Translational research at OVC benefits pets and people

Collaborative, translational research benefits all species. It leads to improved diagnostics for pets and people, and also new therapies.

OVC researchers Byram Bridle, in OVC’s Department of Pathobiology, Paul Woods, a veterinary oncologist in the Campbell Centre for Animal Cancer at OVC, and McMaster University’s Immunology Research Centre have teamed up to treat breast cancer in cats using new vaccines designed to boost the immune system and kill tumour cells in cats with the disease without hurting healthy tissue. The groundbreaking clinical trial may lead to better treatments for breast cancer in animals and people. The work is the first animal patient clinical trial funded by the Canadian Breast Cancer Foundation. >> OVC Bulletin

PART 2 with Dr. Peregrine and Jonathon Kotwa discussion about Echinococcus multilocularis Ontario Animal Health Network Veterinary Podcasts >> go to podcast

Nicole Nemeth, Claire Jardine and Lenny Shirose, along with collaborators at the Ministry of Natural Resources and Forestry, received a $30,000 grant from the 2017/18 Species at Risk Research Fund for Ontario (SARRFO) for a project entitled “Risk of Snake Fungal Disease to Ontario Snakes: Using a Proxy to Determine the Effects of Temperature and Brumation on Ophidiomyces ophiodiicola Fungal Transmission and Disease Severity”.

Drs. Mallard and Caswell for renewal of their NSERC Discovery Grants. Additional congrats to Dr. Caswell for being awarded a Discovery Accelerator Supplement!

Dr. Wootton and several other Pathobiology faculty for a successful NSERC RTI award for ultracentrifuge rotors to support virology research in PABI.

Congratulations to members of the Bridle lab: Amanda AuYeung, Mahi Azizi, Li Deng (co-supervised by Dr. Leo Susta), Robert Mould, Julia Saturno, Manakrat Singh, Megan Strachan-Whaley and Jacob van Vloten (co-advised by Dr. Sarah Wootton), all of whom won substantial travel awards (that cover travel, accommodations and meals) to present posters at the upcoming Summit for Cancer Immunotherapy, June 25-28, Gatineau, Quebec. Rob and Megan also received invitations to give short talks during plenary sessions.

Dr. Andrew Peregrine has been recognized by the Broad Spectrum Veterinary Student Association (BSVSA) with a LGBT+ Veterinary Awareness Award. >> OVC Bulletin

AMELIE ROSE Coverhill Leland
APRIL 12th at 7.7 lbs
Proud Parents
Amanda MacDonald and David Leland

Bryce Roy Leslie
APRIL 18th at 6.13 lbs
Proud Parents
Erin Harkness and Brad Harkness and big sister Gracie

Melantha Oscos-Harrison
APRIL 11th at 6.17 lbs
Proud Parents
Marja Oscos Snowball and Taurean Harrison and big sister Zariah

ABOVE PHOTO: PHRN represented U of G at the recent London Poultry show on April 5th and 6th. (Left to Right): Leah Read, Raveendra Kulkarni and Bahram Shojaadoost.

ABOVE PHOTO: The panelists at the 3rd PHRN Research Day event focused on the topic of ‘Antimicrobial Stewardship in Poultry Production’

| MORE NEWS: | OVC NEWS | OVC BULLETIN | U of G Campus News |
RECENT PUBLICATIONS

The influence of abiotic and biotic factors on the invasion of *Ixodes scapularis* in Ontario, Canada
Katie M. Clow, Nicholas H. Ogden, L. Robbin Lindsay, Pascal Michel, David L. Pearl, Claire M. Jardine

**ABSTRACT (excerpt)** In northeastern North America, the blacklegged tick, *Ixodes scapularis*, is the vector of numerous tick-borne pathogens, including the agent of Lyme disease, *Borrelia burgdorferi* sensu stricto. >> ScienceDirect Journal >> PubMed

Development of an Atlantic salmon heart endothelial cell line (ASHe) that responds to lysophosphatidic acid (LPA)
Pham PH, Vo NT, Tan EJ, Russell S, Jones G, Lumsden JS, Bols NC

**ABSTRACT (excerpt)** As diseases and abnormalities of the heart can interfere with the aquaculture of Atlantic salmon, the heart was investigated as a source of cell lines that could be used to study the cellular basis of these conditions. >> PubMed

Effects of repeated use and resterilization on structural and functional integrity of microwave ablation antennas.
Finck CA, Zur Linden AR, Singh A, Foster RA, Nykamp SG, Sears WC.

**ABSTRACT (excerpt)** OBJECTIVE To determine effects of repeated use and resterilization on structural and functional integrity of microwave ablation (MWA) antennas. >> PubMed

Prediction of milk fatty acid content with mid-infrared spectroscopy in Canadian dairy cattle using differently distributed model development sets
Fleming A, Schenkel FS, Chen J, Malchi F, Donfatti V, Ali RA, Mallard B, Corredig M, Miglior F

**ABSTRACT (excerpt)** The fatty acid profile of milk is a prevailing issue due to the potential negative or positive effects of different fatty acids to human health and nutrition. Mid-infrared spectroscopy can be used to obtain predictions of otherwise costly fatty acid phenotypes in a widespread and rapid manner. The objective of this study was to evaluate the prediction of fatty acid content for the Canadian dairy cattle population from mid-infrared spectral data and to compare the results produced by altering the partial least squares (PLS) model development set used. >> PubMed

GRAD STUDENT CORNER

WELCOME to the New Graduate Students

- **Karen Carlton, DVSc.**
  with Dr. Brandon Lillie

- **Anna Meredith, DVSc.**
  with Drs. Janet Beeler-Marfisi and Dorothee Bienzle

- **Nasrin Husseini, MSc.**
  with Dr. Bonnie Mallard

- **Alexander Leacy, MSc.**
  with Dr. Leonardo Susta

- **Ayumi Matsuyama, PhD**
  with Dr. Shayan Sharif

Graduate seminars — see upcoming events

REMINDERS / IMPORTANT DATES

GRAD STUDENTS AND FACULTY - Final defense forms must be received by the Graduate Program Assistant / Graduate Coordinator at least **8 weeks** prior to the date proposed for the defense.

