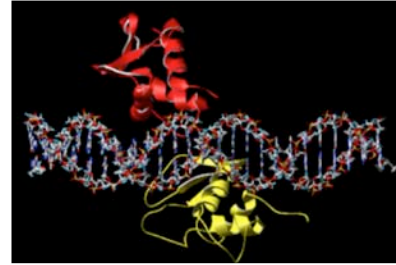


Fall 2014

<http://www.vet.upenn.edu/education/academics-and-training/vmd-phd-program>In This Issue

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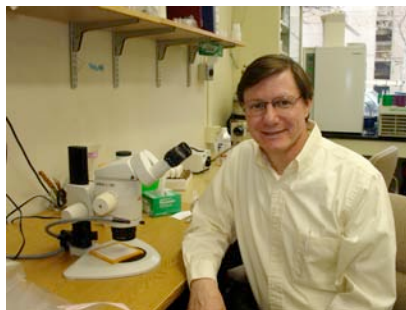


Dear VMD-PhD Alumni,

Greetings from the Penn VMD-PhD program! As usual, the Fall has been very busy. The annual Combined Degree Retreat was held in August at Villanova University and included a keynote address by Dr. George Daley from Harvard, as well as student posters, and student talks. In September we held the annual Penn Vet Student Research BBQ at the Biopond and a good time was had by all. We are entering a new admissions cycle and have received a record number of applications this year. Admissions interviews will be held on January 22, 2015. In late August we welcomed two new VMD-PhD students into the program and their information is included here.

We have also included some alumni and current student updates, promotions, publications, and life events in this letter. We are proud of our alumni and current students. Finally, the annual Dinner Party at my home for current students and local alumni will be on Saturday, December 6 at 5PM. We wish you the best as 2014 comes to a close.

Wishing you the best,  
Michael Atchison, Ph.D.  
Director, VMD-PhD Program

**Alumni are Online!**

Check out:

<http://www.vet.upenn.edu/education/academics-and-training/vmd-phd-program/vmd-phd-alumni-profiles>

**Find your profile, and send us feedback!**

## Incoming VMD-PHD Students: Ian Penkala and Gregory Sousa

### Ian Penkala (Year 1)

Ian graduated from the University of Pennsylvania in May 2013. Ian's most recent research experience was in the laboratory of Dr. Montserrat Anguera. There he studied long noncoding RNA in pluripotency and trophoblast development. He previously worked in the laboratories of Drs. Matthew Lazzara and Kendra Bence. In Dr. Lazzara's lab he investigated EGFR signaling in primary non-small cell lung cancer tissue, and in Dr. Bence's lab he studied protein-tyrosine phosphatases in obesity and cancer. Ian is an avid runner, was a member of the UPenn running club as an undergraduate, and has run in competitive races. In the coming academic year, Ian will take Veterinary curriculum Core courses Gross Anatomy, Cellular and Biochemical Foundations of Disease, Histology, Developmental Biology, Neuroscience, Immunology, Physiology, Introduction to Clinical Veterinary Medicine I, II, III, Nutrition, Wildlife Medicine I, II, and Introduction to Radiology. Ian is in the Cell and Molecular Biology Graduate Group (Cell Biology and Physiology subtrack) and in the coming year will complete a Graduate Seminar Course entitled Topics in Molecular Medicine. He will perform a Laboratory Rotation in the summer, and will participate in a graduate independent study.



### Gregory Sousa (Year 1)

Gregory graduated from Bates College in May 2009. Gregory's most recent research experience was working as a research assistant in the lab of Dr. Nancy Kleckner at Bates College. He studied the impact of gut distention on components of the feeding central pattern generator in the brain of the pond snail, *Helisoma trivolvis*. While an undergraduate, he worked in The Jackson Laboratory with Dr. Simon W.M. John to investigate the molecular factors underlying glaucomatous neurodegeneration and assessed neuroprotective treatment in the DBA/2J mouse. His numerous research experiences also led to being co-author of several papers in the Journal of Clinical Investigation, and General and Comparative Endocrinology journals. In the coming academic year, Gregory will take Veterinary curriculum Core courses Gross Anatomy, Cellular and Biochemical Foundations of Disease, Histology, Developmental Biology,



Neuroscience, Immunology, Physiology, Introduction to Clinical Veterinary Medicine I, II, III, Nutrition, Wildlife Medicine I, II, and Introduction to Radiology. Gregory is in the Neurosciences Graduate Group and in the coming year will complete a Graduate Seminar Course entitled Topics in Molecular Medicine. He will perform a Laboratory Rotation in the summer, and will participate in a graduate independent study.

## Recent Student Thesis Defenses



**Student: Brittany Gregory**

**Date:** November 15, 2013

**Title:** Natural variation in the histone demethylase, KDM4C, influences cell proliferation through the regulation of specific genes.

