


**UNIVERSITY  
of GUELPH**

## **Equine Guelph**

**TheHorsePortal.ca**

**NEW FROM EQUINE GUELPH**

**Short Online Courses**

A photograph of three horses running across a green field under a blue sky with light clouds. Two dark horses are in the foreground, and a lighter brown horse is running alongside them.

**Join the Herd**

## **Annual Report**

**May 1, 2016 – April 30, 2017**

## Table of Contents

<b>Executive Summary .....</b>	<b>2</b>
<b>Dr. Jeff Wichtel and Al Patterson Letter .....</b>	<b>5</b>
<b>Introduction .....</b>	<b>8</b>
<b>Summary of Equine Guelph Programs .....</b>	<b>9</b>
Research .....	9
Education and Training .....	10
Full-Circle-Responsibility Equine Welfare Education Program .....	13
Communications and Marketing .....	15
Development .....	18
<b>Financial Report .....</b>	<b>22</b>
<b>Highlights and Special Events.....</b>	<b>23</b>
<b>Summary .....</b>	<b>42</b>
<b>Appendices</b>	
1. Current membership of Equine Guelph Advisory Council and Committees .....	43
2. Equine Guelph Industry Partners .....	46
3. Equine Guelph Staff .....	47
4. Research projects funded by Equine Guelph .....	48
5. Lay Summaries for Research Projects .....	49
6. Research Publications .....	56
7. Research Presentations .....	59
8. Presentations and Talks by Equine Guelph .....	61
9. Educational Offerings by Equine Guelph .....	62
10. Summary of the Equine Studies Program .....	63
11. Equine Guelph's Promotional Events .....	70
12. Media Coverage List .....	72
13. Website Report .....	80
14. Sponsors .....	83
15. Year End Financial Statement .....	84

## Executive Summary

Current events continue to highlight the public concern about the health and welfare of all animals, including a high degree of awareness about horses. There is a strong and growing societal expectation that animals will be treated in a humane and respectful manner. There has been a strong push against the “business as usual” approach for animal welfare and a heightened acceptance for the need for more research, training and education for horse management and handling. Equine Guelph plays an important and growing role in this change, continuing to build on the foundation started in July, 2003.

Equine Guelph continues, with its unique partnership with the equine industry, to move ahead through new research programs that support the development of new information, health management, diagnostic potential and a deeper understanding of selected problems for the horse. It is also moving forward in the development of new programming in education and training to provide a variety of options for the industry to deliver evidence-based knowledge in an applied and practical form.

The goal of the equine research program is strongly focused on research that supports new treatments, diagnostics and prevention methods for horses of all sectors of the industry. While there are ongoing challenges with the research funding due to the many and ongoing changes in the Ontario racing industry, this program continues to fund high quality and worthy research projects, chosen by the members of the Research Committee for their scientific merit and industry priorities.

A unique aspect of Equine Guelph is the linking of the research process to the communications and education/training program – an integral aspect to the development of evidence-based information for the industry. The research program provides important new information for the industry and this is cycled through the communications program as well as the education and training programs in plain language summaries and application of up-to-date, evidence-based knowledge. This information is developed into press releases, researcher interviews and videos, audio podcasts, research articles, monthly e-blasts, targeted informational seminars and much more.

In this way, industry associations and individual participants can take advantage of this ongoing stream of information and apply the new knowledge to their management and caretaking practices, thus developing best management practices to achieve higher health and well-being of the horses in our industry, whether from the racing or non-racing sectors. This develops accessible new information for owners, caretakers, veterinarians and other industry participants to support health and wellness of horses for life.

The dedicated members of the Research Committee (which includes representation from each of the funding groups) spend many volunteer hours and provide their expertise while reviewing research proposals. Final decisions on allocations are based on the results of the external peer review for quality of the science and an assessment of the relation of the research goals to priorities of the industry. In 2016/2017, approximately \$340,000 was allocated into the research program to support new and ongoing projects.

Input from the representatives of the funding group helps ensure a return on the annual investment into research. Some of the highlights of ongoing or completed research are:

- ❖ identifying the risks of infectious disease by studying the movement patterns of racehorses during their racing season so that optimal disease control programs can be developed.

- ❖ new and improved methods of managing joint disease in horses with new approaches for intra-articular medication
- ❖ the investigation of tick-borne disease risks to horses due to the changes in tick populations in Ontario, including mapping of the risk areas
- ❖ further work on the intestinal microbiota in horses in 3 different studies on normal gut health, colic and colitis
- ❖ in-depth analysis on the ORC Death Registry findings
- ❖ prevalence of Potomac Horse Fever in Ontario
- ❖ defining critical gene expression in the uterus to help understand why pregnancies fail

Each of these projects support industry priorities. This emphasize the ongoing need for funding by the industry in partnership with Equine Guelph and the University of Guelph to continue to support these important contributions to horse health and welfare. In addition to the valuable new knowledge gained, the research program provides training and in-depth experience for future equine veterinarians and help develop areas of expertise for the future of the industry. The equine veterinarians in turn, play an important role for making this information available in practical form as they advise their clients in best practices and evidence-based information to support equine health care.

The year 2016 saw the launch of an exciting new development in Equine Guelph's education and training programs. With the release of the Canadian Code of Practice for the Care and Handling of Equines, followed by the national standard for Equine Biosecurity for horse farms, there was a recognized need for disseminating this information into the industry in Canada. Equine Guelph partnered with all English-speaking equestrian federations and Equestrian Canada to build a new industry training program – TheHorsePortal.ca. With funding from GF2, "The Horse Portal" was launched in early 2017 with a pilot program with the Ontario Equestrian Federation, followed by the national roll-out.

Equine Guelph also pioneered the Fire Prevention program for the horse industry and continued to develop the Technical Large Animal Emergency Rescue program for the racing industry and for first responders, thanks to funding by GF2, OMAFRA and support from Woodbine Entertainment Group.

In partnership with the Campbell Centre for the Study of Animal Welfare (CCSAW), Equine Guelph continues to offer the annual training for Ontario SPCA investigators on horse welfare assessment using national Equine Code of Practice for Welfare. CCSAW is also a partner with Equine Guelph for The Horse Portal and the Equine Welfare Certificate.

The commitment to the health and well-being of all horses is the foundation for Equine Guelph and the achievements are due -- and always dependent on -- the passion and professional contributions of the industry partners, the researchers, the staff and the hundreds of wonderful volunteers that contribute in many meaningful and positive ways.

Equine Guelph sincerely thanks the Council partners as they continue to provide support and guidance for the programs of Equine Guelph on industry priorities – the Alcohol and Gaming Commission of Ontario, the E.P. Taylor Equine Research Fund, Equ, the Horsemen's Benevolent and Protective Association of Ontario, the Ontario Equestrian Federation, the Ontario Harness Horse Association, Ontario Racing, Ontario Ministry of Agriculture and Food, Standardbred Canada, the Quarter Racing Owners of Ontario, Inc. and the University of Guelph.

This annual report provides the details on the 2016-2017 activities of Equine Guelph and salutes the partnerships that make these achievements possible for the benefit of the equine industry and the horse. This partnership continues to provide important support to the horse industry for the future sustainability of our industry.





Dear Partners and Supporters of Equine Guelph,

“Intent reveals desire, ACTION reveals commitment.” ~ Dr. Steve Maraboli

It intrigues, inspires and pulls us together in challenging times; that is the enduring passion of and commitment to the horse industry and those who take action to support it.

The equine industry in Ontario, the racing industry in particular, has weathered serious challenges over the last few years. While the storm is not quite over, there appears to be light at the end of the tunnel thanks to the action taken by those most committed.

Through the ups and downs, the University of Guelph (UofG) has always played an integral role in supporting the industry through education, research and clinical care – primarily through the efforts of our talented people at the Ontario Veterinary College (OVC), Ontario Agricultural College (OAC) and Equine Guelph.

Equine Guelph has a special place in the horse industry as a unique entity. The mission of supporting the health and well-being of horses and the equine industry is one that has been delivered since 2003. Despite the impact of the industry challenges, Equine Guelph has kept an unwavering focus on this mandate with remarkable success – which is especially impressive given that it is almost entirely self-supporting now for its communications, education and training programs.

The significant reach of Equine Guelph cannot be overstated. Horse people in the US and Britain often know about Equine Guelph. The award-winning EquiMania! Program for children, which just celebrated its 10th year at the Royal Agricultural Winter Fair, is a regular fixture at the Minnesota State Fair and recently was invited for a second time to Omaha, Nebraska for the International Jumping Competition. EquiMania! is now recognized as an international program, acknowledged with two international awards.

Equine Guelph's education and training programs are the most widely known examples of their success in connecting with the horse industry. The student numbers in these programs, such as the continuing education program in Equine Studies, and certificates in Equine Science, Business Management and Welfare, illustrate their success. Since the program's inception, students from over 40 countries have enrolled in these 12-week online courses, underscoring this international awareness.

Equine Guelph's reach is about to grow exponentially. As a result of a recent GF2 grant, Equine Guelph, in partnership with the equine industry and animal welfare community, has built

TheHorsePortal.ca. This highly innovative online platform is designed to deliver specialized training and certification for the equine and welfare industries in the form of short courses.

Equine Guelph prides itself on developing educational programming that is relevant, practical and topical. In 2016, Equine Guelph responded quickly to the unfortunate rash of horse barn fires, launching a Fire Prevention program providing valuable information to prevent fires.

Equine Guelph has taken a leadership role in Ontario for TLAER training – large animal rescue in emergency situations. Other organizations are increasingly seeing the value of this. Using the Equine Guelph model, several other provinces are developing their own programs for training for agriculture, transportation and first responder communities as well. Relationships are being forged with the first responder unit in the UK which has pioneered this in the UK, including veterinary schools, so there is a growing opportunity for this in Ontario.

Beyond its mandate for education, Equine Guelph has been a trusted steward of the industry's research funding – by bringing the industry together around one table to determine priorities. In 2016-2017, designated industry funding was directed towards research to support new and ongoing projects including research for new approaches to stem cell therapy, emerging disease concerns of the Ontario herd, understanding failures of pregnancy, 3D printing applications for veterinary training, new approaches to modeling and tracking biosecurity issues and risks and more.

Much of this research draws on the talents of researchers at the OVC who bring expertise in infectious disease, biosecurity, reproductive technologies and therapies. Emeritus professors such as Dr. Laurent Viel and Peter Physick-Sheard are internationally known for their contributions to horse health. Not only do these projects focus on industry-identified priorities, they provide important training opportunities for student veterinarians and develop local expertise in these important areas. There is a growing number of OVC researchers continuing to garner international attention for their work.

Communication and promotion of University of Guelph research results and equine programs are shared with the industry through Equine Guelph's modes of communication including its annual newsletter, monthly e-news, social media, tradeshow and events, news releases to media and many educational offerings.

At the same time, in concert with OVC strategic planning, and the ongoing racing industry renewal process, the members of OVC, OAC and Equine Guelph have convened a planning group to look at leveraging their success. Dr. Scott Weese is leading the group and they are developing strategies to better position UofG within the industry, and further expand our role in research and education in support of a sustainable and innovative horse industry.

An important part of Equine Guelph's success is due to the ongoing support received from the industry as this helps Equine Guelph to build unique and innovative programming to meet industry needs. Our sincere thanks goes out to the many associations, supporters, donors, corporate sponsors and the members of the Advisory Council and Research Committee for their past and continuing support. It is rewarding to see the commitment and passion put into action by the many

volunteers who join in for EquiMania! events and tradeshow throughout the year – our sincere thanks to each of you as your passion helps introduce new people to our industry while promoting the message of health and welfare.

The UofG has made a strong commitment to the equine industry and continues to do so with the programs of Equine Guelph, OVC, OAC and other groups at the UofG – that underscores the desire to take action in partnership with the equine industry for a strong and successful future!

Yours sincerely,



Dr. Jeffrey Wichtel  
Co-Chair, Equine Guelph  
Dean, Ontario Veterinary College



Mr. Al Patterson  
Co-Chair, Equine Guelph



## Introduction

“The Centre for the horse owner at the University of Guelph” -- Equine Guelph was created in 2003 by the horse industry to create and operate programs for the horse industry as an important partner in future sustainability.

Equine Guelph, celebrates its 14th year on July 1, 2017. Equine Guelph continues to play an important role as a committed partner – helping that commitment lead to positive outcome and working together with industry to promote and support the health and welfare of our horses for a sustainable future. Equine Guelph continues to build strategic partnerships within the Ontario industry and beyond our provincial borders to include partners across Canada and beyond. It has been and continues to be a unique partnership between the equine industry and the University of Guelph.

The Annual Report for the 2016 – 2017 fiscal year will highlight the important achievements and showcase the interesting new programs and achievements within the programs of Equine Guelph.

The Advisory Council of Equine Guelph represents an initiative of the leaders of the industry, working together on the common goal of supporting the health and welfare of the equine industry. Membership includes Equestrian Canada, The Horsemen’s Benevolent and Protective Association of Ontario, Ontario Equestrian Federation, Ontario Harness Horse Association, Ontario Ministry of Agriculture, Food and Rural Affairs, Ontario Racing, Standardbred Canada, Quarter Racing Owners of Ontario, Inc. and the University of Guelph. Funding for research is also contributed by the E.P. Taylor Equine Research Fund, managed by the UofG. A special funding agreement with OMAFRA continues into 2017 to support the racing industry survey, fire prevention and Technical Large Animal Emergency training for the racing industry and first responders.

The Co-Chairs of the Equine Guelph Council, OVC Dean, Dr. Jeff Wichtel and Mr. Al Patterson, representing Equestrian Canada, oversee the funding process and program initiatives of the Council to ensure the ongoing focus on industry priorities and a return of the industry investment. Gayle Ecker is the Director of Equine Guelph and heads up the dedicated team of Susan Raymond, David Finlay, Jackie Bellamy-Zions, Diane Gibbard, and Henrietta Coole. Matt Houlahan is new to our team, taking up the reins while Diane Gibbard is on maternity leave.

## Programs of Equine Guelph

### Research

Most of Ontario's research funding for equine studies comes directly from the Racing Industry (including the Thoroughbred, Standardbred, and Quarter Horse Horse Improvement Programs, from the HBPA, and from the E.P. Taylor Foundation, now managed in trust by the University of Guelph). All funds are stewarded and allocated via the Equine Guelph Research Committee, in a regular cyclical process that begins with sending out a call for proposals, followed by a selection process that includes expert review of the scientific value and industry-relevance of the proposed studies, allocation of funding to successful proposals and ending with a reporting cycle from the researchers on the results and their significance for the industry.

This smooth and effective mechanism for bringing science of the highest quality to support the health of Ontario's racing horses did not quite escape the turmoil from major rebuilding and reorganization of the regulation and administration of the racing industry in the past 4 years. Fortunately, the reorganization has had remarkably little impact on the amounts of funding—there has been some decline but minimal in the context of severe challenges facing the industry. Credit is due to the visionary leaders of the HBPA and ORC (now AGCO and Ontario Racing) who have continued to recognize the value of quality research in two ways. First, they acknowledge the value and applicability of the equine research for the health and welfare of horses. Evidence for this value can easily be found in an online survey of these annual reports for the past few years, and the numerous research bulletins and newsletters that have been distributed by Equine Guelph and picked up for further distribution by the industry. Second, keeping horses healthy—by prevention or cure—also has to have a significant benefit to the economic viability and sustainability of the industry itself. Although this effect is difficult to quantify, and has not been directly evaluated for Ontario, the value of research—and education as a means of disseminating evidence-based knowledge—has been explicitly determined in other jurisdictions. For example, reports from the Horse Race Betting Levy Board in the United Kingdom explicitly address the significant returns on a considerable investment in research and education.

In contrast to the continuity in funding amounts, there has been significant, but inevitable, irregularity in the timing of funding, as responsibilities were reallocated between the agencies. This has made it difficult to maintain the annual cycles of funding that facilitate research. Now a regular schedule seems to be back in place. Conversations with the agencies are ongoing, about the value of research and expanding the research allocation, and have been accepted in principle. So we can hope that the vagaries of the past few years have indeed passed, and that the next few will see an increase in research output that is of direct value to the industry.

It is very pleasing to report the development of a funding model by the OEF, in which voluntary levies added to the annual membership look to return more than \$30,000 to be allocated to research in the next cycle. This new, and continuing, initiative speaks highly of the positive interaction between Equine Guelph and the non-racing as well as racing sectors of the horse industry.

In the past year, there has been an increase in the diversity of the topics covered in funded projects. This is partly owing to the arrival of new enthusiastic faculty at OVC, including Dr. Janet Beeler-Marfisi DVM, who is probably known to a number of you in the SB industry. Her newly funded project on inflammatory airway disease will complement the work established by Dr. Laurent Viel many

years ago, and the continuing studies of Dr. Dorothee Bienzle on the cellular degradation concomitant with respiratory inflammation. Dr. Alex zur Linden DVM brings imagination and some of the latest hi-tech to a very practical study: Development of 3-D printed models of various joints for training equine practitioners in the skills of ultrasound-guided joint injections.

