

2015 Cancer Research Symposium

Wednesday, May 27th, Room 1714 OVC LLC



3:30 pm Keynote Address

Dr. Nicola Mason

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"Targeted, Recombinant Listeria-based Immunotherapy in the Treatment of Osteosarcoma - David meets Goliath and the rest is history."

Highly attenuated, recombinant Listeria monocytogenes can be used to safely deliver tumor antigens into antigen-presenting cells and induce potent anti-tumor immunity. Cytotoxic T cell responses induced by L. monocytogenes eliminate established tumors and prevent metastatic disease in multiple mouse models. However, the effectiveness of this approach in the setting of spontaneous disease is unknown. We have evaluated the ability of a recombinant chimeric human HER2/neu expressing L. monocytogenes as adjuvant therapy in the setting of minimal residual disease and in combination with radiation therapy in the setting of non-resectable disease to prevent metastases and delay primary tumor progression in dogs with spontaneous osteosarcoma. Promising results in both settings pave the way to USDA licensure for veterinary use and the initiation of adult and pediatric clinical trials in HER2+ neoplasia.

Dr. Mason graduated from the Royal Veterinary College, London and spent a year in private small animal practice. She performed a small animal internship at the University of Bristol and an Internal Medicine residency at the University of Pennsylvania after which she became a Diplomate of the American College of Veterinary Internal Medicine. She earned her PhD in Immunology from the University of Pennsylvania and performed her post doctoral fellowship in the laboratory of Dr. Carl June at the University of Pennsylvania's School of Medicine. She joined the faculty of the Veterinary School at the University of Pennsylvania in 2006. Her research focuses on developing immune therapeutic approaches to effectively target cancer and prevent metastatic disease in companion dogs, with the ultimate goal of identifying and accelerating successful therapies into the human and veterinary clinics. Her lab is currently focused on two main therapeutic strategies; recombinant listeria-based technologies and chimeric antigen receptor T cells (CAR-T). Target canine neoplasias include osteosarcoma, lymphoma and hemangiosarcoma. She holds the Pamela Cole Chair in Companion Animal Medicine, is an Associate Director of the Mari Lowe Center for Comparative Oncology and serves as the Director of the PennVet Tumor Tissue Bank.

Details of the symposium schedule, registration and abstract submission are available on the conference website:

<http://ovc.uoguelph.ca/icci/2015-symposium>