kaitlin A. Davis             |
| Asha A. Philip              |                              |
Acknowledgements:

On behalf of the faculty, staff and students of the VA-MD College of Veterinary Medicine we would like to thank our invited speakers: Dr. Mark Simpson and Dr. Andrew Pelling.

We would like to thank the BMVS-GSA, especially Anne Nichols, Thomas Brickler and Giulio Menciotti for all their help in organizing the days events along with Dr. Jessica Crawford, Cyndi Booth, and Susan Rosebrough. Thank you to our faculty judges and a special thank you to Becky Jones for her work and input all along the way.

We appreciate the support the College has given to this event. Thank you all for attending the 28th Annual Research Symposium!

Dr. Ansar Ahmed, Associate Dean
SPECIAL THANKS TO:

Virginia-Maryland College of Veterinary Medicine

Virginia Tech
Invent the Future

University of Maryland

zoetis