Increased diversity in research topics is also due to the equine research activity by the professors in the Ontario Agricultural College's Bachelors in Bio-Resource Management program, which has moved from Kemptville to Guelph. Dr. Katrina Merkies PhD, who sat on the national board that established the Equine Code of Practice (<http://www.nfacc.ca/codes-of-practice/equine>), is beginning a project on optimizing the methods for steaming hay to maximize its nutritional and health benefits.

A note from the Co-Chair, Dr. Jeff Thomason: This is my final contribution to this annual report, and it is gratifying to see the current health and future prospects for the research program supported through Equine Guelph. EG has developed in 14 years to be a major supporting adjunct to the whole horse industry in Ontario and beyond. As its contribution increases to evidence-based education based on research, EG will continue to enhance the viability and sustainability of that industry.

Summaries of each new project are found in Appendix 5, and a list of publications and research presentations in Appendices 6 and 7.

## **Education and Training**

For any industry to be sustainable and thriving in this competitive world, a skilled and knowledgeable pool of educated and trained people, at all levels, is important – now more than ever in this fast-changing world. Through its unique partnership with the equine industry, Equine Guelph combines the output of the Research program to the Education and Training program to provide assistance to the horse industry for the offering of education and skills-training programs, ensuring that evidence-based information generated through the research program at University of Guelph and elsewhere is include as part of an industry-wide program for building a sustainable future.

The award-winning programs continue to provide important education and training opportunities for participants in the horse industry, with the largest offering of equine online courses offered by an accredited university. During this past year, 917 registrations were received by students from the horse industry, both racing and non-racing, became a part of our international learning community with 257 new students, taking part in one or more of the 22 courses offered. While we have a growing number of students coming from around the world, the majority of students are part of the Ontario horse industry, we continue to attract students from BC, AB and every other province in Canada.

### **An International Community Dedicated to Learning About Horse Health and Welfare**

It is amazing to see the love of horses bringing together such a global community, reflecting our shared passion about the horse world-wide. Since we began enrolling students in 2002, our international learning community has been growing and has attracted students from over 40 countries! (See Appendix 10 for listing).

We now have 204 graduates with the Diploma in Equine Studies, 383 completing the Equine Science Certificate, and 50 completing the Equine Business Certificate. We have recently seen 6 of our

students complete the Equine Welfare Certificate and a growing number are interested in adding this Certificate in addition to their achievement of their Diploma in Equine Studies.

During 2016, partnering with OpenEd, we have pursued a challenging re-development process to meet the Quality Matters standards for each of our courses. We are dedicated to continually develop and update our award-winning programs to ensure the quality of our program as we offer the Equine Science Certificate, the Equine Business Certificate and the Equine Studies Diploma along with the recently added Equine Welfare Certificate. The instructors on our team represent researchers, industry experts along with special guests from around the world to give our students an in-depth, challenging but enjoyable learning experience. In our partnership with OpenEd, we continue to be an international leader for online offerings (20+ courses) of evidence-based courses from an accredited university. Tuition and workshop revenue contributed almost \$92,000 towards education operating costs for Equine Guelph and the remainder was covered by successful grant proposals and corporate sponsorships.

### **The Horse Portal**

In past surveys and conversations with many people and students in our courses, the challenge of “time” and “money” has often been identified as a barrier to continuing education and training. With the release of two new national standards for welfare of horses and biosecurity, Equine Guelph was presented with an exciting opportunity to develop a whole new approach to industry training. With funding from Growing Forward 2, Equine Guelph developed a new industry training program in partnership with the provincial (English-speaking) equestrian federations, the national federation, animal welfare organizations, international and accreditation partners and several supporting corporate sponsors. The partners currently include:

#### **Provincial Horse Federations**

- ❖ Alberta Equestrian Federation
- ❖ Equine Association of Yukon
- ❖ Horse Council of British Columbia
- ❖ Island Horse Council
- ❖ Manitoba Horse Council
- ❖ New Brunswick Equestrian Association
- ❖ Newfoundland and Labrador Equestrian Association
- ❖ Nova Scotia Equestrian Federation
- ❖ Saskatchewan Horse Federation

#### **Animal Welfare Organizations**

- ❖ Campbell Centre for the Study of Animal Welfare
- ❖ Ontario SPCA

#### **Accreditation Partners**

- ❖ Equestrian Canada

#### **International Partners**

- ❖ Saddle Up Safely (a program of the University of Kentucky Health Care, UK college of Agriculture and many community organizations)

#### **Supporting Partners**

- ❖ Farm & Food Care
- ❖ Greenhawk Equestrian Sport
- ❖ Growing Forward2
- ❖ Omega Alpha
- ❖ Standardbred Canada
- ❖ Manitoba Horse Council

In partnership with the Ontario Equestrian Federation, a pilot program was offered to coaches, facility owners and OSPCA officers with two courses launched, then followed by the national roll-out: “Equine Welfare – Canada’s Code” (March 6-24) on the National Welfare Code of Practice; and “Equine Biosecurity” (April 10-28) based on the national Equine Biosecurity standard. Two new courses are under development for the industry training program and includes Equine Behaviour and Safety along with Gut Health and Colic Prevention, to be offered in the coming fall and winter semesters.

From the January launch of the website to end of April, there were over 79,000 page views with average time of over 10 minutes per visitor perusing the pages of the site. An interesting finding is that of the 4,680 unique visitors to the site, there was a genuine international audience with visitors from the U.S., Germany, UK, Brazil, India, Spain, Australia, France and Peru, as well as 3,800 from Canada (with the majority from Ontario). For more information, visit [TheHorsePortal.ca](http://TheHorsePortal.ca)

### **Other highlights include:**

**OSPCA Training:** Equine Guelph continues to develop and enhance the OSPCA Equine Welfare Assessment program in partnership with CCSAW. It is now a mandatory program for all new officers and will be offered annually.

**Ontario Fire Prevention and Large Animal Emergency Rescue Training:** Fire prevention and emergency readiness will always be a priority in the agricultural sector and this includes the horse industry as well. A two-day course was offered at Mohawk Racetrack, on April 25-26, 2017, for the racing industry and included noted speaker, Dr. Rebecca Gimenez, as the lead trainer for the day. Fire prevention was a key feature in the seminar along with hands-on training for racetrack personnel, security, managers and maintenance, trainers, grooms, veterinarians and first responders.

This was followed by a three-day training course in large animal emergency rescue for active fire fighters, with Dr. Gimenez and the Ontario-trained team leading the hands-on and classroom sessions at the Meaford Fire Department Training Centre held April 28-30, 2017.

This program continues to build on the foundation in 2015 to provide training that will be of benefit to the racing and non-racing industry for fire prevention and emergency rescue of large animals.

### **Events and Seminars**

Twenty-three educational events and tradeshow featured Equine Guelph and/or EquiMania! displays, and promoted Equine Guelph's Research and Education program along with EquiMania!

Over 20 talks/presentations and interviews were completed by Gayle Ecker and Susan Raymond, to the industry and general public on a wide variety of educational topics.

### **EquiMania!**

EquiMania! was an idea born out of the desire to educate children and their families about health, welfare, safety and careers in the horse industry, and just as importantly, to attract people to become participants in the industry. This engaging and award-winning youth education program continues to be a popular travelling display and is the only one of its kind in Canada. EquiMania! has been a regular participant at the Royal Agricultural Winter Fair for 10 years now and has been an annual feature at the Erin Agricultural Fair and the Can-Am All Breeds Equine Expo. EquiMania! enjoys a five year agreement with the Minnesota State Fair (2<sup>nd</sup> largest fair in the U.S. with over 1.8 million annual visitors). The unique character of the display and the unique partnership across the border has resulted in two international awards for its innovation and quality of displays. EquiMania! will be returning to the Canadian National Exhibition as well as Horse Capades, introducing many youth and children to horses.

Equine Guelph is about partnerships and sincerely thanks the ongoing support of the strategic partners that continue to work with us to develop new and maintain programs. Sincere thanks goes out to our wonderful sponsors: Boehringer Ingelheim, Can-Am All Breeds Expo, Equestrian Canada, Greenhawk, Intercity Insurance Services, Kubota Canada, Merck Animal Health, Omega Alpha,

Ontario Equestrian Federation, Ontario Racing, The Royal Agricultural Winter Fair, Shur-Gain, SSG Gloves, Standardbred Canada, System Fencing, Vétoquinol, Workplace Safety & Prevention Services, and Zoetis.

Our sponsors and our dedicated and passionate support are the lifeline of EquiMania! as Equine Guelph could not develop new and fun displays nor be at as many events throughout Ontario and across the borders without each of you as we continue our mission to give back to the horse industry.

### **Full-Circle-Responsibility Equine Welfare Education Program**

The “Full-Circle-Responsibility “ program for equine welfare began with a 3 year transfer payment from OMAFRA and continues in 2016-2017 with a one-year transfer payment agreement.

#### **1. Fire Prevention Education and Training**

Work continued on the development of Fire Prevention and included the development of an online tool, sponsored by Heartland Insurance. The “Barn Fire Prevention Tool” (<http://www.equineguelph.ca/Tools/fireprevention.php>) helps stable owners to learn about fire prevention and provides a guided assessment of their property to look for and remedy fire risks both inside the barn and out. It includes interactive learning activities, videos, and many helpful resources for the owner. Fire prevention and Large Animal Emergency Rescue featured prominently in the program along with Horse Rescue farm guidelines and further welfare training.

#### **Fire Prevention Pilot Program**

##### **a. Racing Stable Fire Safety Walkthroughs (Aug to Oct 2016)**

Equine Guelph, along with a fire inspection expert, performed fire safety assessments of 10 horse racing stables. Each visit included an interview of the owner/manager on opinions of how best to proceed with a fire prevention program for the industry.

Communicating with local FPO’s and insurance company representatives allowed the creation of a facility checklist that is both manageable and includes the areas of greatest concern. This checklist has been used in online application, print and displays at local events. Distribution includes:

- Equine Guelph online tool (<http://www.equineguelph.ca/Tools/fireprevention.php> )
- Printed checklist
- International Plowing Match, Dufferin Town and County Farm Tour, Erin Fall Fair and Royal Agricultural Winter Fair

##### **b. PILOT PROGRAM**

The fire prevention pilot program is ongoing with a blended approach including;

- Mass distribution of printed checklist within racing industry publications (March) (in-print and web) including;
- Quarter Horse Racing Association – direct mail (distribution - 200) and electronic
- Standardbred Canada (web) and TROT publication (distribution - 8,500)
- Canadian Thoroughbred publication (distribution - 12,250)
- Online and social media presence
- Face to face opportunities, including fire prevention display material at Can-Am Equine Show.

The pilot program is currently being evaluated through industry interview/survey and future programming will be outlined for future proposals to the industry.

## **2. Large Animal Rescue Training**

This was a very active year for the Large Animal Rescue Training, with several achievements that will help move the training of the industry and first responders forward.

### **a) Ontario Veterinary College training**

In June, 2016, more than 50 staff, registered veterinary technicians, clinicians, interns and residents from the UofG's OVC joined a half-day Technical Large Animal Emergency Rescue (TLAER) course with Dr. Rebecca Gimenez, focusing on safe transfer and handling of large animals.

### **b) Training Videos**

A full day of demonstrations of techniques were filmed to make complete short training videos for first responders on large animal rescue training procedures. Dr. Gimenez led the demonstrations with the Ontario trainers who had been part of the Train-the-Trainer sessions in previous years. The videos include instructional videos and demonstration videos on many of the major techniques that can be used by first responders in emergency situations with all large animals, as well as horses.

### **c) Training for the Racing Industry**

In April, 2017, Equine Guelph hosted two hands-on courses with internationally recognized instructor Dr. Rebecca Gimenez of Technical Large Animal Emergency Rescue Inc. (TLAER). The first offering, Tuesday April 25 and Wednesday April 26, 2017, at Mohawk Racetrack focused on those involved in the racing industry including racetrack personnel (over 40 attended). Participants at Mohawk Racetrack will be making an investment in safety to help protect both horses and industry workers. Funding for this course has been provided by Grand River Agricultural Society (GRAS) and the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA), and support from Woodbine Entertainment Group (WEG).



### **d) Training for First Responders**

In a busy week for training, on April 28 – 30, a large animal rescue operational level course was delivered at Meaford Fire Department for active fire fighters (over 30 attended). The course at Meaford Fire Department is the result of a partnership between Grey Highlands and Meaford Fire Departments and Equine Guelph and the Ontario team of trainers.

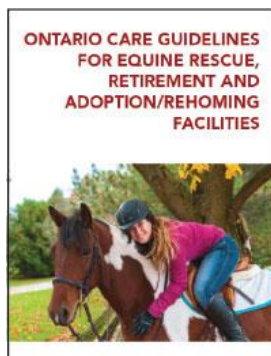
Strategic development of this program has been progressive year to year and now is developing into a program with significant positive impact on Ontario for all large animals. Interest in developing more training programs was indicated by racetrack and association representatives, including racetrack veterinarians who clearly see a value in continuing this training.

## **3. OSPCA training for Equine Welfare Assessment**

The 2016 offering of the four-day training program in Equine Welfare Assessment was attended by 13 OSPCA officers in partnership with the Campbell Centre for the Study of Animal Welfare (which runs the other agricultural species training). Almost all SPCA officers in Ontario have now received

this training and it is now a mandatory part of training for all new officers. The EG-produced manual includes: enhanced training materials such as the “carry-around” Body Condition Scoring instructions and poster, the Horse Health Check poster, the on-site welfare assessment checklist for horses/facilities and the four-day slide deck. The annual training includes new improvement each year and now includes hands-on training with horses for handling and safety, welfare assessment and Body Condition Scoring, assessment of facilities and management, along with a multi-media presentation on relevant case studies, regulations and the application of the new Code of Practice. Course feedback is very positive and the next training is scheduled for new officers for June 2017.

#### **4. Horse Rescue Facility guidelines and ongoing program development including supplementary materials**



Equine Guelph staff members, Gayle Ecker and Susan Raymond were part of a provincial equine welfare committee and subcommittee meetings to look at the issue of unwanted horses and the role played by horse rescue farms, including their needs for educational and supportive materials. Following a lengthy round of edits and re-writing after an extensive review of pertinent information from rescue farms in other countries, a new publication was released, called Ontario Care Guidelines for Equine Rescue, Retirement and Adoption/Rehoming Facilities. This has been distributed to many groups and rescues, and further distribution of hard copies to recognized horse rescue farms will continue. The document is also available as an e-document and can be distributed by accessing:

[http://www.equineguelph.ca/pdf/courses/full\\_circle/Ontario\\_care\\_guidelines\\_equine\\_rescue\\_retirement\\_adoption\\_rehoming\\_facilities01.17.17\\_rev.pdf](http://www.equineguelph.ca/pdf/courses/full_circle/Ontario_care_guidelines_equine_rescue_retirement_adoption_rehoming_facilities01.17.17_rev.pdf)

Further work is being done to analyze a survey completed by horse rescues to determine their educational priorities. Development of secondary materials may be of value for rescue operations in Ontario beyond facility guidelines such as self-assessments to ensure compliance with the Code of Practice, biosecurity, getting set up as a registered charity and others.

### **Communications and Marketing**

Great feedback continues to be received from our equine industry for the communications program and extensive pickup of our articles continues from the horse industry and its publications in published print and web articles.

The media paid special attention to the launch of the Horse Portal in January 2017. This exciting new learning platform was published at least 45 times in popular horse journals all across Canada including 10 provincial equestrian federations!

New media attention was attracted by the extensive campaigns for Equine Guelph’s fire safety resources launched for the racing and non-racing industry throughout 2016 including the introduction of a new barn fire safety healthcare tool with interactive activities and information. This interest continued into 2017 with the wide spread publication of a double-



sided “top 10 tips” Fire Safety Poster providing useful prevention information for both inside and outside the barn.

The launch of another healthcare tool at the start of 2017 resulted in global media attention. Partnering with the international leading blanket company, Bucas, the ThermoRegulator tool sparked interest in Canada, USA and New Zealand to name but a few countries.

Exceptional coverage has also resulted, both in print and on television, from Equine Guelph’s Technical Large Animal Emergency Rescue course providing valuable training to both fire fighters and first responders in the racing industry.

In a first-of-its-kind survey, Equine Guelph extensively canvassed all 3 sectors of the Racing Industry in Ontario (Thoroughbred, Standardbred and Quarter Horse) resulting in feedback for future programs and a strong following in both racing media and among private facility owners.

Much coverage was recorded after the press release of research article: “Changes in Gut microflora could provide early warning of EMS,” featuring research conducted by Ontario Veterinary College researcher, Dr. Scott Weese.

## NEWSLETTER



Equine Guelph’s colour, printed newsletter has a major research focus along with providing updates on our other programs. The newsletter is partially supported by the industry investment into the research program as it extends distribution of research findings to the industry. Current distribution exceeds 26,000 including members of the horse industry and media, with a PDF copy available on the website. Distribution of the newsletter has been supported by the Ontario Equestrian Federation (Whoa!) as an inclusion in their e-newsletter and it is also distributed through Canadian Thoroughbred magazine.

