

Smiling Blue Skies

Taking a bite out of cancer since 2001



OVC Pet Trust

Update Report

2016

**UNIVERSITY
of GUELPH**

Thank you! You are receiving a copy of the Smiling Blue Skies Cancer Fund 2016 Update Report as a thank you for your support of OVC Pet Trust and cancer care, teaching and research at the Ontario Veterinary College, University of Guelph.

This report has been prepared for The Smiling Blue Skies Cancer Fund ©2016.

Smiling Blue Skies

Changing the future...helping to create a cancer-free world



“*It is so important to be happy every day, to dream a little every day and to realize if you dream it and work hard at it, you can do it.*”

– Suzi Beber
Founder, Smiling Blue Skies Cancer Fund
www.smilingblueskies.com

2016 was a remarkable year for Smiling Blue Skies and Suzi Beber. In addition to the special events and walks hosted by volunteers across Canada, Suzi was presented with an honorary degree from the University of Guelph for her tremendous support of cancer research and care.

Suzi exemplifies what a caring person can do to make a difference. She has contributed countless volunteer hours annually to raise funds for OVC Pet Trust. This charitable fund at the Ontario Veterinary College, University of Guelph supports the work of veterinarians and scientists seeking to help animals with cancer. Suzi's visit to the university campus provided her with an opportunity to tour the Mona Campbell Centre for Animal Cancer for the very first time, where she met patients, reunited with friends and was able to see the impact of her work and dedication first hand.

While most people can understand the powerful relationship between dogs and their people, Suzi literally takes these special friendships to heart. In addition to what she does for the Ontario Veterinary College, Suzi provides countless hours of support to pet owners who need help in coping with the loss of their animals. In the years before we met in person, I wondered how Suzi was able to manage this type of work for hours a day – every day. I now have come to understand that people are drawn to Suzi. Her energy, enthusiasm for life and tenacity to do things well allow her to excel at this exhausting work. The impact of her efforts are obvious. She has affected the lives of countless companion animals and people across our country and around the world.

Once again, on behalf of all of us at OVC Pet Trust, thank you Suzi. Thank you for the sacrifices you have made and continue to make to help others!

Kim Robinson, Managing Director, OVC Pet Trust

Smiling Blue Skies continues support of Clinical Trials Coordinator at OVC

The Clinical Trials Coordinator manages clinical studies within the Health Sciences Centre at the Ontario Veterinary College. This role supports cancer and advanced disease clinical research, helps to maximize awareness, manage pet owners' expectations and increase participation in clinical trials. This work ensures studies are able to achieve critical mass, collect appropriate data and help as many pets as possible.

The coordinator oversees recruitment of owners and their pets, the collection of necessary data and acquisition of samples for tumour banking. Working with specialists throughout the OVC Health Sciences Centre, the coordinator actively seeks

patients from all veterinary specialty services that could be included in a clinical trial and advance veterinary knowledge that could lead to the discovery of potential new treatment options that could help current or future patients.

In addition to working with the principal investigators, the coordinator maintains strong relationships with pet owners, explains the steps once a pet is involved in a trial, obtains consent for participation and monitors how pets respond to treatments.

This role is vital to the cancer care OVC offers to patients and their people, while simultaneously helping to advance cancer research.



In photo: Patient, Ella with radiology team.

About the Health Sciences Centre at the Ontario Veterinary College, University of Guelph

The Ontario Veterinary College's Health Sciences Centre (OVC-HSC) is a busy hub of specialized veterinary care and research located at the University of Guelph, approximately 1.5 hours outside of Toronto. The companion animal hospitals within the centre employ 31 clinicians and 45 registered veterinary technicians (RVTs). The OVC-HSC medical team also includes two residents, 11 companion animal interns, 22 Doctor of Veterinary Science students (DVSc), veterinary graduate students focused on a variety of specialties within companion animal medicine.

Open 24 hours a day, OVC-HSC delivers care to approximately 5,000 companion animals each year with an annual average of 12,000 patient visits. Approximately 5,000 of these visits are to the Mona Campbell Centre for Animal Cancer.



