

ONKOS



Number 12
April 28, 2006

Greetings!

After a long hiatus, we are back! This issue will bring you up to date on what is going on in cancer research, new facilities, funding, appointments, and recent publications from our members, as well as future cancer-related seminars.

If you would like to join the Comparative Oncology Program or to learn more about it, please contact Dr. Laura Rush at rush.61@osu.edu. Items for ONKOS should be submitted to Dr. Nong Inpanbutr at [<Inpanbutr.1@osu.edu>](mailto:Inpanbutr.1@osu.edu)

TISSUE BANK WILL BEGIN IN MAY

Tissue procurement for the Biospecimen Repository will begin in early May. Samples of tumors and normal tissue from dogs and cats will be collected and stored for use by multiple investigators. Megan Porter will be responsible for tissue collection and record keeping. For more information please contact Megan Porter (porter.281), Kate Hayes (hayes.9), Laura Rush (rush.61) or Maxey Wellman (wellman.3).

Highlights



PUBLICATIONS:

2005

- Lairmore M, Silverman L, and Ratner L. 2005. Animal Models for Human T-lymphotropic Virus type 1 (HTLV-1) Infection and Transformation. *Oncogene* 24:6005-6015.
- Lairmore M, and Fujii M. 2005. 12th International Conference on Human Retrovirology: HTLV and Related Retroviruses (Short Report). *Retrovirology* 2:61.
- Richard V, Nadella P, Luchin A, Green P, Lairmore M, Foley G, and Rosol T. 2005. Transcriptional Regulation of Parathyroid Hormone-related Protein Promotor P3 by ETS-1 in Adult T-Cell Leukemia / Lymphoma. *Leukemia* 19(7):1175-83.
- Silverman L, Phipps A, Montgomery A, Fernandez S, Tsukahara T, Ratner L, and Lairmore M. 2005. In Vivo Analysis of Replication and Immunogenicity of Proviral Clones of Human T-Lymphotropic Virus Type 1 with Selective Envelope Surface Unit Mutations. *Blood* 106:3602-3608.
- Younis I, Yamamoto B, Phipps A, Green PL: Human T-cell leukemia virus type 1 expressing non-overlapping Tax and Rex genes replicates and immortalizes primary human T-lymphocytes but fails to replicate and persist in vivo. *J Virol* 79: 14473-14481, 2005.
- Xie L and Green PL: Envelope is the major viral determinant of the distinct in vitro cellular transformation tropism of HTLV-1 and HTLV-2. *J Virol* 79: 14536-14545, 2005.

Comparative Oncology Program Newsletter

NEWS FROM THE VETERINARY CANCER SOCIETY CONFERENCE, MARCH 5-8, 2006 IN SEDONA, ARIZONA

Approximately 80 veterinary oncologists, residents-in-training, practitioners and technicians gathered for an informative and exciting meeting on March 5-8, 2006. Dr. Steve Withrow from the Animal Cancer Center at Colorado State University kicked off the scientific meeting with a discussion on surgical management of canine osteosarcoma which was followed by keynote speaker, Dr. Ross Wilkins, from the Denver Clinic for Extremities at Risk (Institute for Limb Preservation). Following their talks, they opened the meeting to questions and general discussion. The scientific program was coordinated by Dr. Pam Jones and the meeting was organized by Barbara McGehee, Executive Director, and Veterinary Cancer Society. A total of 23 abstracts/oral presentations were given; College of Veterinary Medicine faculty, residents, and students appeared as authors on 5 of these. For further information on the Veterinary Cancer Society go to <http://www.vetcancersociety.org/> or contact Barbara J. McGehee, VCS Executive Director: vcs@cox.net or call (619) 474-8929.



MEETING/ SEMINAR

The next meeting of the Molecular Biology & Cancer Genetics Program for the 2005-2006 academic year will be Wednesday, May 3, 2006 in the Ross Heart Hospital, Rm. 1213. The speaker will be Dr. John Hassell from McMaster University. Title: "Analyses of Breast Cancer Stem Cells in Breast Cancer-Prone Transgenic Mice."

PUBLICATIONS (cont.):

- Cline MC, Couto CG: Changes in blood pressure after blood collection for transfusion in Greyhounds. *J Vet Intern Med* 2005;19:845-848.
- Fayos M, Couto CG, Cline Iazbik MC, Wellman M: Serum protein electrophoresis in retired racing Greyhounds. *Vet Clin Pathol* 2005;34:397-400.
- Troyer HL, Feeman WE, Gray TL, Couto CG: Comparing chemical restraint and anesthetic protocols used for blood donation in cats: One teaching hospital's experience. *Vet Med* 2005;100:652-658.
- Fayos M, Couto CG, Cline Iazbik MC, Wellman M: Serum protein electrophoresis in retired racing Greyhounds. *Vet Clin Pathol* 2005;34:397-400.