## E-news & HEALTHflash

A monthly distribution of e-news keeps our readers up-to-date and informed. The media pick-up of Equine Guelph communications continues to indicate that there is a strong interest in the articles and a value for re-distribution to their audience to let them know of new information, research findings and special events. The e-news enjoys a high “open rate” for the articles – higher than the industry average.

In partnership with our sponsors, HEALTHflash, consisting of 4 seasonal email reminders + monthly health alerts, was introduced in January 2013. This publication continues to be highly popular and links have been created from equine media across North America including: Equestrian Canada, Horse-Canada.com and EquiMed, among a growing number of others.

## **Website**

The overarching goal of the website is to create a virtual portal for the equine industry to have a place for updated information on research, events and educational opportunities. Equine Guelph's website continues to remain popular with the horse industry with nearly 100,000 visits from those seeking to improve welfare to the horse including; research advances, diagnostic developments and educational/training programs. New website initiatives include an updated and expanded fire safety web page with safety checklists, a prevention tool, and other free material. New this year is the ThermoRegulator tool, which continues to expand the horse owner learning tools.

Equine Guelph's website has reached over 50,000 new unique visitors with the most popular pages continuing to be Job Track, Education, followed by the Equine Guelph biosecurity tool page and fire prevention tool page.

Finally, the launch of theHorsePortal in January 2017 has received a very positive reception (see under Education for more information).

## **Media, Seminars and Presentations, Association Targeted Communication**

For a complete list of seminars and presentations given by Equine Guelph staff, please see Appendix 8. Regular communications are released to the equine media in formats that are easily included in their publications, whether in print or electronic form. Over 208 articles have been published about the programs of Equine Guelph (slightly down from last year when there was a strong upsurge due to the fire prevention coverage) in the industry media, (see Appendix 12).

A broad range of coverage continues from a large variety of industry publications, including both racing and non-racing interests. Equine Guelph staff regularly review and monitor industry magazines, newsletters and websites to follow and record the ongoing coverage.

In 2016-17, there has been coverage from: Canadian Veterinary Equine Welfare Council website, Ontario Animal Health Network, Greenhawk flyers, The Wellington Advertiser, At Guelph and OVC's News Bulletin. Equine Guelph continues to receive coverage from many Ontario-based horse industry publications such as; Trot, The Rider, Ontario Racing, Raceline, Quarter Racing Owners of Ontario, Ontario Equine Vets and Whoa! Features were also printed in Canadian horse industry publications such as; Canadian Thoroughbred, Horse Sport, Horse Journals and Horse-Canada. American coverage examples include: TheHorse.com, and EquiNews (Kentucky Equine Research).

In addition, Equine Guelph received coverage from international horse industry websites such as; HarnessLink.com, TheHorse.com, StandardbredCanada.com, HorseTalk.co.nz, Horse-Canada.com, AmericanFarriers.com, TheRider.com, StableManagement.com, HorseJournals.com, HBPA.com, and Equine Science Update. Links to Equine Guelph resources continue to be created from sites including: Equestrian Canada, Provincial Equestrian Federation websites, veterinarian web sites, and blogs from social media sites (i.e. Barn Mice, Facebook and Twitter). Information and service sites are also actively posting links to Equine Guelph resources i.e.: Intercityinsurance.com and SystemsFence.com directing the public to Equine Guelph's online courses, horse owner tools and research.

The Ontario Equestrian Federation (OEF) continues their strong and on-going support of Equine Guelph with their e-broadcast program to OEF members (over 20,000). This provides important assistance in alerting their members to new educational opportunities, thus helping to boost student enrollment and increase tuition revenue. Important new partnerships have been developing with

OEF including a new program to contribute to research support, partnering for OEF/EquiMania! displays at the Royal Agricultural Winter Fair and other events.

Several other sponsors such as Equestrian Canada, Central Ontario Standardbred Association, and provincial equine organizations have been posting buttons on their sites to help promote the communications, research and education/training initiatives including the racing survey, the additional fire safety and biosecurity learning opportunities and others.

TheHorsePortal has now linked 10 provincial equestrian federations nation-wide, as well as the OSPCA, each with their own unique landing page generating traffic to the new short courses for training in Welfare and Biosecurity offered by Equine Guelph.

### Information Inquiries

Each year Equine Guelph receives many information requests from the industry on a wide variety of concerns and topics and the small staff continue to provide resources and contacts for the significant number of emails, phone calls, information packages, walk-ins and letters. This includes a significant number of people looking for employment opportunities.

Tradeshows are a common venue for information requests as many visit the booths, displays and attend the seminars, indicating ongoing confidence in the evidence-based information that is provided to the horse industry. Providing an information portal for the industry as well as JobTrack is important to the industry for ongoing industry development and sustainability. Equine Guelph was developed by the industry for the industry to play the role of “portal” between the industry and the knowledge developers in the equine research and extension programs at the University of Guelph and this program remains without a funding basis by the industry or government. An important opportunity remains to be developed for enhancements to this “portal” role to continue to attract new people to the horse industry as workers or horse owners and provide them with important lifelong learning pathways to contribute to the industry.

Popular topics include information requests on fire prevention and safety, biosecurity for horse owners, identifying sources of information on new and emerging diseases, concerns about real or perceived welfare issues such as over population of horses and rehoming/retraining questions, management and nutritional questions.

## Development

### A. Equine Guelph ‘Helping Horses for Life’ Development Campaign:

The following information reflects fundraising initiatives and private donations as well as corporate sponsorship sales over the past fiscal year:

	<b>FY15-16 Amount Raised</b>	<b>FY16-17 Amount Raised</b>	<b>FY16-17 No. of Unique Donors</b>	<b>FY16-17 Median Gift</b>
Area of Greatest Need	\$18,456.32	\$17,606	93	\$50

Education	\$5,779.32	\$7,645	10	\$280
Research	\$2,589	\$1,347	17	\$50
OEF- Welfare Education Fund	\$1,530	\$648	10	\$10
Sponsorship	\$82,750	\$64,995	11	\$5000
<b>TOTAL</b>	<b>\$111,104.64</b>	<b>\$92,241</b>	<b>138</b>	<b>\$50</b>

TABLE I - Funds raised from private donations to EG accounts during FY15-16 and FY16-17 including number of donations (unique donors which includes repeat donors) and the median size of gift for each account.

**1. Annual Appeal:** Equine Guelph includes donation cards with its annual spring newsletter.

	<b>Total Value Gifts Returned</b>	<b>Total # Gifts Returned</b>
2012-13 Newsletter Mailings (fall and spring)	\$6,442	67
2013-14 Newsletter Mailings (fall and spring)	\$6,788	88
2014-15 Newsletter Mailings (fall and spring)	\$4,317	73
2015-16 Newsletter Mailing (spring only)	\$3,566	107
2016-17 Newsletter Mailing (spring only)	\$12,124	31

TABLE II – Comparison of select metrics for the past five fiscal years.

The 2017 spring newsletter mailing included a newsletter (focus on research and The Horse Portal), donation card and return envelope. Although the number of gifts returned was lower from previous years, the total value of gifts was considerably higher.

One month after the mailing, a chaser appeal followed, encouraging those who had not yet responded to please do so. This was sent electronically to past donors with active e-mail addresses who had not yet given in FY16-17 – a total of 199 individuals (an increase over last year). Stats related to the e-mail message are below.

	<b>FY2015-16</b>	<b>FY2016-17</b>
Recipients	128	199
Open rate	61 (48.41%)	79 (44%)
Recipient click-throughs	1 (0.79%)	7 (3.9%)
Recipient actions	0	3 (1.6%)
Forwarded opens	32	47
Unsubscribes/Opt-outs	1	0

TABLE III – FY15-16 and FY16-17 chaser e-mail results

**2. Ontario Equestrian Federation Annual Membership Mailing Fundraising Program:** Each year the Ontario Equestrian Federation (OEF), through its annual membership renewal form, gives members an opportunity to donate to a cause (Equine Guelph is one on a list of choices). FY2016-17 donations total **\$4,251.30** and were directed to the Education account.

**3. Corporate Sponsorship Program:** The FY2016-17 sponsorship program has resulted in the addition of three new sponsors\* and the loss of one (Zoetis). Total billings from the corporate sponsorship program was \$60,995:

**Online Tools & Education Programs (\$26,995):**

- a. **Intercity Insurance Services/Capris Insurance Services Ltd – Hoofprints** tributes + Education patron + colic tool (\$7,000)
- b. **Boehringer Ingelheim Canada** – senior horse tool (\$4,995)
- c. **Merck (via Duck et associes)** – HEALTHflash initiative (\$5,000)
- d. **\*Heartland Farm Mutual Inc** – fire prevention & safety tool (\$5,000)
- e. **\*Bucas Ltd** – thermo-regulation tool (\$5,000)

**Note: Vétoquinol Canada Inc** – biosecurity tool (have received signed contract for \$5,000, but not included in total as payment is pending)

**EquiMania! (\$34,000):**

- a. **SSG Gloves** – safety activity (\$15,000)
- b. **Workplace Safety & Prevention Services** – safety activity (\$7,500)
- c. **Kubota Canada Inc** – safety activity (\$5,000)
- d. **Shur-Gain** – nutrition display (\$5,000)
- e. **Standardbred Canada** – harness racing display (\$1,500)

**\*Ontario Racing** – horse racing display (\$1,000 is not included in total as contribution was donated directly to the Education account)

**B. Equine Guelph Grants:** Equine Guelph was successful in securing **\$27,982** in grant funding for FY2016-17.

This grant from the Grand River Agricultural Society provided funding for a Fire Prevention & Safety Training Program:

1. Education display at the International Plowing Match
2. Training workshop at Mohawk Racetrack for the Ontario horse racing industry

EG had previously secured a grant from GF2 for \$114,002 in FT2015-16. In FY2016-17, the funding from this grant has been delivered as EG delivered work on an industry welfare training program including portal development and online training pilot in Ontario for the Code of Practice and new Biosecurity standard. As a result of this grant, The Horse Portal is now operational and providing a new revenue stream for EG in the area of short online course training.

As well, additional funds are being realized through revenue-generating tools developed as a result of a previous GF2 grant on welfare: Horse Health Tracker App, First Aid Kit and Horse Health Check posters (see below section for more details).

**A. Equine Guelph Store:** Made possible by a GF2 grant secured in FY2012-13, Equine Guelph has developed new tools which will help grassroots caregivers give the best possible care to their horses when they're healthy and sick. Not only do these three tools support the welfare of the horse, but they provide critical revenue to support Equine Guelph's welfare education program.

Total revenue raised in FY2016-17 is **\$2,813** with a breakdown by item below:

**Horse Health Check (HHC) Posters:** In the past, posters retailed through 10 Greenhawk corporate stores in Ontario. During 2016-17, the poster became available from coast to coast (30 Greenhawk locations including the Greenhawk online store). Equine Guelph wholesales the posters to Greenhawk. Total poster revenue was **\$1,264**.



**Horse Health App:** The *Horse Health Tracker App* has been developed for both Google Play and Apple iTunes. The tool allows horse caregivers to be active participants in their horse's healthcare. Total revenue generated in FY2016-17 was **\$1,309** (Note: Apple sales were \$936 and Google Play sales were \$373).

**First Aid Tote:** This extensive equine first aid kit was specifically developed for horse caregivers by Equine Guelph. Designed to keep horse caregivers organized, the kit will prepare them to be ready to deal with emergency situations with their horses.



The Equine Guelph First Aid Kit is available at eight Greenhawk corporate stores in Ontario. Equine Guelph wholesales the kits to Greenhawk and further proceeds from kit sales are donated by Greenhawk to Equine Guelph in support of its welfare education programs. Total revenue generated in FY2016-17 was **\$240**.

## Financial Report

The Year End Financial Report is included in the Appendices. Quarterly reports are produced for the Equine Guelph Advisory Council. Financial reports include forecasting of revenue and expenditure for each of the program areas, and year-to-date statements.

Equine Guelph revenue totaled \$910,875 (previous year: \$1,225,817) for the fiscal year with funding provided by our funding partners, donations, tuition and a substantial portion coming from grants and increased sponsorships. Program expenditures totaled \$1,028,622 (\$609,257 last fiscal year) using planned carry forwards from the previous year to buffer the anticipated decrease in revenue.

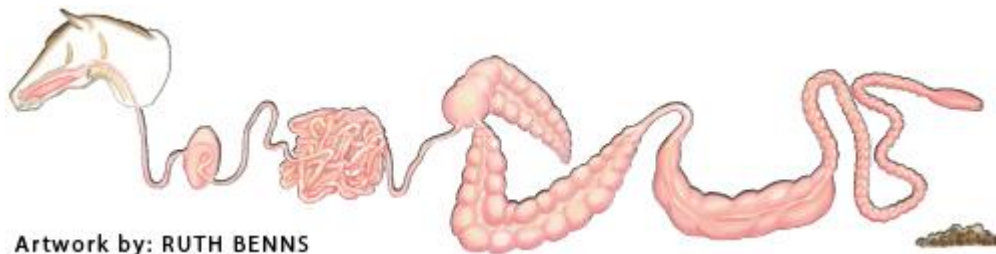
The research program allocated \$339,580 (with \$37,690 and \$289,660 allocated in previous two years) for research projects. Expenditures for the education program were \$469,824 which included program development and exhibits as specified from grant money or transfer payment agreements. Expenditures for the Communications and Marketing program were \$82,966. The online education tuition returned \$101,075.

The majority of the funding for the education/communications program continues to come from tuition, sponsorships and successful grant proposals. Research funding continues to be decreased significantly from previous years funding before the major changes took place in the racing industry due to the ending of the Slots at Racetrack program and the ongoing re-organization in the racing industry. The goal of stable, consistent funding for the programs of Equine Guelph, as a Centre at the University for the horse industry, remains as a high priority as the industry develops its plan for re-organization.

## Highlights and Special Events

### Reduce Your Risk of Spring Colic

Spring is the epitome of change. It is common knowledge that the horse's gut does not cope well with quick change. One documented study states 42% of colic cases had an environmental change one week prior to the incident (Malamed et al 2012). Equine Guelph's free healthcare tool, The Colic Risk Rater, kindly sponsored by Intercity Insurance Services Inc. and Capri Insurance Services Ltd. helps horse owners look at their management practices to reduce the risk of colic in every season.



*"The majority of colic incidents can be avoided by employing wise stable management practices,"* says Gayle Ecker, director of Equine Guelph. *"We are currently putting the finishing touches on our next online short course, Gut Health and Colic Prevention."* This future offering will be available at TheHorsePortal.ca and taking the Colic Risk Rater assessment is the first required reading and discussion point.

Colic is a word that strikes fear in any horse owner. Mike King, National equine industry program manager for Intercity/Capri is familiar with both the financial and emotional costs involved and fully supports colic prevention through education. *"With decades of insurance underwriting and claims experience in the horse industry across Canada, we can think of no better risk management tool to prevent colic, than education."*

Don't let the number one killer of horses (other than old age) threaten your horse's health. On topics including: feeding, housing, stress, dental care and parasite control, there is much the horse caregiver can do to minimize the risk of colic.

Go to Equine Guelph's [Colic Risk Rater tool](#) and take the ten minute assessment to reduce your horse's risk.

**Full Story:** <http://www.equineguelph.ca/news/index.php?content=504>



## Using radio frequency identification (RFID) tags to help track horses' movement and interactions

Horses and barn workers are constantly interacting with each other. However, little is known about horse contact patterns and how contact patterns might contribute to disease spread.

U of G researchers are conducting an on-farm study using small (about the size of a toonie), lightweight, and non-invasive RFID tags, to document contact patterns in horse barns. This will help them to compare contact patterns within and between horse farms.



*"This pioneering research can set the path for future veterinary research in this field, as this technology has done for human research,"* says doctoral student Rachael Milwid, who is conducting the study with her supervisors Prof. Amy Greer and Prof. Terri O'Sullivan, in the Ontario Veterinary College's Department of Population Medicine.

From that data, Milwid, Greer and O'Sullivan will be able to quantify contact patterns within different horse barns. *"A lot of studies make simplifying assumptions about the way in which animals contact one another which are unrealistic,"* says Greer. *"The RFID tools we have developed for this project provide a unique, cheap, easy to use system to measure contacts between horses and horses and people in real-time. There are many areas of veterinary research where these tools could be used to collect more detailed contact pattern data."*

*Funding for this project comes from the OMAFRA-U of G Partnership.*

**Full Story:** <http://www.equineguelph.ca/news/index.php?content=503>

## Inquiring Minds Want to Know More About Biosecurity

Regardless of riding discipline; everyone wants their equine partner to be healthy and performing at its best. In the last offering of Equine Guelph's online Biosecurity short

course, the discussions moved beyond giving everything a quick cleaning to help facilitate just that.