In photo: OVC Clinical Trials Coordinator, Vicky Sabine, Suzi Beber and OVC Tumour Bank Coordinator, Kaya Skowronski.

Oncology Care and Research at the Ontario Veterinary College in 2016

Over the past year OVC has experienced an increase in participation by pet owners in clinical trials. The number of donations of both blood and tumour samples to the Companion Animal Tumour Bank has also increased for both canine and feline patients. This growth has been made possible through the continued support of The Smiling Blue Skies Cancer Fund.

Funds donated from Smiling Blue Skies support the Clinical Trials Coordinator position at OVC. The coordinator works within the OVC Health Sciences Centre to keep front line specialists and referring veterinarians informed by providing access to the most up-to-date information on new and ongoing cancer studies.

In 2016, the OVC team strengthened its approach by improving communications, outreach and awareness in regards to clinical research. During the past 12 months the coordinator expanded the pool of pets referred to take part in current trials by reaching more pet owners and referring veterinarians. She also promoted collaborations and facilitated cancer research at the OVC Health Sciences Centre across the University of Guelph and with external organizations focused on finding solutions to cancer.



In photo: Patient, Smokey with Oncology Resident, Arata.

3 Things Pet Owners Need to Know About... *Clinical Trials*

The Ontario Veterinary College is currently conducting more than 25 companion animal-related clinical trials in specialty care areas such as oncology, nutrition, emergency care, advanced surgical techniques and more. Each study aims to help advance medical treatments that can improve the health or quality of life for our pets.

What is a Clinical Trial? Clinical trials are research studies used in all specialties of human and veterinary medicine to evaluate new medical devices, vaccines, diagnostic tests and treatments. These trials may investigate new types of surgical or other procedures as well as novel medical therapies for patients.

What are the benefits of participating in a clinical trial?

Clinical trials allow clinicians to discover new and improved ways to prevent, diagnose or treat patients. By participating in a clinical trial, your pet may benefit by: gaining access to new treatments that are not yet available to the public; obtaining expert medical care at a leading health care facility; playing an active role in developing a specialized healthcare plan; and helping others by contributing to medical research.

How can my pet take part in a clinical trial at OVC?

Pet owners should talk to their family veterinarian about clinical trial treatment and referral options to OVC. To see the full list of current clinical trials please visit the OVC Health Sciences Centre website:

<http://bit.ly/OVCClinicalTrials>

2016 Activities

On top of managing patients recruited into clinical trials at OVC, the Clinical Trials Coordinator has been involved in many activities to help improve the reputation and certification standard of the Companion Animal Tumour Sample Bank (CATSB).

Accomplishments in 2016

- CATSB successfully registered with the 'Biobank Resource Centre: Canadian Tissue Repository Network (CTRNet)', developed by the University of British Columbia Office of Biobank Education and Research. Registering with the CTRNet provides CATSB access to the industry's best practices, including international standard operating procedures (SOPs) for banking and to be listed in the biobank locator, promoting CATSB at a national level.
- Assisted with the launch and publicity of OVC's first study in collaboration with NIH-NCI-COTC (National Institutes of Health - National Cancer Institute - Comparative Oncology Trials Consortium): *Standard of Care Therapy with or without Rapamycin in Newly Diagnosed Dogs with Appendicular Osteosarcoma (OSA)*; and started recruiting canine OSA patients into this trial.
- Education and outreach to potential research partners for current and/or future studies and to recruit companion animal patients, in particular, oncology patients.
- Ongoing updates to create a searchable database of surgical oncology procedures performed at OVC to enable appropriate grants and/or identify potential collaborators.



In photo: Patient, Cujo with his owner(right), OVC's clinical trials coordinator (top), surgical and cancer care team.

Highlights: Ontario Veterinary College cancer research and healthcare in the news

Vets, Pets and Debt

This episode looks at the lengths people will go to ensure their pets live a long and healthy life. The Nature of Things, March 2016.

NCI teams up with 20 vet schools to test transplant drug in bone cancer FiercePharma, April 2016.

OVC Takes Part in Bone Cancer Clinical Trial Veterinary Practice News, May 2016.

Dogs, cats may help us find better treatments for human cancers Toronto Metro News, May 2016.