**Mentor:** Vivian Cheung

**Graduate Group:** CAMB GGR

**Student: Catherine Brinkley**

**Date:** November 18, 2013

**Title:** Fringe Benefits: quantitative and qualitative study of urban form on farmland functions.

**Mentor:** Tom Daniels

**Graduate Group:** City and Regional Planning (School of Design)



**Student: Laurel Redding**

**Date:** January 30, 2014

**Title:** Antibiotic use in dairy cattle on small farms in rural Peru.

**Mentor:** Sean Hennessy

**Graduate Group:** Epi/Biostats

**Student: Steve Artim**

**Date:** April 30, 2014

**Title:** Regulation and Kinase Activity of the TRK Family of Receptor Tyrosine Kinases

**Mentor:** Mark Lemmon

**Graduate Group:** BMB



**Student: Irene Bukh**

**Date:** June 20, 2014

**Title:** Blood and Guts: Consequences of Adenovirus Vector Vaccination on T Cell Activation and SIV Susceptibility in Rhesus Macaques

**Mentor:** Michael Betts

**Graduate Group:** CAMB MVP

## Current Student Awards, Accomplishments, and Honors

Congratulations go out to all of our students listed below:

### **Laurel Redding**

Laurel won the prestigious Biomedical Graduate Studies Saul Weingrad award for best PhD thesis this year.



### **Penn Vet Student Research Day Award Winners, March 11, 2014**



### **Rebecca Evans**

First place in the Penn Vet Student Research Day, Oral presentation: CD4 T Cells Impair CD8 T Cell Surveillance in a Genetic Mouse Model of Pancreatic Cancer.

### **Erika Lin-Hendel**

Second Place Penn Vet Student Research Day, Oral presentation: Mitochondrial Manipulations Interfere with Interneuron Migration



### **Steve Artim**

Third Place Penn Vet Student Research Day, Oral presentation: Differences in Autophosphorylation of the Trk Family of Receptor Tyrosine Kinases

### **Pierce Nathanson**

Third Place Penn Vet Student Research Day, Poster presentation: The Role of miRNAs in TDP-43 Autoregulation



## Alumni Awards, Accomplishments, and Honors



### Stephanie Murphy

Stephanie is now Director of the Division of Comparative Medicine, Office of Research Infrastructure Programs, Division of Program Coordination, Planning, and Strategic Initiatives, Office of the Director, National Institutes of Health.

She is responsible for programs that provide funding for the development of access to critical animal models, which offer essential clues to a broad range of human disorders such as Parkinson's disease, diabetes, multiple sclerosis, and AIDS. She provides scientific leadership for strengthening and enhancing a critical part of the biomedical research continuum, providing support for animal models that build the bridge between basic science and human medicine, with discoveries in one species enhancing understanding of another. She provides funding for pre- and post-doctoral training and career development for veterinary scientists who provide unique expertise to translational biomedical research, and establishes collaborations between DCM-supported grantees and grantees funded by the NIH Institutes and Centers. Her office sets scientific priorities through the development of long-term strategic plans and execution of funding decisions, and manages the direction of operations and activities through the implementation of NIH policies and resource allocation.

Telephone: 301-451-7818

FAX: 301-480-3819

Email: [stephanie.murphy@nih.gov](mailto:stephanie.murphy@nih.gov)

### Jessica Bertout

New Position: Jessica began a new job on July 1, 2014 as a senior scientist and in-house veterinarian for Presage Biosciences in Seattle, WA.



### Bruce Smith

Bruce has a new publication:

Sandey M, Bird RC, Das SK, Sarkar D, Curiel DT, Fisher PB, **Smith BF**. Characterization of the canine mda-7 gene, transcripts and expression patterns, *Gene*, Volume 547, Issue 1, 15 August 2014, Pages 23-33.

And he adds the following note:

In addition, and yes, completely true and arguably relevant, I am one of the founding members of the Auburn University Brewing Science Program. The program leads to a post-graduate certificate in Brewing Science and Operations and the opportunity to sit for the Institute of Brewing and Distilling's Brewmaster Certification Examination. The inaugural class of 20 students was admitted for the Fall 2014 semester. I teach in both Brewing Science 1 and Brewing Science 2, courses that cover the science of brewing in detail. Almost all of the course material is delivered via the web and therefore students anywhere can be admitted to the program. Details of the program are on the web at <http://www.humsci.auburn.edu/brewing/>

<http://www.vet.upenn.edu/education/academics-and-training/vmd-phd-program>

## **Kim Blackwell**

Avrama was awarded another research grant from NIH under the collaborative research in computational neuroscience program, with French partners. The grant is for four years and was funded by NIDA.