Guest speaker, Dr. Alison Moore, Lead Veterinarian, Animal Health & Welfare at Ontario Ministry of Agriculture, Food and Rural Affairs, provided a wealth of information to the participants of the biosecurity short course. With each answer, Moore revealed biosecurity is more about diligence than difficulty.

Many interesting questions came up in the last Equine Guelph Biosecurity short course, while exploring Canada's new Biosecurity standard. Topics such as: how to disinfect items purchased at tack swaps, precautions to take when entering a drug testing stall, procedures vets and horse owners follow when confronted with a diagnosis of disease such as EHM or EHV-1.

**Full story:** <http://www.equineguelph.ca/news/index.php?content=502>



### **Fire Prevention and Emergency Rescue Training for Racing Industry & Fire Fighters**

Equine Guelph is hosting two upcoming hands-on clinics with internationally recognized instructor Dr. Rebecca Gimenez of Technical Large Animal Emergency Rescue Inc. (TLAER). The first offering, Tuesday April 25 and Wednesday April 26, 2017, at Mohawk Racetrack will be open to the general public and will be of particular interest to those involved in the racing industry including racetrack personnel. Then on April 28 – 30, a large animal rescue operational level course at Meaford Fire Department will be available for active fire fighters.



photos by TONI MACPHERSON

Participants in 'Fire Prevention and Emergency Rescue Training for the Horse Racing Industry' will be making an investment in safety to help protect both horses and industry

workers. Thanks to generous funding from Grand River Agricultural Society (GRAS) and the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA), and support from Woodbine Entertainment Group (WEG) Equine Guelph has been able to organize this workshop for all three sectors of racing: Thoroughbred, Standardbred and Quarter Horse.

**Full story:** <http://www.equineguelph.ca/news/index.php?content=500>

### **Diligence and Details for Fire Safety**

When it comes to fire safety, there are some top tips that need daily, weekly and seasonally attention. Equine Guelph has a free download to help you stop barn fires. Subscribers of Canadian Thoroughbred magazine, Trot magazine and Quarter Racing Owners of Ontario (QROOI) members recently received a free copy of Equine Guelph's handy **barn fire checklist**.



COPYRIGHT © 2016, Ina Colley | www.happynoncaricatures.com | equineguelph.ca

Visit Equine Guelph's traveling interactive safety exhibit, EquiMania!, complete with fire safety display, at the Can-Am All Breeds Expo March 31 – April 2. Thank you to our EquiMania! sponsors for their generous support: Greenhawk, Kubota Canada, Ontario Equestrian Federation, SSG Gloves, System Fencing, Shur-Gain and Workplace Safety and Prevention Services.

Want to learn more? Equine Guelph will be hosting a **Fire Prevention and Emergency Rescue Training Workshop for the Horse Racing Industry** at Mohawk Racetrack on April 25 & 26, 2017 followed by a Technical Large Animal Emergency Rescue Operational Level Course for fire fighters on April 28, 29, 30 at the Meaford Fire Department Training Centre.

**Full Story:** <http://www.equineguelph.ca/news/index.php?content=499>

### **EquiMania! Double Play**

EquiMania! will make a home run at **Can-Am Equine Expo** in Markham, ON while it will also be a featured exhibit at the **FEI World Cup** in Omaha, Nebraska!

EquiMania! made its debut at Can-Am 12 years ago and this is a show not to be missed. *"It's a partnership that makes good horse sense,"* says president, Ross Millar. *"Both Can-Am and Equine Guelph share a great passion for educating horse owners and care givers on topics of equine health and welfare."*

The full EquiMania! exhibit will also be present at the FEI World Cup in Omaha, Nebraska, March 29 – April 2. EquiMania! was completely replicated in 2013 to feature annually at the Minnesota state fair. It is by virtue of this display, housed in Minnesota, that EquiMania! can be in two places at once and can make itself available for events all over the U.S.A.



Jacquelyn Vinci, Director of Education Omaha Equestrian Foundation says, "We are thrilled to partner with EquiMania! to provide an outstanding educational exhibit for the Longines FEI World Cup™ Finals. EquiMania! premiered at our first International Omaha event five years ago and was an instrumental equestrian learning tool for all our attendees. As this is the first time Omaha has hosted a global sports world championship, we are so excited to bring back this expanded exhibit to share with our international visitors and the thousands of children who will attend on field trips."

**Full story:** <http://www.equineguelph.ca/news/index.php?content=498>

### **Love Horses – Learn Welfare The herd is gathering!**



A full herd of online learners signed up in less than 20 minutes after Equine Guelph announced the official launch of [TheHorsePortal.ca](http://www.thehorseportal.ca). The feedback has been extremely positive for the new online learning community resulting from an innovative industry partnership including ten provincial equestrian federations across Canada.

The inaugural courses offered being: **'Equine Welfare – Canada's Code'** and **'Equine Biosecurity – Canada's standard'**.

"This is an online community where science, practical application and discussion come together to facilitate learning," says, Equine Guelph director, Gayle Ecker. "Students from Equine Guelph have been making a difference – the knowledgeable horse owner or caregiver is well equipped to have meaningful proactive discussions with their horse healthcare providers. Equine Guelph looks forward to partnering with the equine industry around the world to bring horse people together to learn about equine welfare and care as a community."

**Full Story:** <http://www.equineguelph.ca/news/index.php?content=497>

## 'Going Under Cover' – Blanketing Decisions New ThermoRegulator Healthcare Tool launched by Equine Guelph January 2017

Equine Guelph has partnered with internationally renowned blanket manufacturer, Bucas of Ireland and is pleased to announce the launch of the **ThermoRegulator Healthcare Tool**.

The new interactive online tool explores thermoregulation in all seasons to help horse owners avoid over-heating and dehydration along with a variety of sicknesses caused as a result of chilling and other preventable health concerns.



Bucas managing director, Ulf Casselbrant complimented Equine Guelph saying, "Bucas is pleased to partner with Equine Guelph in the development of the **ThermoRegulator Healthcare Tool**, as it is an excellent resource for the horse owner in understanding the principles of thermoregulation in horses and helpful in the proper use of blanket protection for their horse."

To learn more about thermoregulation and to decide if your horse is a candidate to be covered by a blanket, go to the **ThermoRegulator Healthcare Tool**.

**Full Story:** <http://www.equineguelph.ca/news/index.php?content=496>

## **TheHorsePortal.ca – Join the Herd!**

Equine Guelph announces the official launch of **TheHorsePortal.ca** – a new portal for industry training in an easily-accessible online format for the equine industry. From the Rockies to the eastern islands, the portal will bring together horse people like never before to stay current on best health and welfare practices.

The new program, resulting from an innovative industry partnership, provides horse people with short, practical online training to stay up-to-date with the latest

information on equine care.

*This project is funded in part through Growing Forward 2 (GF2), a federal-provincial-territorial initiative. The Agricultural Adaptation Council assists in the delivery of GF2 in Ontario. Other partners include: Campbell Centre for the Study of Animal Welfare, Equestrian Canada, Farm & Food Care Ontario, Greenhawk, Omega Alpha Equine, Ontario Equestrian Federation, Ontario Society for the Prevention of Cruelty to Animals and Standardbred Canada. Participating Federations include:*



COPYRIGHT © 2014 by C&L, www.hippos.com | equestrian.ca  
"HEY, MY OWNER TOOK THE CODE OF PRACTICE COURSE, DID YOURS?"

*Alberta Equestrian Federation, Equine Association of Yukon, Horse Council British Columbia, Island Horse Council, Manitoba Horse Council, New Brunswick Equestrian Association, Newfoundland and Labrador Equestrian Association, Nova Scotia Equestrian Federation, Ontario Equestrian Federation and Saskatchewan Horse Federation. National training partner is Equestrian Canada.*

For more information, go to [TheHorsePortal.ca](http://TheHorsePortal.ca)

**Full Story:** <http://www.equineguelph.ca/news/index.php?content=495>

### **Stewart Stocks Memorial Equine Award Winners Announced**

The Stuart Stocks Memorial Equine Award honours the late Stuart Stocks who followed the world's top racehorses and had a passion for the sport all his life. Applicants from the Ontario horse industry applied by mid-November with a short story detailing their commitment to the horse industry and desire to learn more for the love of the horse. The winners were chosen from a panel of racing industry professionals.

Congratulations to Deborah Corcoran of Mississauga, ON and Cameron Lago of Guelph, ON. Both recipients of the 2016 award will receive two Equine Guelph 12-week online courses to help further their careers in the horse racing industry. The reason for two award recipients is due to a pleasant surprise. An anonymous donation came in, matching the funds for this year's annual Stuart Stocks Memorial Equine Award thus enabling two winners to benefit from Equine Guelph's

educational offerings! Racing associations are encouraged to join this award program to provide more racing participants this important opportunity.

*“New champions for the health and welfare of horses will receive training to help them along their journey thanks to the generosity of the Stocks family and this new tuition award,”* says Equine Guelph co-Chair Al Paterson. *“To have a second donation to support two winners keen on receiving education for their future in the racing industry is just wonderful and much appreciated.”*



Cameron and homebred Standardbred racing star Ardyne Ace



Deborah and Dawson

*“To have a second donation to support two winners keen on receiving education for their future in the racing industry is just wonderful and much appreciated.”*

**Full Story:** <http://www.equineguelph.ca/news/index.php?content=494>

### **Ontario Racing Industry Survey Coming Down the Final Stretch**

Equine Guelph thanks all participants so far who have given their input to help shape the future of the racing industry in Ontario. **The respondents to date have been 5% from Quarter Horse, 23% from Thoroughbred and 72% from Standardbred racing industries.** Your thoughts contributing towards a healthy and prosperous racing industry are invaluable.



So far there has been an outstanding survey completion rate of 93%! Grooms, trainers and owners in the racing industry, already completing this survey on racehorse health and well-being have been highly engaged. This feedback will assist Equine Guelph in directing future research and programs for the industry. A summary of the results of this comprehensive survey will be published.

**Full Story:** <http://www.equineguelph.ca/news/index.php?content=492>

### **Painful Incidents and Horseback Riding**

Beyond physical benefits, horseback riding is a sport which can also have a number of positive psychological, social and therapeutic effects for individuals of all abilities (e.g., Bizoub et al., 2003; British Horse Society, 2010; Mackinnon et al., 2009). Horseback riding also brings with it risks of experiencing painful incidents during both handling (e.g., being kicked or bitten) and riding (e.g., falling off) horses. Research on children who ride horses



has focused largely on painful incidents leading to emergency medical care. We know very little about less severe incidents (e.g., how often do they occur, where do they occur, the impact of these incidents on children(s) safety behaviours around horses).

In collaboration with Equine Guelph, Lara Genik (PhD Student) and Dr. C. Meghan McMurtry of the Psychology Department at the University of Guelph are working to better understand the types of painful incidents that children commonly experience when handling and riding horses.

In November 2015 at the Royal Agricultural Winter Fair in Toronto, Ontario, 124 children and 128 of their parent(s) completed surveys with research assistants. All children received horse treats from Martin Mills as a thank you for taking the time to participate. Data analyses are ongoing, and a summary will be released in the Equine Guelph Research Update newsletter and on the Pediatric Pain, Health and Communication lab's website after publication.

**Full Story:** <http://www.equineguelph.ca/news/index.php?content=491>

### **Help the Ontario Racing Industry**

Equine Guelph is calling on grooms, trainers and owners in the racing industry, to complete a first-of-its-kind [survey on racehorse health and well-being](#) to direct future research and programs for the industry. Your feedback can help shape the future of racing in Ontario.

The goal of the survey is to learn more about the current challenges facing the Ontario horse racing industry in all three sectors (quarter horse, standardbred, thoroughbred). More specifically, this project explores: current racehorse health concerns (injuries and diseases of most concern), horsemanship and racehorse well-being including post racing opportunities, communications and training.

**Full Story:** <http://www.equineguelph.ca/news/index.php?content=490>

### **EquiMania! Celebrates 10 Years at 2016 Royal Agricultural Winter Fair!**

**EquiMania!** will be trotting into Toronto to celebrate a decade of entertaining Royal Agricultural Winter Fair visitors this November 4 - 13! Equimaniacs can expect their favorite interactive exhibits and several new activities to join the well-travelled, award-winning display.

*"We're proud to have EquiMania! joining The Royal for the 10th year," says Charlie Johnstone, CEO of The Royal Agricultural Winter Fair. "Educating the public on animals and agriculture is a core mandate of The Royal and we're thrilled to be working with*



*EquiMania! to offer an interactive education centre at the Fair, which is often the first time parents and kids can engage with horses."*

Come see the impressive new 'Tree of Life' equine reproduction station, showcasing the stages of foal development complete with a video featuring the birth of a foal! Fantastic clay models and artwork illustrate the different stages of fetal development. Each stage of growth from first heartbeat to the forming of hooves and hair is captured in this amazing new display. Visitors will also leave with knowledge of nutritional requirements of the mare during pregnancy, lactation, growth of the foal and responsible breeding.



'Shorty Legs' will have a whole new look as he gets dressed up to go off to the races! Saddle up again and learn a thing or two about the different racing disciplines in Ontario. This fiberglass horse is a barn favorite the kids want to ride on every year. Have your camera ready.

Check out new barn fire prevention resources and play the popular EquiMania! Explorer game. Kids and parents will learn more about horses and safety inside the stable and out, around equipment and when handling them. The EquiMania! Explorer Passport makes learning fun as kids collect stamps while they accumulate horse sense.

Equine Guelph, in partnership with the Ontario Equestrian Federation, will be promoting **'Ticket to Ride'** for a third time at the Royal Agricultural Winter Fair. The **'Ticket to Ride'** program is proving hugely popular, offering youth an opportunity for a FREE introductory riding lesson (or introduction to horses) at participating OEF member riding facilities. Visit EquiMania! for more details.

Girl Guide night is another feature returning on Wednesday evening, November 9th. Club members will participate in an exciting itinerary of activities working towards earning their Horse Power Badge followed by a special presentation by OEF in the Animal Theatre. EquiMania! looks forward to welcoming the Girl Guides and showing them interesting equine facts like how their anatomy effects function.

*"Equine Guelph is proud to be presenting EquiMania! for its tenth year at the Royal," says Gayle Ecker, Director of Equine Guelph. "We are passionate about getting kids and adults excited about horses and thanks to the generosity of our loyal partners and volunteers, we are able to celebrate this wonderful milestone!"*

Equine Guelph would like to thank the Royal Winter Fair for bringing EquiMania to their Education Centre and our sponsors for their continued support: Greenhawk, Kubota Canada, Ontario Equestrian Federation, Shur-Gain, Standardbred Canada, SSG Gloves, System Fencing, Workplace Safety and Prevention Services and Zoetis. Equine Guelph is looking forward to another busy year of touring with EquiMania in 2017!

## World Horse Welfare Conference

Gayle Ecker was an invited guest to the World Horse Welfare conference in England for a second year at the November conference. Presentations from this invitation only event can be viewed on the [World Horse Welfare website](#). Presentations covered a wide variety of topics with a focus on racing welfare as one of the main topics with comparisons between countries on steps forward to supporting welfare.



While in the UK, Ecker also attended meetings, presented the programs of Equine Guelph and had special tours arranged through the Royal Society for the Prevention of Cruelty to Animals, Redwings Horse Sanctuary in Roydon England, and met with some of the members of the National Equine Welfare Committee of the UK to learn more about welfare training, current equine welfare issues and the impact of Brexit and solutions under development. Several of the individuals with whom Ecker met are now joining the online courses as special international guests.

## Free Courses: Exclusive Offer to OEF Members for TheHorsePortal Pilot

Equine Guelph and the Ontario Equestrian Federation are partnering to offer FREE online short courses to the first 200 OEF members to register. The new training courses are: 'Equine Welfare – Canada's Code' and 'Equine Biosecurity – Canada's standard'. The online courses are valued at \$95. Selection of winners will be made on a first-come-first-served basis with 50 coaches/facilities and 50 general OEF members chosen for each course.

**Full Story:** <http://www.equineguelph.ca/news/index.php?content=487>

## Get Your Barn Ready for Winter with Equine Guelph's New Barn Fire Prevention Tool



Equine Guelph has launched the new Barn Fire Prevention online tool as a resource for horse owners. Responding to the high incidence of barn fires in Ontario last winter, Equine Guelph has developed a tool that is easy to use and provides horse owners with interactive assessments for their individual facilities.

*"If you have a farm, you have combustibles that need to be stored properly, electrical wiring that requires proper installation and maintenance and a host of appliances that may or may not be safe for use," says Gayle Ecker, director of Equine Guelph. "The key to reducing the risk of fire is education focusing on prevention. We are pleased to partner with Heartland*

*Farm Mutual to offer a healthcare tool which creates two handy checklists for fire safety both inside and outside the barn."*

Developed in collaboration with fire protection professionals; the tool asks 20 important questions that will help maintain a safe facility as well as provide insight for anyone looking to build or renovate their barn.