Ontario Vet College cancer treatment breakthrough spurs human clinical trials . CBC News, July 2016.

Cancer breakthrough out of the OVC CBC News, July 2016.

Animal cancer breakthrough leads to human clinical trials Science Daily, July 2016.

Dogs studied at OVC in hope of answers for humans with cancer CTV News, July 2016.

Clinical cancer studies at the Ontario Veterinary College currently seeking oncology participants:

Canine oncology studies:

- Evaluation of the safety and effectiveness of standard-of-care therapy, with or without adjuvant rapamycin administration in dogs with osteosarcoma
- Non-invasive detection and quantification of circulating tumour cells in dogs with appendicular osteosarcoma
- Identification of response to chemotherapy in relapsed canine lymphoma patients
- Evaluation of sentinel lymph nodes in dogs with oral tumours
- Analysis of cytokines in dogs with osteosarcoma treated with amputation, radiation and/or chemotherapy
- microRNA profiling for diagnosis and prognosis in canine multicentric lymphoma

- Prognostication of canine T-cell lymphoma
- Acute Myeloid Leukemia Study

Oncology-related studies:

- Evaluation of anesthetic blocks during forelimb surgery for analgesia in dogs
- Investigation of high flow nasal cannula respiratory support systems in brachycephalic dogs recovering from general anesthesia
- Investigation of high flow nasal cannula respiratory support systems in dogs with clinical disease
- Comparison of subcutaneous hydromorphone delivered with Medipacs Mini-Infuser™ CRI pump to subcutaneous intermittent injection in dogs
- Feline acute kidney injury study
- Improving characterization of respiratory disease in cats



In photo: RVT Geri with lymphoma clinical trial participant, Honeybun.

MOST PREVALENT CANINE TUMOURS

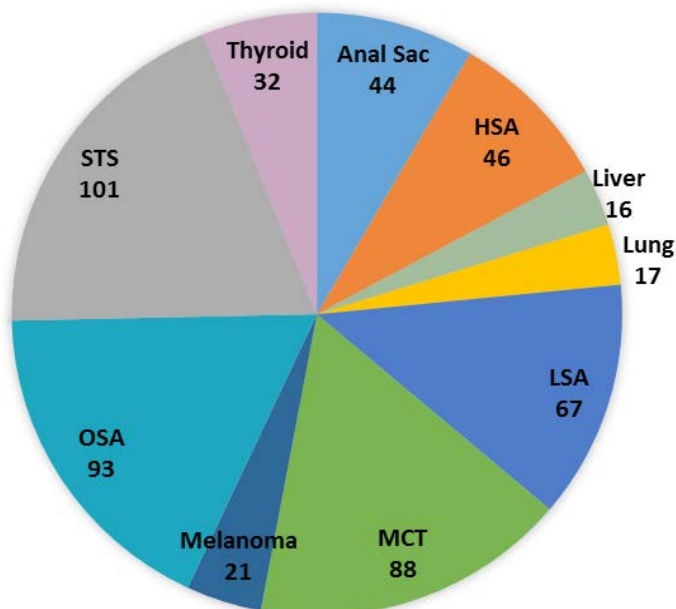


Figure 1 - The most prevalent canine tumour types in the OVC Companion Animal Tumour Sample Bank as of October 2016, and respective number of cases banked for each tumour type.

Abbreviations:

OSA – osteosarcoma

MCT – mast cell tumour

STS – soft tissue sarcoma

LSA – lymphoma

Tumour Bank Facts

- The Companion Animal Tumour Sample Bank (CATSB) has banked approximately **17,000 samples** from **871 companion animal** patients
- **99% compliance rate from OVC-HSC clients when asked about their companion animal's participation**
- **2016: 289 unique cases banked**
- **75% increase** in research projects utilizing blood or tumour samples from the CATSB in 2016

In photo: Suzi Beber meets patient Kegan during her first visit to the Mona Campbell Centre for Animal Cancer at the Ontario Veterinary College.