- May 19  Tuition payments are due
- May 19  Last day to add courses

All Graduate Students using WebAdvisor

Registration is in two parts:

**Part I:**
Register into your courses UNIV*7500-Research and Writing & UNIV*7510- Full-time Student or UNIV*7520 Part-time Student.

**Part II:**
Graduate Settlement due this now to avoid being charged a late fee.
RESEARCH HIGHLIGHT

Nuclease-based gene therapy for permanent correction of Cystic fibrosis

Cystic fibrosis (CF) is caused by inherited mutations in the gene encoding the cystic fibrosis transmembrane conductance regulator (CFTR) and is one of the most widespread inherited genetic disorders. Although the disease affects multiple organs, the primary cause of morbidity and mortality is cystic fibrosis related lung disease. Due to its recessive nature, i.e. requirement for two defective copies of the gene, and easy accessibility of the lungs to inhaled gene therapy agents; CF is an excellent candidate for gene replacement therapy.

With funding from CF Canada, our lab has been developing gene therapy vectors to “functionally cure” individuals with CF. To achieve this goal, we have genetically engineered baculovirus, a harmless insect virus, to permanently insert genes of interest into a safe location within the human genome using two different cutting-edge genome-editing technologies (TALENs and CRISPR-Cas9). We have also modified the baculovirus genome so that it can “hide” from the immune system long enough to permit site-specific integration of therapeutic genes to occur. By engineering baculovirus to deliver all the “tools” required to insert a functional copy of the CFTR gene into the genome of lung cells, we hope to be able to provide a safe, economical and effective treatment for CF patients irrespective of their CFTR mutation status, gender or genetic background. Additionally, these studies would validate this platform as a general gene therapy vector for broader gene therapy applications in tissues other than the lung, as well as ex vivo correction of human stem cells. >> more

Collaborator:
- Dr. Theo Moraes, Sick Kids

Funding:

PIZZA LUNCH

May 11th  12-1 pm Rm 1800

New Graduate and Summer Student Pizza Lunch

- Please bring your advisor/supervisor with you to introduce you to the department.
- Be prepared to tell us about yourself and your graduate work or the project you will be working on.

Everyone is welcome.

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GRAD STUDENT REMINDERS

Please make sure that you get all the signatures from your committee members before submitting your semester report to the Graduate Program Assistant Donna Kangas will get the signature from the Graduate Coordinator. You can submit your forms in an envelope in Donna’s mailbox on the third floor in Pathobiology. They will be picked up once a day.

READ YOUR UoG Email DAILY: This is how the Department of Pathobiology and other Departments of the University of Guelph contacts you.

MAILBOX: Pick up your mail on a daily or weekly bases.

MOVING? Let Donna Kangas know.

Donna Kangas Ext. 54725 Graduate Program Assistant - GPA Population Medicine Building, Bldg #174 Pathobiology ovasas.gradpath@uoguelph.ca dkangas@uoguelph.ca
UPCOMING EVENTS

PATHOBIOLOGY SEMINARS
Seminars will take place at **11:30 am** in PAHL room 1810

May 5  Dr. Jim Uniacke
MCB, University of Guelph
“Translational Control and Oxygen sensing in Cancer Progression” Host: S. Wootton

OVC EVENTS

May 9  Summer Career Opportunities and Research Experience Program
Orientation session for students and faculty advisors
12:30 LLC 1714 > details

May 11  Pizza Lunch 12-1 pm Rm 1800
New Pathobiology grad students and summer students.

PHRN SEMINARS  NEWS  EVENTS

May 9  Dr. Keith Warriner
12:30 PAHL Room 1810

U of G EVENTS

May 2-3  Teaching & Learning Innovations Conference

May 8  Course reDesign Institute

May 11  CCSAW Annual Animal Welfare Research Symposium

May 15  Roundtable on Teaching of Evaluation at U of G

May 25  10th Annual Institute for Comparative Cancer Investigation Cancer Research Symposium
Free all day campus event includes guest speakers, student presentations and a poster session. LLC 1714 & 1707/B/C

May 25  Jobs Canada Job Fair

Jun 9-10  Alumni Weekend

DO YOU KNOW HOW TO RECOGNIZE A PHISHING SCAM?

Over the past week, the Information Security team has been dealing with a higher than normal volume of phishing email resulting in a number of compromised accounts.

>> details

It's Time to Spring Clean!
Electronic Waste and Scrap Metal Pick Up
**Wednesday May 3**

Bring your items to Room 3838 or email a photo and the location of your items for pick up to mstruyk@uoguelph.ca

STUDENT SUPPORT

INTERNAL

• OVC Scholarship Program
  Deadline: June 9th, 2017

EXTERNAL

• Nestle Purina Sponsorship on the Human Animal Bond
  Deadline: May 15th, 2017

DEPARTMENT REMINDERS

If you use the service elevator to move product particularly on skids please be careful not to leave any pieces that may break off the skids in the elevator. The source of the malfunction earlier this month was large wood chips getting into the track causing the door to seize and the seized door trying to open was the smell of burning rubber.

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Contact Nathalie
newsletter submissions
OVC website updates
research posters
research websites
teaching rooms and resources