*"Equine Guelph's Barn Fire Prevention Tool is a practical way to promote education and awareness of farm safety", says Jim Zyta, Vice President Loss Prevention/ Risk Assessment Specialist at Heartland Mutual. "In the farm insurance industry, we have seen first-hand the many causes of barn fires and their devastating effects. Losses from such events are not only physical and financial, but can be very emotional for the horse owner. In many cases, the tragedy is realizing that the fire could have easily been prevented. We encourage all farm owners to use this simple checklist to identify the potential hazards in their own barn and help keep it a safe environment."*

Please, take 5 minutes to answer the questions on each activity and receive a personalized list of recommended improvements for your facility. Link to **Equine Guelph's Fire Prevention Tool**.

**Full Story:** <http://www.equineguelph.ca/news/index.php?content=486>



## GRAS donations benefit Equine Guelph & Fergus Agricultural Society

The Grand River Agricultural Society (GRAS) recently presented two donation cheques to bolster local community initiatives. The presentations took place at Grand River Raceway, which is owned and operated by GRAS.

On July 19, a donation of \$27,982 was awarded to Equine Guelph on behalf of their Barn Fire Prevention & Safety training programs developed for the Ontario Horse Racing Industry and the rural community of Wellington County. See the full story for more details!

**Full story:** <http://www.equineguelph.ca/news/index.php?content=485>



## Equine Guelph Announces The Stuart Stocks Memorial Equine Award

The Stuart Stocks Memorial Equine Award has been created by the Stocks family in memory of their beloved brother, son and uncle, Mr. Stuart Stocks. Stuart Stocks was born in Sheffield England in 1957. He struggled throughout his life with a multitude of medical issues, but had a dry sense of humour and zest for life. His love of horses started at an early age. Although Stuart never rode a horse, or laid a bet, he followed the world's top horses and loved to watch the races on television. Stuart could tell you anything about racehorses. It wasn't until after his death that detailed hand written notes he had made throughout his life were found – a testament to his love of horses and horse racing.



The successful candidate of the Stuart Stocks Memorial Equine Award will receive two online courses through Equine Guelph valued at \$549 each (Certificates are available in Equine Science, Equine Welfare and Equine Business – six courses complete the certificate).

The 1973 Canadian International at Woodbine went down in history as the great Secretariat's last day of racing. As a huge fan of racehorses, Stuart Stocks was an avid collector of memorabilia and student of bloodlines, closely following the world's top horses, in particular Secretariat and Northern Dancer. This October 16, on the day of the 78th running of the Pattison Canadian International, a special fundraiser will be held in his memory at Woodbine Racetrack.

A beautiful print of Secretariat, donated by the Stocks family and signed by Big Red's former jockey and racing legend, Ron Turcotte will be part of a silent auction raising funds for Equine Guelph. The auction will also include two books: The Hancocks by Frank Mitchell and Champions: The Lives, Times and Past Performances of America's Greatest Thoroughbred by Daily Racing Form. Last but not least, Woodbine will have a Queen's Plate VIP package for the winning bidder.

The Stocks' family and Equine Guelph representatives will be in the winner's circle presenting a cooler after a race that will be dedicated to Stuart's great passion for horse racing. *"The Stocks family would like to thank Equine Guelph and Woodbine Racetrack for honouring Stuart's memory, and allowing us to share his passion for horses and horse racing,"* says Julie Freemantle, Stuart's sister. *"We know Stuart would be overwhelmed to know that his dedication to the sport has been so greatly appreciated. Thank you!"*

Equine Guelph would like to thank Woodbine for hosting this special fundraiser and the Stocks family for honouring Stuart's memory with the donation of these auction items and for creating a legacy with the Stuart Stocks Memorial Equine Award. Gayle Ecker, director at Equine Guelph says, *"Stuart's love for horses and racing will live on as the tuition award serves to help educate future racing industry professionals to be champions for the health and welfare of horses."*

**Full Story:** <http://www.equineguelph.ca/news/index.php?content=484>

### **Changes in Gut microflora could provide early warning of EMS**

Early diagnosis of Equine Metabolic Syndrome (EMS) is an important area of study especially considering one of the first signs can be laminitis, a serious and sometimes life-ending condition. Catching EMS in its initial stages can facilitate early intervention with an appropriate exercise and diet plan to reduce the chances of laminitis developing.

In a first of its kind study, researchers at Gluck Equine Research Center at the University of Kentucky and the University of Guelph have been collaborating to find out if there are changes in the intestinal microbiota of horses afflicted with EMS. It is known that humans with metabolic disorders have these changes so the researchers set out to compare ten horses with EMS to ten horses in a control group by analyzing fecal microbiota with next generation sequencing of DNA.



Dr. Scott Weese, researcher at the Ontario Veterinary College says, *"The study revealed a decrease in the fecal microbial diversity for the EMS horses as well as differences in the overall community structure when compared to the metabolically normal control group of horses."* Both groups of horses were of comparable age and fed a similar all-forage diet for at least two months before sampling. Links have been made between obesity and lower microbial diversity in human, dog and horse studies but there is still much to learn about optimal values for diversity. With more research toward understanding the

changes in microbiota and what influences these changes, it is possible this technology will be used in the future to help in management of syndromes such as EMS.

For more information on the signs of metabolic syndromes including EMS, visit [Equine Guelph's Senior Horse Challenge healthcare tool](#).

**Full story:** <http://www.equineguelph.ca/news/index.php?content=483>

### **Winsong Fundraiser for Equine Guelph features a Downton Abbey Theme**

Despite the heat and humidity, the horses of Winsong performed admirably as part of the Winsong fund-raiser for Equine Guelph on Sunday, June 26, 2016. As part of the Downton Abbey theme for the day, Lord and Lady Grantham (represented by Allen Kalpin and Ellen Cameron) played the host and hostess for the day and participants enjoyed the delicious treats of ice cream and cookies made by Mrs. Patmore (a.k.a. Charlene!) in the shade of the arena.

Special thanks to Winnie and all her helpers at Winsong for organizing this unique Equine Guelph fundraiser. *"Fundraising events that provide support for Equine Guelph play an important role for building our equine welfare initiatives."* said Gayle Ecker, Director. *"It is a wonderful partnership when we work with groups like Winsong to help raise funds for communication and education programs."*

**Full Story:** <http://www.equineguelph.ca/news/index.php?content=481>

### **Gunshot Method Gone**

The gunshot method of deworming may soon be gone. What you don't know might hurt your horse(s) if they are harbouring worms that are resistant to the drugs you are deworming with. Veterinarians and animal health companies are spending more time educating their clients about the growing resistance of parasites to anthelmintic drugs used in deworming. Rather than deworming every horse, at every interval, a fecal egg count test will reveal which horses are carrying the higher strongyle parasite burdens. Veterinarians and researchers are advocating a more targeted approach to treating the horses with such burdens. To find out more, check out the full story!

**Full Story:** <http://www.equineguelph.ca/news/index.php?content=480>

### **Giving Immunity a Boost**

*"Think of booster shots for your horse as being similar to practising fire drills,"* says Dr. Alison Moore, DVM, DVSc, Lead Veterinarian, Animal Health and Welfare, Ontario Ministry of Agriculture and Food and Rural Affairs. *"If you only practise a fire drill once in your life you are unlikely to remember the plan when it's necessary, however by repeating the drill on a regular basis you will be able to respond to the best of your ability when required. By providing a booster vaccine at regular intervals, your veterinarian is training your horse's immune system to be prepared to respond to a disease agent when required."*

Equine Guelph's Vaccination Equi-Planner, kindly sponsored by Zoetis Canada, is a great starting point to learn what vaccines are recommended and at what frequency. The interactive healthcare tool creates a personalized immunization plan for your horse based on age, location and risk factor. For example, a horse traveling to events will be at higher risk of contracting infectious disease than one that stays on the farm in a closed herd.

Visit Vaccination Equi-Planner from Equine Guelph to learn more about core and optional vaccines. Discuss the right plan with your veterinarian to help protect the health of your horse.



**Full story:** <http://www.equineguelph.ca/news/index.php?content=479>

### **Large Animal training provides hands-on tips and techniques**

Dr. Rebecca Gimenez gave a half-day Technical Large Animal Emergency Rescue (TLAER) course, focusing on safe transfer and handling of large animals, to more than 50 staff, registered veterinary technicians, clinicians, interns and residents from the University of Guelph's Ontario Veterinary College.

The TLAER course was customized for the OVC session, and included hands-on opportunities with equine models. Participants learned a variety of large animal techniques, tactics, and procedures to safely move and handle animals.



*"We are so pleased to have this opportunity to facilitate bringing this training to the large animal clinic. There are so many professional groups that benefit from this level of expertise for safety and welfare of both animals and people involved. We are committed in our ongoing efforts for this program and look forward to future training offerings,"* says Dr. Susan Raymond, Communications and Programs Officer, Equine Guelph.

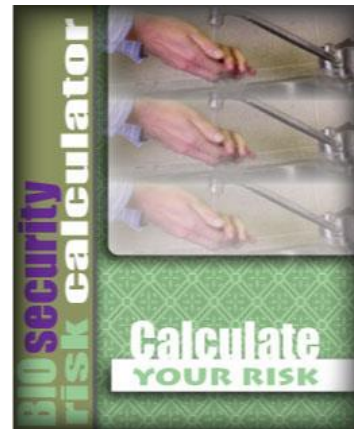
Merial, the Ontario Equestrian Federation and Equine Guelph sponsored the training.

**Full story:** <http://www.equineguelph.ca/news/index.php?content=478>

## Biosecurity Basics - 2016

Equine Guelph has the perfect health care tool to help you find out your farm's biosecurity score. With a simple 10 minute survey, the **Biosecurity Risk Calculator**, sponsored by Vétoquinol Canada Inc., provides a starting point to protecting your horse's health with easy to implement practices for infectious disease control.

In a recent podcast interview, Dr. Steve Roche, principle consultant for ACER consulting, talks about preventing disease from coming onto the farm such as viruses and bacteria. Roche was involved in rolling out and following up with the racing industry in Equine Guelph's 'Spread the Word not the Germs' campaign including: posters, white-board videos and other resources distributed to Ontario race tracks. These **Biosecurity resources** and more are available on Equine Guelph's website.



**Full Story:** <http://www.equineguelph.ca/news/index.php?content=477>

## Hoof Prints That Cannot be Erased

Equine Guelph and Intercity Insurance understand what it is like to suffer the loss of a beloved equine friend. *"Hoofprints was created for courageous people wishing to share their memories and pay respect to their dearly departed equine partner or person in the horse community,"* says Equine Guelph director, Gayle Ecker. A photo and story are posted on the **Hoofprints webpage** as a positive means to cope with the devastating loss and a way to grieve with fellow horse lovers.

*"We are proud to partner in a program facilitating a loving way to remember the horses and horse people who have had a huge impact on our lives,"* says Mike King of Intercity Insurance. By dedicating an Equine Guelph donation in their name, their legacy lives on giving back to horse health and welfare through Equine Guelph's programs.

**Full story:** <http://www.equineguelph.ca/news/index.php?content=476>

## Fire Prevention Outreach Program for Racing

After the rash of barn fires in Ontario at the beginning of 2016, Equine Guelph and its partners were quick to respond, bringing educational material regarding fire prevention to the horse industry.





During the summer of 2016 a pilot program will be introduced for horse farms involved in the racing industry; including thoroughbred, standardbred and quarterhorse racing, whether racing, training or breeding. A limited number of visits will be scheduled for farms interested in having a fire prevention professional walk through their facility, providing a valuable assessment and recommendations to maximize safety.

Equine Guelph is pleased to be able to offer this valuable, one-time, learning opportunity to the racing industry of Ontario. *"It is our belief that an investment in fire prevention and safety education/training will help protect people, horses and facilities."*

says Gayle Ecker, Director of Equine Guelph. *"Prevention is key and this is a special opportunity to become more aware of the steps we can take to reduce the risk. Our horses are depending on us to protect them."*

For more information on fire safety and prevention visit [EquineGuelph.ca/tools/fireprevention.php](http://EquineGuelph.ca/tools/fireprevention.php)

**Full story:** <http://www.equineguelph.ca/news/index.php?content=475>

### **Can-Am Art Auction Raises Over \$3,000 in Support of Equine Guelph**

Equine Guelph thanks Ross Millar and all his dedicated staff including: auction organizer, Janice Blakeney, auctioneer, Brad Bowie and all the artists who made this fundraiser a huge success for the second year in a row.

*"Equine Guelph has been a part of the Can-Am from the very first show and we are pleased to receive this special donation from the Can-Am. Our thanks to all the artists who donated beautiful artwork, along with Amber Marshall for her contribution as well,"* said Ecker, Director of Equine Guelph. *"It is great to partner with such wonderful people who share our passion for educating the horse industry on equine health and welfare."*



With close to 10,000 in attendance at Can-Am, six lucky bidders came away from the evening extravaganza on Saturday April 2, 2016 with some impressive artwork while helping out a great cause.

Special thanks go to the incredibly talented Canadian artists who donated their work with 100% of the proceeds going to Equine Guelph: Ann Clifford, Mark Grice, Shawn Hamilton and Nola McConnan.

Thank you also to Amber Marshall who donated two gift packages and photo shoots. Young admirers were very enthusiastic in their bidding for these two unique items.

EquiMania!, Equine Guelph's interactive youth safety display has a long history with Can-Am, appearing for the past 11 years (since the inception of EquiMania!). *"Can-Am is proud to promote equine welfare and is happy to lend support,"* says president, Ross Millar. *"Our long-standing relationship with Equine Guelph is rooted in a mutual passion for educating horse owners and care givers."*

### **First Annual Equine Research Presentations, a Success!**

On March 3, 2016, the University of Guelph's Bachelor of Bio-Resource Management (BBRM), Equine Major students, in partnership with Equine Guelph, hosted the first annual Equine Research Night. This inaugural event featured presentations about some of the equine industry's hot topics to a sold out lecture hall at the University of Guelph.

Equine Guelph's director, Gayle Ecker, made a special presentation on barn fire safety, promoting awareness and arming attendees with practical tools to help prevent fires at their facilities. A video of this presentation is archived on the new [Fire Prevention and Safety web page](#).

Among the sponsors for this inaugural event were Greenhawk, Willow Equestrian, EquiSmart, Omega Alpha Equine and The Campbell Centre for the Study of Animal Welfare.

This year's Equine Research Night demonstrated the need for more opportunities to share results from the horse industry's top researchers, with donations playing a key role in allowing Equine Guelph to put on events such as this. As shown through the number of attendees both in-person and through the online broadcast, members of the equine industry are interested in equine research being done, and understand how this information can help them be more productive, safe and ethical when working with horses.

**Full story:** <http://www.equineguelph.ca/news/index.php?content=473>

### **Avoiding a Lameness Exam**

While there is no fool-proof way to avoid all circumstances that could necessitate a lameness exam, there are precautions every horse owner can take to reduce the risk of injury. As with every great fitness program, the key to success is a logical progression and controlling the factors you can control such as footing, stable management and horse health care.

To practice your early detection skills for lameness, visit Equine Guelph's free online healthcare tool, [Lameness Lab](#), kindly sponsored by Zoetis.

Lameness Lab reviews causes of lameness, goes over checklists, looks at when to call the veterinarian and what to expect in an exam. Finally, take the video challenge to see if you can spot the lame leg!

**Full story:** <http://www.equineguelph.ca/news/index.php?content=472>



## Summary

Now in its 14<sup>th</sup> year of partnership, Equine Guelph continues with its industry-directed mandate to develop programs that support the health and welfare of horses and the ongoing success of our equine industry.

“Developed by the industry and for the industry”, Equine Guelph works in partnership with associations and individuals of the Ontario industry and beyond those provincial borders to help direct industry research funding towards industry-identified priorities. New education and training programs, most notably with the exciting launch of TheHorsePortal and its new offerings for short, affordable programs on industry-designated topics of priority, will continue to be an important focus, along with the development of resources and initiatives in response to new and on-going needs of the industry, including fire safety, biosecurity and emergency preparedness.

Communication of evidence-based information to our industry through our partners and the communications/education programs will help increase awareness and knowledge, encourage the inclusion of this new information for the development of best practices as part of the effort to support horse health and welfare.

In challenging times, the need for equine research remains an important program and there is optimism that this can be increased to levels that will provide in much greater measure a return on that investment by the industry, as industry priorities are addressed and identified by the members of the Advisory Council. It is the partnership with the equine industry that provides a strong foundation for this unique partnership between the industry and the University of Guelph. This includes the support of our many dedicated donors, volunteers and corporate sponsors who are a part of this team.

Equine Guelph acknowledges and sincerely thanks the members of the Advisory Council and funding/support partners: Quarter Racing Owners of Ontario, Inc., Equestrian Canada, the Horsemen’s Benevolent and Protective Association of Ontario, the E.P. Taylor Equine Research Fund, Standardbred Canada, the Ontario Equestrian Federation, the Ontario Ministry of Agriculture, Food and Rural Affairs, the Ontario Harness Horse Association, the former Ontario Racing Commission, Ontario Racing, the Ontario Veterinary College, and the University of Guelph.

The core values of equine health and welfare and industry sustainability remain at the forefront for Equine Guelph.