Number of Cases Banked Yearly in CATSB

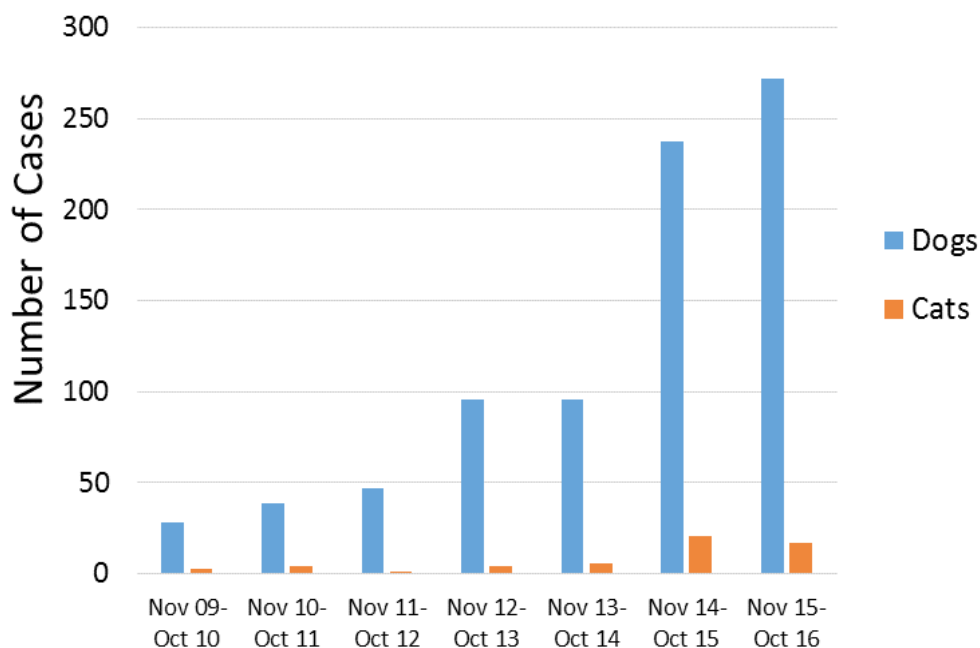


Figure 2 - Number of cases banked in OVC Companion Animal Tumour Sample Bank (CATSB) per year. Cases are divided by year and species (dogs in blue, cats in orange). There are approximately 871 cases now banked; 815 dogs and 56 cats, equating to over 17,000 samples stored in CATSB.

Patient Enrollment Companion Animal Tumour Sample Bank (CATSB)

Numbers of oncology patients recruited into oncology and oncology-related studies and banked in CATSB and requests made by researchers during periods Jan 1 – Oct 31 for 2014 – 2016.

| | Clinical Research Studies | | | CATSB | | |
|-----------------------------|----------------------------|----------------------|-------------------------------|-------------------|----------------------------|----------------------------------|
| Time frame (Jan 1 - Oct 31) | # Oncology-related Studies | # patients recruited | # Golden retrievers recruited | # of cases banked | # Golden Retrievers banked | # sample requests by researchers |
| 2014 | 11 | 221 | 20 | 103 | 6 | 2 |
| 2015 | 13 | 147 | 14 | 239 | 25 | 2 |
| 2016 | 19 | 158 | 18 | 242 | 25 | 6 |

Please note: the largest contributing study in 2014 was from a survey (n=75) rather than a study collecting patient samples or involving patient treatment. As well, in 2014, three of the studies were able to include any cancer patients whereas in 2015 and 2016 all the studies are for specific canine/feline cancers or diseases which include oncology patients, possess strict inclusion/exclusion criteria and two of the cancers under investigation are rare or uncommon diseases, 'acute myeloid leukemia' and 'T-cell lymphoma'. Several new trials have recently started in 2016 – while cancer patients are eligible to be included none as yet have been recruited. As the number of cases banked in the CATSB continues to increase, this results in a greater number of samples being available for various tumour types, and so the CATSB increasingly becomes a more attractive resource to researchers for obtaining samples to utilize in their research studies.



Creating a Community: What the Mona Campbell Centre for Animal Cancer means to pet owners

"The waiting room at the cancer centre is a special place for us," Teresa reflects. "After Alfie was diagnosed with lymphoma, we spent a lot of time at OVC – we were basket cases. Over a period of weeks and months, you see the same people come in and out with their pets. At the beginning, other people helped us; they helped us become more positive by telling us what they'd been through with their pet; they helped us realize there was hope. We've tried to now pay it forward and do the same for others as was done for us."