2006

- Hiraragi H, Kim S-J, Phipps A, Silic-Benussi M, Ciminale V, Ratner L, Green P, and Lairmore M. 2006. Human T-lymphotropic Virus Type 1 Mitochondria Localizing Protein p13II is Required for Viral Infectivity in vivo. *J. Virol.* 80:3469-3476.
- Yilmaz A, Fernandez S, Lairmore M, Boris-Lawrie K. 2006. Coordinate enhancement of transgene transcription and translation in a lentivirus-based vector. *Retrovirology* 2006, 3:13 (15 February 2006)
- Arnold J, Yamamoto B, Phipps AJ, Lairmore M, Green PL. 2006. HTLV-1 1 nuclear b-ZIP (HBZ) is dispensable for cellular immortalization In Vitro and viral spread and persistence in inoculated rabbits. *Blood* 2006 Jan 19; [Epub ahead of print]
- Kim S-J, Nair AM, Fernandez S, Mathes L, and Lairmore M. 2006. Enhancement of LFA-1-Mediated T-Cell Adhesion by Human T-Lymphotropic Virus Type 1 p12I. *J. Immunol.* 176(9):5463-5470
- Fabrizio F, Baumwart R, Cline MC, Meurs K, Couto CG: Functional systolic murmur in retired racing Greyhounds. *J Vet Intern Med* 2006;20:78-82.

OPENING OF THE NEW BIOMEDICAL IMAGING CENTER

The Wright Center of Innovation in Biomedical Imaging was created with funding obtained by Dr. Michael Knopp. This facility currently contains 2 high-field magnets, 3T and 7T, for human and animal imaging. A portion of the Wright Center is a dedicated, dual use, animal facility for clinical veterinary patients and for research animals. At the center of the animal facility is an area for anesthesia preparation and recovery. The 3T magnet is available for clinical imaging of VTH patients on Tuesday and Friday afternoons; research scans are available after consultation and scheduling. The 3T magnet has many oncology applications including magnetic resonance spectroscopy (MRS) and dynamic contrast enhancement (DCE-MRI). Members of the Radiology Section are more than willing to answer questions about the Wright Center and help with projects. Please contact Dr. Tod Drost (drost.2@osu.edu) in the Radiology Section.



IN THE NEWS

- The OSU Oncology Program was featured in Animal News (Morris Animal Foundation) in the last issue.

NEW GRANT AWARDS

- Patrick Green, Principal investigator, National Institutes of Health, R01CA77556-06, "Molecular determinants of HTLV cellular transformation"
- The OSU CVM Oncology program received funding from a private donor to establish a National Greyhound Database and Blood/Tissue Procurement Lab.

APPOINTMENTS

- Patrick Green, Co-director of the Ohio State University Comprehensive Cancer Center-Viral Oncogenesis Program.

PUBLICATIONS (cont.):

- Couto CG, Cline Iazbik MC, Garcia L, Brooks M: Evaluation of platelet aggregation using a point-of-care instrument in retired racing Greyhounds. *J Vet Intern Med* 2006;20:365-370.
- Younis I, Boris-Lawrie K, Green PL. Human T-cell leukemia virus ORF II p28 encodes a post-transcriptional repressor that is recruited at the level of transcription. *J Virol* 80:181-191, 2006.
- Xie L, Yamamoto B, Haoudi A, Semmes OJ, Green PL: The PDZ domain of HTLV-1 Tax promotes virus mediated T-cell proliferation in vitro and persistence in vivo. *Blood*. In Press.
- Arnold J, Younis I, Yamamoto B, Phipps AJ, Lairmore MD, Green PL: Enhancement of infectivity and persistence in vivo by HBZ, a natural antisense coded protein of HTLV-1. *Blood*. In Press.
- Tzu-yin Lin, Laura J. Rush and Cheryl A. London. Generation and Characterization of Bone Marrow-Derived Cultured Canine Mast Cells. *Veterinary Immunology and Immunopathology*. In Press.

ABSTRACTS PRESENTED AT THE VETERINARY CANCER SOCIETY CONFERENCE:

- Clinicopathologic features of appendicular osteosarcoma in retired racing greyhounds. A Lara, CG Couto, C Crawford, H Hamilton
- Postamputation adjuvant low-dose suramin and doxorubicin in dogs with appendicular osteosarcoma. FJ Alvarez, CG Couto, WC Kisseberth, A Lara-García, SL Gallant, NE Westendorf, LJ Rush, J-L Au, G Wientjes
- Identification of a novel germline met mutation in dogs. AT Liao, CA London
- Evaluation of the efficacy of the PDK1/Akt signaling pathway inhibitor OSU-03012 in canine osteosarcoma cell lines. S Murahari, F Alvarez, CG Couto, JF Modiano, CM Jubala, SP Fosmire, SK Kulp, CS Chen, WC Kisseberth
- In vitro cytotoxicity of dihydroartemisinin in canine tumor cell lines. K Hosoya, WC Kisseberth, S Murahari, F Alvarez, CG Couto