## Appendix 1: Current Equine Guelph Advisory Council Members for 2016-2017

**Al Patterson, Co-Chair**  
**Equestrian Canada**  
308 Legget Drive, Suite 100  
Ottawa ON, K2K 1Y6  
Tel: 1-866-282-8395  
[president@equinecanada.ca](mailto:president@equinecanada.ca)

**Ken Hardy**  
**Ontario Harness Horse Association**  
44 Crawford Crescent  
Campbellville, ON L0P 1B0  
Tel: (705) 361-1479  
Fax: (905) 858-1680  
**Brian Tropea (Alternate)**  
Tel: (905) 854-6442 X 223  
[brian@ohha.ca](mailto:brian@ohha.ca)

**Jean Szkotnicki**  
**Ontario Equestrian Federation**  
1 West Pearce Street, Suite 201  
Richmond Hill, Ontario L4B 3K3  
Tel: 905-709-6545  
Fax: (905) 709-6544  
[jszk@cahi-icsa.ca](mailto:jszk@cahi-icsa.ca)

**Dr. Bruce Duncan**  
**AGCO**  
10 Carlson Court, Suite 400  
Toronto, ON M9W 6L2  
Tel: (416) 213-0520  
Fax: (416) 213-7827

**Gayle Sommer, DVM**  
**Quarter Racing Owners of Ontario, Inc.**  
**Industry Development Program**  
10 Carlson Court, Suite 400  
Toronto, ON M9W 6L2  
Tel: (416) 213-0520  
Fax: (416) 213-7827

**Dean Jeffery Wichtel, Co-Chair**  
**University of Guelph**  
50 Stone Road  
Guelph, ON N1G 2W1  
Tel: (519) 824-4120 X 54417  
Fax: (519) 837-3230  
[jwichtel@uoguelph.ca](mailto:jwichtel@uoguelph.ca)

**Sue Leslie**  
**Horsemen's Benevolent and Protective Association of Ontario**  
135 Queens Plate Drive, Suite 370  
Toronto, ON M9W 6V1  
Tel: (416) 747-5252 X 31  
Fax: (416) 747-9606  
[sue.leslie@hbpa.on.ca](mailto:sue.leslie@hbpa.on.ca)

**Dan Gall**  
**Standardbred Canada**  
2150 Meadowvale Blvd.  
Mississauga, ON L5N 6R6  
Tel: (905) 858-3060 X 207  
Fax: (905) 858-3111  
[kwvlaar@standardbredcanada.ca](mailto:kwvlaar@standardbredcanada.ca)

**Jeff Thomason**  
**Ontario Veterinary College**  
50 Stone Road  
Guelph, ON N1G 2W1  
Tel: (519) 824-4120 ext. 54934  
[jthomaso@ovc.uoguelph.ca](mailto:jthomaso@ovc.uoguelph.ca)

**Gayle Ecker, Ex-officio**  
**Equine Guelph**  
50 McGilvray Street  
Guelph, ON N1G 2W1  
Tel: (519) 824-4120 X 56678

## **Equine Guelph's Research Committee**

***Dr. Jeff Thomason, Co-Chair***  
**University of Guelph**  
50 Stone Road  
Guelph, ON N1G 2W1  
Tel: (519) 824-4120 X 54934  
[jthomaso@ovc.uoguelph.ca](mailto:jthomaso@ovc.uoguelph.ca)

***Adam Chambers, DVM***  
**AGCO**  
10 Carlson Court, Suite 400  
Toronto, ON M9W 6L2  
Tel: (416) 213-0520  
[chambers.adam@gmail.com](mailto:chambers.adam@gmail.com)

***Darryl Bonder, DVM***  
**Horsemen's Benevolent and  
Protective Association of Ontario**  
6345 Northwest Drive  
Mississauga, ON L4V 1P6  
Tel: (905) 405-9500

***Dan Duncan, DVM***  
**AGCO**  
**Horse Improvement Program - Thoroughbred**  
Adena Springs Canada  
14875 Bayview Avenue  
Aurora, ON L4G 3G8  
Tel: (416) 705-0336

***Dan McMaster DVM***  
**Representing Standardbreds**  
14068 Guelph Line  
Campbellville, ON L0P 1B0  
[magnadan@albedo.net](mailto:magnadan@albedo.net)

***Dr. John Baird, Co-Chair***  
Professor Emeritus  
Ontario Veterinary College  
University of Guelph  
Guelph, ON N1G 2W1  
[jbaird@ovc.uoguelph.ca](mailto:jbaird@ovc.uoguelph.ca)

***Gayle Ecker, Ex-officio***  
**Equine Guelph**  
50 McGilvray Street  
Guelph, ON N1G 2W1  
Tel: (519) 824-4120 X 56678  
[gecker@uoguelph.ca](mailto:gecker@uoguelph.ca)

***Gayle Sommer, DVM***  
**Quarter Horse Racing  
Industry Development Program**  
10 Carlson Court, Suite 400  
Toronto, ON M9W 6L2  
Tel: (416) 213-0520  
Fax: (416) 213-7827

***Bruce Duncan, DVM***  
**AGCO**  
10 Carlson Court, Suite 400  
Toronto, ON M9W 6L2  
Tel: (416) 213-0520  
Fax: (416) 213-7827

## **Equine Guelph's Development Committee**

***Al Patterson, Co-Chair***

**Equestrian Canada**

308 Legget Drive, Suite 100

Ottawa ON, K2K 1Y6

Tel: 1-866-282-8395

## **Equine Guelph Finance Committee**

***Gayle Ecker***

**Equine Guelph**

50 McGilvray Street

Guelph, ON N1G 2W1

Tel: (519) 824-4120 X 56678

***Al Patterson***

**Equestrian Canada**

308 Legget Drive, Suite 100

Ottawa, ON, K2K 1Y6

Tel: 1-866-282-8395

## E.P Taylor Equine Research Fund



**Ontario Racing Commission**



**UNIVERSITY  
of GUELPH**



 Ontario  
**Ontario Ministry of  
Agriculture and Food**



## Appendix 3: Equine Guelph Staff

***Gayle Ecker***

**Director**

Tel: (519) 824-4120 X 56678

[gecker@uoguelph.ca](mailto:gecker@uoguelph.ca)

***Susan Raymond***

**Communications & Program Officer**

Tel: (519) 824-4120 X 54230

[slraymon@uoguelph.ca](mailto:slraymon@uoguelph.ca)

***Diane Gibbard***

**Event Coordinator & Finances**

Tel: (519) 824-4120 X 53457

[horses@uoguelph.ca](mailto:horses@uoguelph.ca)

***Henrietta Coole***

**Corporate Sponsorship & Citizenship**

50 McGilvray Street

Guelph, ON N1G 2W1

Tel: (519) 824-4120 X 56727

[eginfo@uoguelph.ca](mailto:eginfo@uoguelph.ca)

***David Finlay***

**Multimedia Design**

Tel: (519) 824-4120 X 53772

[finlayd@uoguelph.ca](mailto:finlayd@uoguelph.ca)

***Jackie Bellamy-Zions***

**Media Manager & Administrative Assistant**

Tel: (519) 824-4120 X 54756

[jbellamy@uoguelph.ca](mailto:jbellamy@uoguelph.ca)

***Matt Houlahan***

**Finance and Special Projects**

Tel: (519) 824-4120 X 54205





## Appendix 4: Research Projects for 2016-2017

### New Projects:

Investigator	Title
Beeler-Marfisi, J.	Pathogenesis and characterization of inflammatory airway disease in Ontario Thoroughbred and Standardbred racehorses
Bienzle, D.	Ciliary function in horses with inflammatory lung disease
Koch, T.	Comparison of umbilical cord tissue and cord blood stem cells
Merkies, K.	Nutritional and feeding behaviour effects of steaming or soaking hay for horses
Thomason, J.	Comparing loading between the forelimbs of racing Thoroughbred to investigate possible causes of laterality in catastrophic injury
zur Linden, A.	Development of 3D printed models of the sacroiliac, hip, and cervical articular facet joints for ultrasound guided joint injections training of equine practitioners

### Continuing Projects:

Investigator	Title
Arroyo, L.	Characterization of the equine hindgut microflora and metabolites using an in-vitro model.
Arroyo, L.	Seroprevalence of Potomac Horse Fever in Ontario
Betteridge, K.	Critical gene expression in the uterus and conceptus during successful and failing equine pregnancies
Hurtig, M.	Sustained release drug formulations for equine joint conditions: Formulation and forensic considerations
Physick-Sheard, P.W.	ORC Death Registry: An in-Depth Analysis
Staempfli, H.	A prospective study on the use of fecal oral transfaunation as adjunct treatment in horses with acute colitis
Weese, J.	Evaluation of the intestinal microbiota in horses with gas colic
Weese, J.	Evaluation of the seroprevalence of <i>Borrelia burgdorferi</i> and <i>Anaplasma phagocytophilum</i> in Ontario horses

## Appendix 5: Lay Summaries of New Research Projects for 2016- 2017

### **Beeler-Marfisi, J.** Pathogenesis and characterization of inflammatory airway disease in Ontario Thoroughbred and Standardbred racehorses

Inflammatory Airway Disease is a type of lung inflammation in horses that is similar to mild asthma in people. It is common in racehorses, especially 2 and 3 year olds that are stabled, but the asthma is not caused by an infection and the horse's temperature remains normal. The asthma causes the horse to have a persistent cough, which is made worse by exercise. We think it is partly caused by breathing in barn dust from hay, bedding and the floor (during sweeping). In part, barn dust is made up of very fine mould spores (even from good looking hay), and little pieces of dead bacteria (from manure). Both of these things cause the horse's lungs to react and that reaction causes the asthma. Another thing we think causes horse asthma is air pollution. It is true that in Ontario air pollution causes asthma in people, but we haven't studied whether it does the same in horses. It's important to study this disease because it is costly to treat and means missed training and racing days, so the earnings potential of the horse is decreased. In this project, we will work with Thoroughbred and Standardbred trainers and veterinarians at Woodbine and Mohawk racetracks. When a trainer has a horse that they think is coughing bad enough to call their veterinarian, the vet will do a physical examination on the horse and will use their scope to look in the horse's windpipe and down into the lungs. The vet will then perform a 'lung wash' on the horse. This is a safe procedure where they put a small amount of sterile saline into the lung and suck it right back out. It doesn't fix the problem, but it allows us to look at the cells and mucus in the lungs and tells us what the horse has wrong with it (asthma, lung infection, or bleeding). Based on what we find we will be able to work out approximately how many racehorses have asthma, and we will see whether air pollution, the mould spores and pieces of bacteria cause asthma. If we can get scientific evidence of these things we will be able to help racehorses to be healthier and improve their earnings potential to the benefit of all involved.

### **Bienzle, D.** Ciliary function in horses with inflammatory lung disease

Cilia are small hair-like extensions on cells that line the nose, trachea and larger airways. The function of cilia is to move a layer of mucus produced by cells in the lower airways toward the mouth for swallowing, and therefore to protect the lung from inhaled particles. Thus, cells with cilia that constantly beat to move a layer of mucus "outward" line the entire upper airway. Inhaled bacteria, molds and particles "stick" to the mucus layer, and are then moved by beating ciliary toward the mouth. People and animals born with cilia that are defective in the proteins necessary for ciliary movement ("primary ciliary dyskinesia") have recurrent pneumonia throughout their life as well as abnormalities in other organs. In conditions such as asthma and heaves, recurrent inflammation of the airways results in injury to cells lining the airways, including ciliated epithelial cells. It is thought that in these conditions cilia do not regenerate properly, leading to a vicious cycle of poor clearance of particles by shortened or poorly beating cilia and recurring inflammation. Viral infections of the nose and lungs have also very recently been recognized to affect the function of cilia. We will collect epithelial cells from healthy horses' noses with a simple short medical brush, put the cells into culture and measure how well they move particles mimicking bacteria (fluorescent beads). We will compare the results from nasal samples to tracheal samples obtained with a bronchoscope and a longer medical brush. If cilia in samples from the nose function similar to those from the trachea, routine samples for assessments can be readily acquired. Once the functional assays are established we will collect samples from young and older horses with mild and severe lung inflammation ("inflammatory airway disease", IAD, and "heaves"), respectively, to measure how cilia function in these conditions and to assess their appearance. If abnormal cilia function is a consistent feature of respiratory

diseases of horses, inhaled medication to change the composition of mucus and/or to increase the production of mucus may be helpful.

**Koch, T.** Comparison of umbilical cord tissue and cord blood stem cells

Equine mesenchymal stromal cells are increasingly explored as novel therapeutic agents in equine medicine for a variety of conditions. The field is increasingly focused on using these cells in an allogeneic manner due to ease of application and reduced cost of cell production. Cells from neonatal tissues have higher proliferative potential than similar cells derived from adult tissues. The use of cells with high proliferative potential is essential in order to leverage the potential advantages of using allogeneic cells. However, extended culture expansion may result in cellular drift with regards to phenotype, function and cytogenetic stability (normal chromosome numbers and sizes). The Koch lab has extensively studied equine umbilical cord blood-derived mesenchymal stromal cells and found the cells to have higher proliferative potential than similar cells from bone marrow and adipose tissue. One limitation of cord blood cells is the collection of the umbilical cord blood and the relatively few progenitor cells present in the blood. Advanced foaling management is required at the farm level and trained personnel have to be present during foaling to obtain the blood. Extensive laboratory cell expansion is needed due to the few progenitor cells present, which is associated with increased laboratory selection pressure on the cells. Mesenchymal stromal cells have been isolated from the connective tissue of equine umbilical cords. This cell source is easier to obtain and higher number of putative progenitor cells has been reported. However, it is unclear if mesenchymal stromal cells from cord tissue and cord blood are equivalent with regards to phenotype, proliferation, function and cytogenetic stability. The goal of this project is to compare donor-matched mesenchymal stromal cells from cord tissue and cord blood with regards to the above-mentioned parameters. The influence of oxygen tension on these cell parameters will also be evaluated for both cell sources.

**Merkies, K.** Nutritional and feeding behaviour effects of steaming or soaking hay for horses

Dried hay is the most common feedstuff for horses in North America. Horse owners supply hay in a variety of formats for a variety of reasons. Two such methods in which dried hay is altered before being offered to horses is soaking and, to a lesser extent, steaming. When grass hay is soaked or steamed the resulting wet or steamed hay has less carbohydrates. Soaking, but not steaming, also results in a loss of protein and micronutrients. A lower carbohydrate-content hay can help to reduce blood glucose and this is appealing for horses with laminitis, insulin resistance (Cushings), Equine Polysaccharide Myopathy, and those who are overweight. The extent of the effects of soaking and steaming on timothy/alfalfa hay, the most commonly available hay in Ontario, is unknown as the majority of research has been conducted in the United Kingdom where grass hays are more common. Therefore, under commonly-used soaking and steaming practices, this research seeks to understand how soaking and steaming affect the nutrient content of timothy/alfalfa hay and additionally whether soaking or steaming alters the preference horses have for dried, soaked or steamed hay.

**Thomason, J.** Comparing loading between the forelimbs of racing Thoroughbred to investigate possible causes of laterality in catastrophic injury

The U.S. Jockey Club's Equine Injury Database (EID) has information on more than 1.6 million racing starts by Thoroughbreds in North America. A recent survey of the approximately 3000 catastrophic injuries (CI) appearing in the database confirmed that the frequency of CI is related to the surface type, being greater on dirt, intermediate on turf and least on synthetics. In addition the study found

that the left fore and right hind limbs were significantly more prone to CI on dirt tracks than the opposite limbs, but this effect was not evident on synthetic or turf tracks. The researchers speculated that this laterality of injury might be due to uneven forces acting on the left and right limbs in turns combined with relative inconsistency of support during the stance on dirt. These findings are significant for Ontario's TB racing industry because races are on turf or synthetics while most training is on dirt. The aims of this study are to assess whether laterality of biomechanical loading exists on dirt and synthetic surfaces, and whether epidemiological data identify that as an issue in Ontario. We will tackle this project in 4 ways: (a) We'll collaborate with the researcher currently studying the Ontario Death Registry, to look for evidence of injury laterality. The emphasis will be on the forefeet, which sustain higher rates of injury. (b) We will take another look at data we have from previous experiment on forces acting on the feet of Thoroughbreds galloping on the straight and turns of different tracks, and will look for evidence of laterality in loading at all stages of the stance for both front feet. We have data from dirt, turf and synthetic surfaces, using the same horse but on different days. (c) We will record new biomechanical data from the front feet of horses galloping on a training dirt track and a racing synthetic track within a few minutes, to find whether and how much laterality of loading exists on each surface. (d) We combine the analyses from all of the data from parts a-c to assess whether laterality is a problem in Ontario, and to categorize which parts of the complex mechanical loading acting on the horse' hoof during galloping might be at the root of the problem. The results should identify whether turning or the surface induces the higher risk for injury, from a biomechanical perspective.