- Teresa Chadwick, pet owner and client at the Mona Campbell Centre for Animal Cancer.

In photo: Dr. Ameet Singh with Mazie, Max, Alfie and Annie.

Educating students from Canada and around the world

I gained invaluable experience working directly with cancer patients at the Ontario Veterinary College and developed a great appreciation for the lab techniques used to help clinicians identify and characterize cancers through my summer student research. I know that the work done by cancer researchers at OVC and the information I have gained will help me to better prevent, diagnose, and treat cancer in my own patients in the future!

Melissa Pinto, OVC class of 2018



Educating the Next Generation

Exposure to alternative career options and increasing opportunities for students to learn more about the research side of veterinary medicine is a key objective at the Ontario Veterinary College (OVC). Continuing on the success of 2015, the oncology team at OVC was able to offer learning opportunities to two Doctor of Veterinary Medicine (DVM) students, one from Canada and the other on exchange from Ceará State University, Brazil as part of the 'Science Without Borders Program'. Both students participated and presented research posters based on their work within the cancer centre as part of the the Univeristy of Guelph's Summer Career Opportunities and Research Experience Program (CORE), which aims to offer a wide range of undergraduate research opportunities. Topics presented included: *Expression profiling of EGFR and uPAR in ICICI sarcoma cell lines* and *Determining the effects of mTOR inhibitors on canine leiomyosarcoma cells from the Institute for Comparative Cancer Investigation (ICCI) cell line bank*, respectively.

"I'm really fortunate to have this opportunity and really grateful to all my supervisors, all the residents and interns," **Lais Calazans**, fourth year DVM student, Ceará State University, Brazil. Calazans plans to continue pursuing veterinary oncology upon her return to Brazil.



Other education opportunities:

- Two advanced biotechnology students from Sir Sanford Fleming College, Peterborough, who completed 4-month internships (May – Aug 2016): assisting with clinical research and data management studies, in particular the COTC canine OSA trial and with the CATSB.
- Two volunteer placements: one University of Guelph undergraduate student gaining experience in order to apply to veterinary college; one University of Guelph graduate student whose experience at the cancer centre helped in successfully obtaining a place with the Medical Science Graduate Program, Cumming School of Medicine, University of Calgary.

In photo: Dr. Michelle Oblak (surgical oncologist) instructs second year Doctor of Veterinary Medicine students in surgical skills building lab. Using silicon models which have 3 layers that replicate the skin, subcutaneous, and muscle layer, students can practice dealing with margins, biopsies, tumour removals and suturing. These exercises allow students to develop their psychomotor skills by repeating exercises in a low stress environment.

Champion for helping others receives Honorary Doctorate at winter convocation

A champion for innovative cancer research with a passion for helping others, Suzi Beber was honoured with an honorary doctorate from the University of Guelph in 2016 for her dedication, volunteerism and leadership in helping to improve canine health and find answers to canine cancer.

Suzi's Story

Suzi Beber exemplifies what a caring person can do to make a difference. After suffering serious injuries following routine surgery, Beber welcomed a Golden Retriever puppy named Blues into her life. Blues helped Beber with the emotional and physical challenges associated with her recovery but unfortunately was diagnosed with cancer at a young age. Blues was treated at the Ontario Veterinary College (OVC) and lived for a year after his diagnosis. To honour his memory, and in gratitude for the care he received, Suzi created the Smiling Blue Skies Cancer Fund.

Smiling Blue Skies began with modest beginnings in 2001 and has grown into a network of dedicated supporters that spans North America and Europe.

Through her tireless efforts, the Smiling Blue Skies Cancer Fund has raised more than \$1.7 million for OVC Pet Trust.



In photo: Dr. Franco Vaccarino presents Suzi Beber with her honorary degree from the University of Guelph.

In 2013, Suzi was presented with a Canadian Diamond Jubilee medal by the Governor General.