She has a few new primary research papers and she edited a book:  
Damodaran S, Evans RC, **Blackwell KT**. Synchronized firing of fast-spiking interneurons is critical to maintain balanced firing between direct and indirect pathway neurons of the striatum. *J Neurophysiol*. 2014 Feb;111(4):836-48.

Hawes SL, Gillani F, Evans RC, Benkert EA, **Blackwell KT**. Sensitivity to theta-burst timing permits LTP in dorsal striatal adult brain slice. *J Neurophysiol*. 2013 Nov;110(9):2027-36.

Evans RC, Maniar YM, **Blackwell KT**. Dynamic modulation of spike timing-dependent calcium influx during corticostriatal upstates. *J Neurophysiol*. 2013 Oct;110(7):1631-45.

And she also edited the book:  
*Progress in Molecular Biology and Translational Science*  
Volume 123, 2014 published by Elsevier.

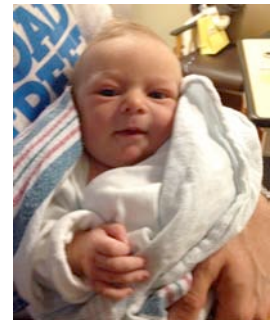


## **Todd Strohlic**

### **New Paper:**

**Strohlic TI**, Stavrides KP, Thomas SV, Nicolas E, O'Reilly AM, Peterson JR. Ack kinase regulates CTP synthase filaments during *Drosophila* oogenesis. *EMBO Rep*. 2014 Sep 15. pii: e201438688. [Epub ahead of print] PMID: 25223282 [PubMed - as supplied by publisher]

And, Todd and his wife, Jennifer Chachkes (V'04), are very excited to announce the birth of their daughter, Hallie Beatrice Strohlic born on Sept. 23, 2014. They are all doing well!



## **Rich Miselis and Pat McManus**

A message from Rich and Pat is below:

Yo Mike,

Pat (McManus) and I are in Ione, WA tonight - rode 80 miles on our bikes today to get here from Sandpoint, ID. Have 270 miles to go on the WACANID bike ride - Washington-Canada-Idaho. Weather is spectacular, fellow riders are wonderful and wildlife/scenery are terrific. Give our regards to all



### **Mary Robinson**

Mary has been promoted! She is now the Director for the Penn Vet Equine Pharmacology Laboratory and the Acting Director for the Pennsylvania Equine Toxicology and Research Laboratory in West Chester, PA.

Website: <http://www.vet.upenn.edu/research/research-laboratories/research-laboratory/equine-pharmacology-laboratory>

As Director of the Penn Vet lab (Co-director since Dr. Soma's retirement in July 2013 and full director since July 2014), she is responsible for the pharmacological research done at New Bolton Center with their herd of research horses. As Acting Director of PETRL (since April 2014), she is responsible for the forensic drug testing laboratory and analytical research program at PETRL, which is a State-owned laboratory and is located on WCU campus in West Chester PA. The Penn Vet Research contract was renewed in July 2014 for another 2.5 years, and supports the 19 Penn personnel that work at these laboratories.



Mary has a publication accepted by the Journal of Veterinary Pharmacology and Therapeutics entitled: Pharmacokinetics and pharmacodynamics of dermorphin in the horse.



### **Spencer Shelly**

Spencer and Jen's son Bennett is already 5 months and it has been an incredibly busy summer/fall. About a year ago Jen was promoted to Assistant Professor at Delaware Valley College. She also won the school wide student nominated teaching award last Spring semester.

### **Melissa Sanchez**

Melissa has been promoted too! Melissa interviewed for an Assistant Professor of Anatomic Pathology (CE track) position at Penn Vet and was promoted earlier last year.



### **We want to know....**

New position, promotion, patent, publication, etc.? Please share your news!  
[vmstp@vet.upenn.edu](mailto:vmstp@vet.upenn.edu)

## Student Publications

### 2013-2014

**Brinkley, C.** Avenues into the food system: a review of scholarly food system research. *International Planning Studies*. 5: 243-266 (2013).