**zur Linden, A.** Development of 3D printed models of the sacroiliac, hip, and cervical articular facet joints for ultrasound guided joint injections training of equine practitioners

Three-dimensional models are used to teach various skills and techniques without needing cadavers or practice on live patients. Ultrasound guided injections of the neck, hip, and sacroiliac joints are challenging to perform, but very useful for diagnosing and treating arthritis in sports and racehorses. Joint injections are used for diagnosing lameness by injecting local anesthetics, or treating arthritis by injecting steroids or other similar substances. These specific injections are often only performed by radiologists or those with advanced training, and access to ultrasound machines. With the increased use of ultrasound by equine veterinarians for the diagnosis of tendon injuries in racehorses, this imaging modality can also be used for diagnostic and therapeutic joint injections. One goal of this project is determine the proper 3D printed material to mimic equine bones via ultrasound examination. The next step is to scan various body parts of a cadaver (neck, sacroiliac joints, and hips) with computed tomography (CT) to create highly accurate digital versions of these joints. These body parts will then be 3D printed in high resolution and embedded in clear ballistics gel to mimic tissue, while allowing the user to directly see the needle and underlying bones. The models will then be assessed for validity by radiologists, equine surgeons, and residents at the Ontario Veterinary College. Once validated, these models will be used to teach interested equine veterinarians in Ontario how to perform these techniques via seminars.

## Lay Summaries of Continuing Research Projects for 2016 - 2017

**Arroyo, L** Characterization of the equine hindgut microflora and metabolites using an in-vitro model

Co-investigators' names and Departments: Dr. Emma Allen-Vercoe, Department of Molecular and Cellular Biology, University of Guelph

The equine gastrointestinal tract is a large tubular structure that houses complex microbial ecosystems within multiple compartments along its length. The hindgut compartment (cecum and colon) comprises the larger portion of the tract and it is here where complex sugars are fermented by the resident microbes, providing between 60 - 70% of the daily energy requirements of the horse. Microbial communities (microbiota) disturbances may affect the health of the host leading to potentially life threatening disorders in horses, such as colitis and laminitis. The composition and function of the equine hindgut microflora is currently a topic undergoing intense research and much knowledge has been generated. However, a better understanding of the microbial ecosystem, in particular how disturbances in microbiota homeostasis change its function and the consequences of these changes to host health is needed. In order to understand the effects of gut microbiota disturbances, it is imperative to know the status of the microbial ecosystem under healthy conditions. Culture of whole gut microbial communities in vitro, under physiologically relevant conditions can be achieved by using continuous culture (chemostat) systems. The aim of this proposal is to develop an in vitro system that mimics the nutritional and environmental conditions of the hindgut of the horse, which (when seeded with GI samples obtained from horses) will allow analysis of the microbial population composition, abundance and distribution and their metabolic products.

**Arroyo, L** Seroprevalence of Potomac Horse Fever in Ontario

Potomac Horse Fever (PHF) is a seasonal infectious disease caused by the bacterium *Neorickettsia risticii*. PHF occurs in Ontario mainly during the summer months (July to September). The clinical disease is usually sporadic with most of the cases reported from eastern and south-western Ontario. The severity of the clinical signs varies between horses but in general characteristic clinical signs include: depression, decreased appetite, fever, diarrhea and colic. A high percentage of cases (up to 40%) of horses suffering from PHF may develop laminitis, which is the most serious and life-threatening complication. Recent studies conducted on the life cycle of *N. risticii* have shown that fresh water snails and aquatic insects, such as caddisflies, mayflies, and dragonflies, are common carriers of the bacterium. Ingestion of contaminated hay, grain, pasture or drinking water with dead insects may result in clinical disease. Currently, there is an increasing concern among horse owners in Ontario because of the lack of information about the epidemiology and prevalence of the disease, natural reservoir of the bacterium, and biosecurity measures to prevent and control the disease. Preliminary data at the Ontario Veterinary College support clinical, serological and molecular evidence of the presence of the disease in different parts of the province. However, up to date there are only 2 published cases of PHF from horses in Ontario. The objectives of this preliminary study are to investigate the seroprevalence of PHF in horses from Ontario, and b) to isolate the endemic strain(s) of *N. risticii* from horses with clinical disease in Ontario for molecular analysis.

**Betteridge, K** Proteins involved in failure of early pregnancy

Co-investigators: M. Anthony Hayes (Co-PI) and Brandon Lillie, Pathobiology; James I. Raeside, Biomedical Sciences

During the third week of pregnancy, the horse conceptus (embryo and associated membranes) moves around in the uterus, transiently protected by a thin capsule. At about Day 17, the capsule starts to degrade so the placenta can develop. At this critical stage of early pregnancy, the embryo appears to be more vulnerable. Some proteins normally involved in protecting the non-pregnant uterus from infection are potentially harmful to the unprotected embryo so their production is normally suppressed when the capsule is lost. However, those that persist in excess during uterine inflammation or spontaneous pregnancy failure have the potential to harm the embryo when the capsule becomes more permeable. Using various new technologies, we have identified many proteins produced by the equine endometrium, and several that are suppressed as pregnancy is established but increased in pregnancy failure of inflammation. Our prime objectives are to identify the proteins that are most likely to harm the embryo, and those that might be most useful in the assessment of uterine health in barren mares. To do this, we are comparing sequential changes in uterine proteins in cycling mares, mares with endometritis, mares in which pregnancy failure occurs spontaneously, and mares in which pregnancy failure is induced experimentally by injection of cloprostenol at Day 18 (when the conceptus is more vulnerable to early embryonic death).

**Hurtig, M.** Sustained release drug formulations for equine joint conditions: Formulation and forensic considerations

In past studies we have studied long acting drugs that were created by a drug company for the human market to control inflammation in joints for up to 90 days. Using the sheep knee as a model we showed that these drug and polymer combinations take up residency in the joint lining where they are slowly broken down to release the drug and control pain and inflammation. The duration and drug levels in joints can be changed by altering the polymer-drug binding, so release times of a few days to several months are possible. Through a collaboration with polymer chemist Dr. Elizabeth Gillies (Western University, Ontario) we will create non-steroidal anti-inflammatory drug (NSAIDs) formulations that will last from a few days to several months after injection into joints. The advantage of this delivery system is that no drug leaks from the joint into the rest of the horse's body to cause the all too common complications of colic and gut ulcers. Dr. Gillies' role will be to create the polymer carriers from safe, food grade chemicals. These are widely used in human sustained release drugs for the eye conditions, cancer therapies etc. Dr. Gillies will modify NSAID drugs so they can be trapped in the polymer carrier system. Laboratory experiments will be used to estimate the rate of drug release into joint fluid over 21 days. With this information we will conduct trials of sustained release NSAID formulations by injecting them into the fetlocks of horses at the University of Guelph Arken Research Station. By injecting the drug and then challenging the horse joint with an inflammation-causing molecule (lipopolysaccharide) at intervals of up to 90 days, we will be able to determine the duration of the drugs' anti-inflammatory effect. Many horses have low grade inflammation in joints that is difficult to address, and requires repeated, costly treatments. Such medication regimes are expensive and not without risk, particularly when steroids are used since they may promote cartilage loss over time. An additional consideration is the potential for doping with similar drug formulations. By measuring drug levels in plasma, urine and joint fluid we will be able to estimate when drugs would be detected in doping tests. We will share all our data with racing and clean sport/doping jurisdictions and provide samples of our drug formulations for their own use. This project will provide the basis for commercialization of a sustained release formulation that would improve the

safety of NSAID use in the horse, and potentially reduce the incidence and rate of osteoarthritis progression in horses.

**Physick Sheard, P** ORC Death Registry: An in-Depth Analysis

The Ontario Racing Commission (ORC) Death Registry was inaugurated in 2003, and contains a record of all racehorses dying within 60 days of participation in racing in the Province of Ontario. Most recorded horses were subjected to post mortem examination. General overviews of Registry data have previously been presented and subsets have been extracted and published to support specific studies. In-depth analysis of accumulated data has not been performed and overall Registry integrity has not been assessed. Over the last two years we have compiled a secure, detailed database of all horses entering the Registry to the end of 2011. This database contains Registry data, plus detailed race line information. It adds expanded results from post-mortem and ancillary reports, including categorization of post-mortem findings not appearing in the list of final diagnoses, and expanded details on circumstances of death. Each record now contains almost 1000 variables. All entries have been error-checked. Data has also been gathered on races taking place in the province from 2003-2011 to allow outcomes such as gender, age, and (where applicable) gait-specific mortality risk to be assessed. These expansions allow much greater detail to be extracted from Registry data, aiding in group-specific selection of targeted preventive strategies. Analysis will provide information of great significance to Ontario racing, while direction will be provided to aid in further development of this most valuable Provincial resource.

**Staempfli, H** A prospective study on the use of fecal oral transfaunation as adjunct treatment in horses with acute colitis and diarrhea

Co-investigators' names and Departments: Scott Weese, Pathobiology

Acute equine enterocolitis concerns the equine industry because of high mortality and economic costs of treatments. The underlying cause for the diarrhea is rarely known and routine treatments are mainly supportive, with intravenous fluid treatment and if needed antibiotics and anti-inflammatories. Recently in human medicine there has been growing scientific evidence that oral or rectal transfaunation with fecal cocktails from healthy donor individuals are beneficial to treat and prevent recurrent *C difficile* infections. Central to acute diarrhea is disruption of a normal healthy bacterial flora maintaining health and function of the large colon, which in horses is crucial for providing energy in form of fatty acids. The main goal of this research is to use this technology by transfaunating fresh feces from a healthy horse via nasogastric intubation to the horse with acute diarrhea. The transfaunated feces should accelerate the healing of the colon and the reestablishment of a normal healthy functioning ceco-colonic flora. The research will be using a prospective objective study to compare horses not receiving the transfaunation with horses receiving transfaunation in order to find out benefit of such a cheap adjunct treatment. We will use complex DNA sequencing methods to establish evidence that indeed the transfaunated feces will accelerate recovery from diarrhea, will change the damaged colonic flora and will cause less devastating side effects often observed in such cases.

**Weese, J.** Evaluation of the intestinal microbiota in horses with gas colic

Colic is a leading cause of illness and death in horses, and root causes are poorly understood. One important factor in development of colic is thought to be excessive gas production or accumulation in the intestinal tract, which can result in colic itself or potentially lead to life-threatening

displacement or torsion of the colon. The horse's intestinal tract harbours a large, complex and diverse microbial population (the microbiota) that plays critical roles in health and disease. Gas production by intestinal bacteria is likely a critical factor in development of gas colic, but the role of the microbiota in colic has not been adequately evaluated. A recent study by the applicant identified a group of 'indicator' bacteria that were evaluated with risk of, or prevention of, large colon torsion in postpartum mares. This was the first study to identify changes in the microbiota that precede disease and suggests that certain changes might be able to both predict colic and allow for development of methods to modify the microbiota to prevent colic. This study will evaluate horses that are predisposed to gas colic and evaluate their fecal microbiota before, during and after colic episodes, as well as compare them to horses that are not predisposed to colic. This study will provide important new insight into this important equine disease and provide information needed for development of new preventive methods.

**Weese, J.** Evaluation of the seroprevalence of *Borrelia burgdorferi* and *Anaplasma phagocytophilum* in Ontario horses

In recent years, there has been a dramatic change in the range of ticks and the diseases they carry in Ontario. Climate change is a likely driving factor and climate and tick range models indicate that this trend will continue, with steady increases in ticks, even in northern regions. Unfortunately, as ticks move into an area, tick-borne diseases accompany them. Lyme disease caused by *Borrelia burgdorferi*, a bacterium that has a life cycle involving small mammals (e.g. mice), large mammals (e.g. deer) and *Ixodes scapularis* (called the black legged or deer tick). Ticks become infected when feeding from an infected animal, then can pass the bacterium on when feeding on another animal, including horses. In recent years, Lyme disease has been increasingly identified in humans and dogs in Ontario, with anecdotal infection indicating infections in horses. Since Lyme disease can be quite variable, often vague in nature, but potentially serious, compromising the health and performance of affected horses, understanding of this disease in Ontario horses is needed. Another tick borne bacterium, *Anaplasma phagocytophilum*, is also of concern. It is also transmitted by *Ixodes scapularis*, and an infected horse was identified in eastern Ontario in 2015. It is unclear whether that was a rare infection, a more common problem that has gone undiagnosed or an indication of movement of this disease into Ontario. This study will evaluate the presence of antibodies against these two tick borne bacteria in horses from across Ontario. The presence of antibodies indicates the horse has been exposed sometime in the past. Identification of how common antibodies are and factors that are associated with the presence of antibodies (e.g. region of Ontario, access to woodlands, travel) will provide important information about these diseases. It will also investigate the relevance of finding antibodies against *B. burgdorferi* in healthy horses. It is unknown whether there is any clinical relevance of this; whether it denotes previous exposure that has been controlled, whether it indicates the potential that disease is developing or whether there is a risk of subsequent complications. This is important for understanding how to interpret any screening results and to help determine when testing is appropriate.



## Appendix 6: Research Publications

### Dr Luis Arroyo

Xiong Q, Bekebrede H, Sharma P, Arroyo LG, Baird JD, Rikihisa Y. An Ecotype of *Neorickettsia risticii* Causing Potomac Horse Fever in Canada. *Appl Environ Microbiol*. 2016 Sep 16;82(19):6030-6.

“Arterial Calcification in Horses”, *Equine Guelph Fall 2014 Newsletter*.

### Dr Keith Betteridge

“Early Embryonic Loss”, *Equine Guelph 2015 Spring Newsletter*.

Diel de Amorim, M., Chenier T., Quinn B.A., Yekkala K., Rannala V., Velianou, S. Scholtz E., Gartley C.J., Hayes M.A. 2014. Endometritis-associated alterations in major proteins in uterine flush fluids from mares. *J. Eq. Vet. Sci.* 34:150.

Betteridge K.J., Waelchli R.O., Raeside J.I., Christie H.L., Quinn B.A., Hayes M.A. 2014. Changes accompanying spontaneous embryonic loss in nine mares during the first month of pregnancy. *J. Eq. +Vet. Sci.* 34:195-197.

Betteridge, K.J. 2014. Therio-ontology: a personal view of 40 years of farm animal embryo form and function. *Theriogenology* 81:85-95.

Diel de Amorim, M., 2014. Diagnostic aspects and proteomic analysis of uterine flush fluid from mares with endometritis D.V.Sc Thesis, University of Guelph.

### Dr. Amy Greer

Spence, K., T. O’Sullivan, Z. Poljak, and A.L. Greer. (In review). Using an agent-based modeling approach to determine the potential impact of infection prevention and control measures on a facility-level equine influenza outbreak.

Spence, K., T. O’Sullivan, Z. Poljak, and A.L. Greer. (In review). Descriptive and network analyses of the equine contact network at an equestrian show in Ontario, Canada and the application to potential disease transmission. Submitted.

### Dr. Mark Hurtig

Sustained Release Intra-articular Medication. *Equine Guelph – Research Update*. Spring 2017. pp1-2

### Dr. Thomas Koch

Lepage S, et al. 2014. Generation, characterization and multilineage potency of mesenchymal-like progenitors derived from equine iPS cells. *Stem Cells and Development*

“Grant Brings Stem Cell Research closer to In Vivo Studies”, *Equine Guelph Fall Newsletter 2013*

Sparks, Carley. "Stem Cell Reality Check: The Science and Science Fiction of Stem Cell Therapy." *The Corinthian Horse Sport* 01 2013: 28.

Dr. Judith Koenig

Williams LB, Tessier L, Koenig JB, Koch TG. Post-thaw non-cultured and post-thaw cultured equine cord blood mesenchymal stromal cells equally suppress lymphocyte proliferation in vitro. PLoS One. 2014 Dec 1;9(12)

Bourzac CA, Koenig JB, Link KA, Nykamp SG, Koch TG. Evaluation of ultra small superparamagnetic iron oxide contrast agent labeling of equine cord blood and bone marrow mesenchymal stromal cells. Am J Vet Res. 2014 Nov;75(11):1010-7

“Unravelling the Mysteries of Colic” Page 26 - 31, January, 2014 - Horse-Canada & Horse Sport Horse Health Annual

Dr. John F. Prescott

Prevalence of netF-positive *Clostridium perfringens* in foals in southwestern Ontario. Finley, A., Gohari, I., Parreira, V.R., Abrahams, M., Staempfli, H., John Prescott (in press, 2016). Canadian Journal of Veterinary Research

*Clostridium perfringens* and its arsenal of toxins, Prescott, J. Published by GroupBMJ.com from Veterinary Record, February, 25, 2016

NetF-positive *Clostridium perfringens* in neonatal foal necrotizing enteritis in Kentucky. Iman Mehdizadeh Gohari, V. R. Parreira, J.F Timoney, L. Fallon, J. F. Prescott. From Veterinary Record, group.bmj.com, February, 25, 2016

NetF-positive *Clostridium perfringens* in neonatal foal necrotizing enteritis, Prescott, J. Veterinary Record, Feb 22, 2016.