Her support of OVC Pet Trust has helped OVC advance the prevention and treatment of cancer through initiatives such as: validation of a blood test to diagnose hemangiosarcoma, a highly aggressive cancer; development of Canada's first cancer registry for companion animals; investigation of novel cancer treatments and approaches, providing much needed seed money for research that can be difficult to obtain from traditional grant and

funding sources; funding for a clinical trials coordinator position at OVC and continuing education opportunities for veterinarians, including updates in oncology.

In addition to the thousands of volunteer hours Beber contributes annually to raise funds for OVC Pet Trust, she also recognizes the need for compassionate support for pet owners dealing with the loss of a beloved animal and makes herself available to people who need an empathetic friend during a difficult time.



Pets Plus Us Annual Champion Award recognizes outstanding volunteerism



In photo: The Pets Plus Us team presents Suzi Beber with Outstanding Volunteerism Award.

In 2016, Suzi Beber was presented with the Pets Plus Us Champion Award, recognizing outstanding volunteerism.

The awards, presented by Pets Plus Us, a Canadian pet health insurance company, recognize the individuals and organizations that treat, volunteer, rescue and care for pets in the community. Nominations are received over a four-

month period and the public is encouraged to vote for their favourite nominee. The top five nominees with the most votes in each category are reviewed by a judging panel made up of pet health and wellness professionals to select the winners.

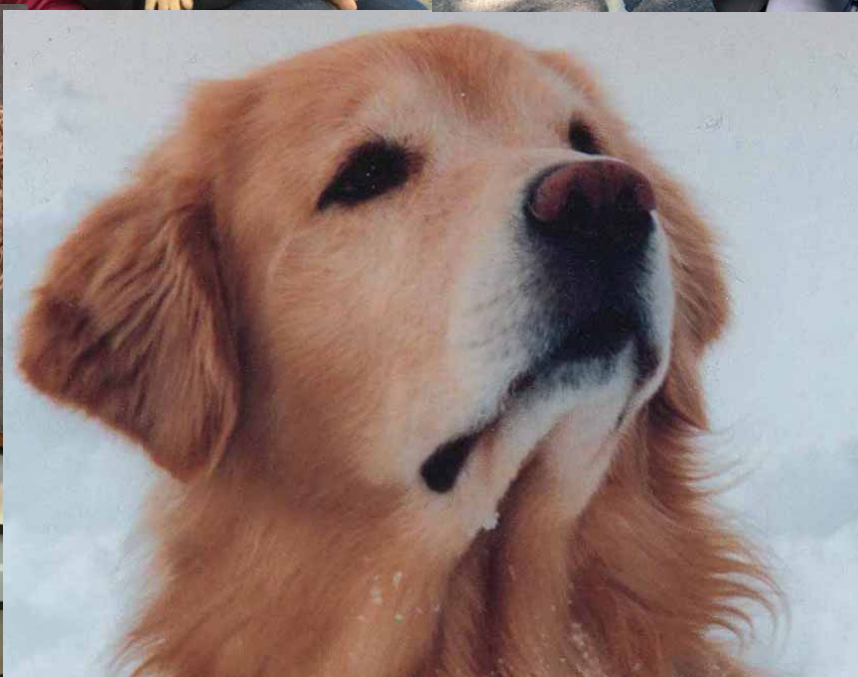
“We’re thrilled to be able to recognize the amazing work being done by Suzi Beber of The Smiling Blue Skies Cancer Fund, and we hope that the Champion Awards inspires new advocates to champion the happiness of pets and their owners in their own way.”

-Dr. Chip Coombs, Chief Veterinary Officer, Pets Plus Us



Celebrating our volunteers across the country!







OVC Pet Trust, founded in 1986 at the Ontario Veterinary College, University of Guelph, is Canada's first charitable fund dedicated to the health and well-being of companion animals.

OVC Pet Trust honours the relationship between pets, their people and veterinary caregivers by raising funds to support innovative discoveries that improve the prevention, diagnosis and treatment of diseases of pets.

Funds also help train veterinarians to provide exceptional healthcare for pets and provide equipment and facilities for the Ontario Veterinary College.

University of Guelph
Charitable Registration Number:
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