**Brinkley, C.,** Chrisinger, B., and Hillier, A. Tradition of Healthy Food Access in Low-income Neighborhoods: Price and Variety of Produce Vending Compared to Conventional Retail. *Journal of Agriculture Food Systems and Community Development*. 2014 4(1): 155-169  
NIHMSID #575156

**Brinkley, C.** and Vitiello, D. From Farm to Nuisance: Animal Agriculture and the Rise of Planning Regulation. *Journal of Planning History* 13(2): 113-135

**Brinkley, C.** Decoupled: successful planning policies in countries that have reduced per capita GHG emissions with continued economic growth. *Environment and Planning C* (in press)

**Bukh I,** Calcedo R, Roy S, Carnathan DG, Grant R, Qin Q, Boyd S, Ratcliffe SJ, Veeder CL, Bellamy SL, Betts MR, Wilson JM. Increased mucosal CD4+ T cell activation in rhesus macaques following vaccination with an adenoviral vector. *J Virol*. 2014 Aug;88(15):8468-8478. PMID: PMC4135938

de Waal E, Mak W, **Calhoun S,** Stein P, Ord T, Krapp C, Coutifaris C, Schultz RM, Bartolomei MS. In vitro culture increases the frequency of stochastic epigenetic errors at imprinted genes in placental tissues from mouse concepti produced through assisted reproductive technologies. *Biol Reprod*. 2014 Feb 6;90(2):22, 1-12. PMID: PMC4076403

**Gregory BL** and Cheung VG. Natural variation in the histone demethylase, KDM4C, influences expression levels of specific genes including those that affect cell growth. *Genome Res*. 2014 Jan; 24(1):52-63. PMID: PMC3875861

Li, Y., Myers, J.L., Bostick, D.L., Sullivan, C.B., **Madara, J.J.,** Linderman, S.L., Liu, Q., Carter, D.M., Wrammert, J., Esposito, S., Principi, N., Plotkin, J.B., Ross, T.M., Ahmed, R., Wilson, P.C., Hensley, S.E. Immune history shapes specificity of pandemic H1N1 influenza antibody responses. *The Journal of Experimental Medicine* 210:1493-1500 (2013).

**Knight MN,** Hankenson KD. R-spondins: Novel matricellular regulators of the skeleton. (Review) *Matrix Biol*. 2014 Jun 27. pii: S0945-053X(14)00096-1.[Epub ahead of print]  
PMID: 24980904 [PubMed - as supplied by publisher]

Markosyan N, Chen EP, **Evans RA,** Ndong V, Vonderheide RH, Smyth EM. Mammary Carcinoma Cell Derived Cyclooxygenase 2 suppresses Tumor Immune Surveillance by Enhancing Intratumoral Immune Checkpoint Activity. *Breast Cancer Res*. 2013 Sep 3; 15(5):R75 PMID: PMC3979159

**Qu, F.,** Lin, J.M., Esterhai, J.L., Fisher, M.B., and Mauck, R.L. Biomaterial-mediated delivery of degradative enzymes to improve meniscus integration and repair. *Acta Biomaterialia*. 9: 6393-6402 (2013).

**Qu, F.,** Fisher, M.B., and Mauck. R.L. Basic Science of Meniscus Repair: Limitations and Emerging

<http://www.vet.upenn.edu/education/academics-and-training/vmd-phd-program>



Strategies. In "Meniscal Injuries: Management and Surgical Techniques". p89-104, John D. Kelly IV, Ed., Springer, New York, 2014. ([www.amazon.com/Meniscal-Injuries-Management-Surgical-Techniques/dp/1461484855](http://www.amazon.com/Meniscal-Injuries-Management-Surgical-Techniques/dp/1461484855)).

**Redding, L.E.**, Barg, F.K., Smith, G., Galligan, D.T., Levy, M.Z., Hennessy, S. The role of veterinarians and feed-store vendors in the prescription and use of antibiotics on small dairy farms in rural Peru, *Journal of Dairy Science*, 96:7349-7354 (2013).

**Redding, L.E.**, Cubas-Delgado, F., Sammel, M.D., Smith, G., Galligan, D.T., Levy, M.Z., Hennessy, S. The use of antibiotics on small dairy farms in rural Peru. *Prev Vet Med*. 2014 Jan 1;113(1):88-95. NIHMSID#632704.

Vitiello D and **Brinkley C**. The hidden history of food system planning. *J. Planning History* 13(2): 91-112.

Vonderheide, R.H., Bajor, D.L., Winograd, R., **Evans, R.A.**, Bayne, L.J., and Beatty, G.L. CD40 immunotherapy for pancreatic cancer. *Cancer Immunology and Immunotherapy*. 62: 949-954 (2013).

Zhang Y, Yan W, Mathew E, Bednar F, Wan S, Collins MA, **Evans RA**, Welling TH, Vonderheide RH, Pasca di Magliano M. CD4+ lymphocyte ablation prevents pancreatic carcinogenesis in mice. *Cancer Immunol Res*. 2014 May;2(5):423-35. PMID: PMC4160804

## Upcoming Events



### VMD-PhD Christmas Party

Make sure to save the date for the annual VMD-PhD Christmas party to be held at Dr. Atchison's home on Saturday, December 6th at 5pm. Please RSVP by emailing: [atchison@vet.upenn.edu](mailto:atchison@vet.upenn.edu)  
All current students and alumni are invited.

### Contact Us

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