Plasmid Characterization and Chromosome Analysis of Two netF + *Clostridium perfringens* Isolates Associated with Foal and Canine Necrotizing Enteritis. Iman Mehdizadeh Gohari, Andrew M. Kropinski, Scott J. Weese, Valeria R. Parreira, Ashley E. Whitehead, Patrick Boerlin, John F. Prescott. PLOS ONE | DOI:10.1371/journal.pone.0148344, February 9, 2016

A Novel Pore-Forming Toxin in Type A *Clostridium perfringens* Is Associated with Both Fatal Canine Hemorrhagic Gastroenteritis and Fatal Foal Necrotizing Enterocolitis. Iman Mehdizadeh Gohari, Valeria R. Parreira, Victoria J Nowell, Vivian M. Nicholson, Kaitlyn Oliphant, John F. Prescott. PLOS ONE | DOI:10.1371/journal.pone.0122684 April 8, 2015

Dr. Henry Stämpfli

*Clostridium difficile* prevalence in foals on Ontario breeding farms: a longitudinal study. M. Abrahams, H. Staempfli, M. Walker, J.S. Weese. J Vet Intern Med 2014; 28:976–1134 (page 1118) Poster Ontario Veterinary College, Guelph, ON.

Dr. Scott Weese

“Emerging Diseases in the Equine Industry” Spring 2015 Equine Guelph Newsletter

“Infection Control in Canada’s Horse Industry” Spring 2015 Equine Guelph Newsletter

“Tracking Map Aids Disease Prevention” Fall 2014 Equine Guelph Newsletter

“What are the Protocols for Dealing with Highly Infectious Disease like EHV-1 in Canada?”, 2013 Fall Equine Guelph Newsletter.

“Investigating Gut Function to Prevent Disease”, 2013 Spring Equine Guelph Newsletter.

Costa, H Staempfli, LG Arroyo, RG Gomes, JS Weese. Effects of parenteral antimicrobial is on the equine fecal microbiome investigated by next generation sequencing. Proceedings of the 2013 ACVIM Forum

The Horse (<http://www.thehorse.com/articles/31247/microbiomes-its-all-about-balance>) Jan 23, 2013

## Appendix 7: Research Presentations

### Dr. Luis Arroyo

“Duodenitis Proximal-Jejunitis in Horses. What is the culprit? What is the evidence?” OVC-Pathobiology, Departmental Seminar. November 7th, 2014.

“Investigation of Clostridium difficile toxins to experimentally induced duodenitis proximal jejunitis in horses”. Arroyo, L.G., Costa, M.C., Guest, B.B., Beaudoin-Kimble, M., Lillie, B., Weese, J.S. Eleventh Equine Colic Research Symposium, Trinity College Dublin, Dublin, Ireland. July 7th-9th, 2014. (Podium Presentation)

2013 World Equine Airway Symposium in Calgary, Canada. (Podium Presentation) Ex-vivo Pulmonary Arterial Perfusion System to model biomechanical and hemodynamic phenomena in equine pulmonary arteries

### Dr. Keith Betteridge

Bruce P, Lillie BN, Hammermueller JD, Betteridge KJ, Hayes, MA. 2016. Endometrial gene expression in normal and failing pregnancies in mares. Summer CORE Symposium. Guelph, ON. Aug 9-10 2016.

“Endometritis-associated alterations in major proteins in uterine flush fluids from mares” XIth Int Symp Equine Reprod, Waikato University, Hamilton, New Zealand, Jan 26 – 31, 2014

“Changes accompanying spontaneous embryonic loss in nine mares during the first month of pregnancy” XIth Int Symp Equine Reprod, Waikato University, Hamilton, New Zealand, Jan 26 – 31, 2014

KJ Betteridge was Honorary Chairman of the XIth International Symposium on Equine Reproduction, Waikato University, Hamilton, New Zealand, and January 2014. (See: Stout, TAE. 2014. Tribute to the Honorary Chairman, Honorary Chairman of the Eleventh International Symposium on Equine Reproduction Keith J. Betteridge BVSc, MVSc, PhD, FRCVS. J Equine Vet Sci 34:10-11.)

### Dr. Amy Greer

Spence, K.L., T.L. O’Sullivan, Z. Poljak, and A.L. Greer. Estimating potential disease spread at an equestrian show in Ontario, Canada using an agent-based network model. Conference for Research Workers in Animal Diseases. Chicago, IL. December 2016.

Spence, K.L., T.L. O’Sullivan, Z. Poljak, and A.L. Greer. Describing the Ontario equine movement network to understand the risk of disease introduction and spread. Canadian Association for Veterinary Epidemiology and Preventive Medicine. Guelph, ON. May 2016.

Spence KL, Goh B, O’Sullivan TL, Poljak Z, and Greer AL. Characterization of the equine contact network at a single equestrian show. OVC Graduate Student Symposium. Guelph, ON, December 2015.

Spence KL, O'Sullivan T, Poljak Z, Greer AL. Preventing equine disease outbreaks using mathematics. OMAFRA Emergency Management Expo. Guelph, ON. December 2015.

Spence KL, O'Sullivan T, Poljak Z, Greer AL. Identifying factors influencing the probability of an equine influenza outbreak in an equine training facility. 5<sup>th</sup> International Conference on Infectious Disease Dynamics. Clearwater Beach, FL. Abstract. December 2015.

Spence, K.L., T.L., O'Sullivan, Z. Poljak, and A.L. Greer. Describing the Ontario equine movement network to understand the risk of disease introduction and spread. Canadian Association for Veterinary Epidemiology and Preventive Medicine. Guelph, ON. Abstract. May 2015.

#### Dr. Mark Hurtig

Sustained-release intra-articular medication. Ontario Equine Practitioners Equine Research Update December 15, 2016, OVC Lifetime Learning Centre.

#### Dr. Thomas Koch

PhD Candidate Ms. Sarah Lepage presented her work in induced pluripotent stem cells The International Society for Stem Cell Research, Vancouver, 2014

PhD Candidate Ms. Sarah Lepage presented her work in induced pluripotent stem cells. The Till and McCullough Meetings, Ottawa, 2014

#### Dr. Judith Koenig

2013 Abstract submitted for review to the Annual Meeting of the American College of Veterinary Surgeons (October 2013, San Antonio, TX)

2013 Koenig J. Extracorporeal shock wave therapy in horses. Equine Guelph Report on Research Day, Guelph, Ontario, Saturday, April 6th, 2013.

2013 Poster presented at the OAEP Annual Meeting in March 2013

#### Dr. Henry Stämpfli

"The effect of a newly designed probiotic on prevention of diarrhea and fecal pathogen shedding of foals during the first two months of life" conference abstract (oral presentation) presented at the annual conference of the European College for Equine Internal medicine 2014 in Prag Tschec republic.

Clostridium difficile prevalence in foals on Ontario breeding farms: a longitudinal study Presented at ACVIM Forum June 2014, Nashville, TN

Clostridium difficile prevalence in foals on Ontario breeding farms: a longitudinal study Presented at OVC Graduate Student Research Symposium, November 12, 2014, Guelph, ON

Clostridium difficile prevalence in foals on Ontario breeding farms: a longitudinal study Presented at the Woodbine research update, May 22, 2014 Woodbine Racetrack Toronto, ON

Infectious agents in diarrheic foals on Ontario breeding farms: a case control study  
M Abrahams, H Staempfli, C Leutenegger, JS Weese. Poster Presented at the International Society for Companion Animal Infectious Diseases Symposium, October 2014, Niagara-on-the-Lake, ON

Infectious Agents in Diarrheic Foals on Ontario Breeding Farms: A Case Control Study.  
M Abrahams, H Staempfli, C Leutenegger, JS Weese. Poster. Presented at OVC Graduate Student Research Symposium, November 12, 2014, Guelph, ON

### Dr. Scott Weese

Data presented at OVC Practitioner Night, Dec 14, 2016, and the OAEP Annual Meeting, Feb 2017

## **Appendix 8: Presentation and Talks Given by Equine Guelph**

### **Presentations & Talks by Gayle Ecker**

“Programs of Equine Guelph” to visitors from Germany Agricultural College, June 2, 2016

“Fire Safety in the Horse Stable”, Puslinch Fire Department Open House, June 4, 2016

“OSPCA Pawdcast – Interview with Gayle Ecker on Fire Prevention program”, OSPCA Education Conference, June 7, 2016

“Education and training programs of Equine Guelph”, presentation to AGCO staff, July 18, 2016

“New Directions for training – a partnership with OEF”, presentation of education offerings to OEF staff, July 28, 2016

“The Programs of Equine Guelph”, presentation to BBRM students, September 16, 2016

“The Programs of Equine Guelph – Research Promotions to the Equine Industry”, Pathobiology seminars, October 28, 2016

“Equine Guelph’s Programs in Support of Welfare”, RSPCA head office, UK, November 11, 2016

“Welfare Education Programs”, Redwings Horse Sanctuary staff, UK, November 14, 2016

“Introducing TheHorsePortal”, Sunrise Therapeutic Riding Centre staff, February 22, 2017

“An Interactive Journey through the Horse’s Gut!”, Central Ontario Agricultural Conference Horse Day, March 4, 2017

“Panel Discussion on Fire Safety”, Central Ontario Agricultural Conference Horse Day, March 4, 2017

“The Horse Portal” and “OSPCA Training”, OSPCA Pawdcasts, March 15, 2017

“An Interactive Journey through the Horse’s Gut!”, Can-Am All Breeds Expo, March 31, April 1, April 2, 2017

“Do You Know the Code?”, Can-Am All Breeds Expo, April 1, 2017

“Towards a New Partnership”, presentation to AGCO with tour, April 21, 2017

“Horse Behaviour and Emergency Situations”, presentation to OMAFRA Fire Prevention Task Force,  
Woodstock, April 27, 2017

“Human vs. Horse – Comparative Anatomy”, TLAER training, Meaford Fire Training Centre, April 30, 2017

### **Presentations & Talks by Susan Raymond**

“Fire Prevention outreach program designed for the racing industry.”, interview for Equine Guelph Research Radio, 2016

“Fire Prevention”, Western Ontario Region Pony Club Camp, July 14 2016, Paris ON Fairgrounds

“Update – fire prevention program”, Ontario Municipal Fire Prevention Officers Association and the Wellington Chapter, Jan 31 2017, Hillsburgh, ON

“Horse Portal Project in Canada”, National Equine Conference Call (US – Federal – State – Academia – Industry), April 13, 2017

## **Appendix 9: Educational Offerings by Equine Guelph**

### **Educational Courses offered by Equine Guelph and Open Learning and Educational Support**

Advanced Equine Health through Nutrition (Instructor: *Dr. Kathleen Crandell, PhD*)

Advanced Equine Behaviour (Instructor: *Lindsay Nakonechny, MSc*)

Advanced Functional Anatomy (Instructor *Dr. Jeff Thomason, PhD*)

Behaviour and Safety online two-week eWorkshop (Instructor: *Dr. Susan Raymond, PhD*)

Biosecurity online two-week eWorkshop (Instructor: *Dr. Susan Raymond, PhD*)

Colic Prevention online two-week eWorkshop (Instructor: *Diane Gibbard, MSc*)

Equine Behaviour (Instructor: *Lindsay Nakonechny, MSc*)

Equine Business Finance and Risk Management (Instructor: *Nicole Velozo*)

Equine Business Management (Instructors: *Rachael Hunter & Christine Polhkamp*)

Equine Event Management (Instructor: *Tracy Dopko and Marjory Gaouette*)

Equine Genetics (Instructor: *Dr. Dianne Winkelman-Sim, PhD*)

Equine Nutrition (Instructor: *Dr. Kathleen Cavanagh, DVM*)

Equine Welfare (Instructors: *Cordy DuBois, MSc, Gayle Ecker, MSc*)

Exercise Physiology (Instructor: *Dr. Amanda Waller, PhD*)

Functional Anatomy (Instructor: *Dr. Jeff Thomason, PhD*)

Global Perspectives in Equine Welfare (Instructor: *Dr. Tamara Tadich, PhD, DVM*)

Growth & Development (Instructor: *Dr. Pat Meyers*)

Health & Disease Prevention (Instructor: *Dr. Ev Post*)

Management of the Equine Environment (Instructors: *Dr. Susan Raymond & Kathy Fremes*)

Marketing & Communications (Instructor: *Kelly Spencer*)

Stewardship of the Equine Environment (Instructor: *Dr. Susan Raymond, PhD*)

The Equine Industry (Instructor: *Gayle Ecker, MSc*)

## Appendix 10: Summary of the Equine Studies program

### **Diploma in Equine Studies**

The diploma in equine studies requires 6 core courses and 4 electives. We are seeing an increase in students beginning the program with the intent to complete the Diploma in Equine Studies. In 2009 we awarded our first Diploma in Equine Studies. With 34 diplomas awarded in 2016/17, the total number of diplomas awarded has increased to 204 (170 in previous year).

#### **Program Requirements:**

Management of the Equine Environment	Core
Health & Disease Prevention	Core
Equine Nutrition	Core
Functional Anatomy	Core
Equine Behaviour	Core
Stewardship of the Equine Environment	Core

*Students can continue with electives from the Equine Science Specialty*

Growth & Development	Elective
Exercise Physiology	Elective
Equine Genetics	Elective

*and/or combine Equine Business Management courses*

Equine Business Management	Elective
Marketing & Communications in the Equine Industry	Elective
Finance & Risk Management	Elective
The Equine Industry	Elective
Equine Journalism	Elective
Equine Event Management	Elective

*and/or combine Equine Welfare courses*

Equine Welfare	Elective
----------------	----------

### **Equine Science Certificate**

The Equine Science Certificate requires 4 core courses and 2 electives. The first Equine Science Certificates were awarded in 2004/05 to 36 students. With 27 Equine Science Certificates awarded in 2016/17, to date 383 (356 at end of last year) Equine Science Certificates have been awarded.

#### **Program Requirements:**

Management of the Equine Environment	Core
Health & Disease Prevention	Core
Equine Nutrition	Core
Functional Anatomy	Core
Growth & Development	Elective



Equine Behaviour	Elective
Exercise Physiology	Elective
Equine Genetics	Elective

### **Certificate in Equine Business Management**

The Certificate in Equine Business Management requires 5 core courses and 1 elective. With 6 Certificates in Equine Business Management awarded in 2016/17, to date 50 (44 at end of last year) Equine Business Management Certificates have been awarded.

#### ***Program Requirements:***

Management of the Equine Environment	Core
Equine Business Management	Core
Marketing & Communications in the Equine Industry	Core
Finance & Risk Management	Core
The Equine Industry	Core
Equine Journalism	Elective
Equine Event Management	Elective
Stewardship of the Equine Environment	Elective

### **Equine Welfare Certificate**

The Equine Welfare Certificate requires 3 pre-requisite courses, 4 core courses and 2 electives. The Equine Welfare Certificate is a partnership between Equine Guelph, Campbell Centre for the Study of Animal Welfare and Open Learning and Educational Support. In 2016/17 the Equine Welfare course had 17 enrollments and a total of 6 Equine Welfare Certificates have been awarded as of April 30, 2017.

#### ***Program Requirements:***

Management of the Equine Environment	Pre-requisite
Equine Behaviour	Pre-requisite
Course of your choice from Equine Science or Business	Pre-requisite
Equine Welfare	Core
Advanced Equine Behaviour	Core
Advanced Equine Health through Nutrition OR Equine Nutrition	Core
Global Perspectives in Animal and Equine Welfare	Core
Health & Disease Prevention	Elective
The Equine Industry	Elective
Equine Nutrition OR Advanced Equine Health Through Nutrition	Elective
Advanced Equine Anatomy	Elective

## **Equine Veterinary Technician Certificate**

The Equine Veterinary Technician Certificate requires 3 pre-requisite courses, 3 core courses and 3 practicum.

### ***Program Requirements:***

Equine Nutrition	Pre-requisite
Equine Behaviour	Pre-requisite
Functional Anatomy	Pre-requisite
Equine Health through Nutrition	Core
Advanced Equine Behaviour	Core
Advanced Equine Functional Anatomy	Core
Equine Reproduction	Practicum
Equine Critical Care	Practicum
Equine Dentistry	Practicum

## **2016 - 2017 Student Registration Profile**

Number of individual students	524
Number of new students	257
Total number of registrations	917

## **Enrollment Registrations by Course 2016-2017**

### **Summer 2016**

2200008	Exercise Physiology	54
2200004	Health & Disease Prevention	37
2200006	Equine Nutrition	62
2200000	Management of the Equine Environment	38
2200012	Equine Business Financial and Risk Management	40
2200014	Advanced Equine Health through Nutrition	9
2200013	Equine Welfare	17

### **Fall 2016**

2200000	Management of the Equine Environment	42
2200006	Equine Nutrition	55
2200003	Management of the Broodmare, Stallion and Foal	32
2200002	Equine Functional Anatomy	61
2200004	Health & Disease Prevention	44
2210002	Equine Business Management	49
2200010	Stewardship of the Equine Environment	39
2200015	Advanced Equine Behaviour	12

### **Winter 2017**

2200005	Equine Behaviour	56
---------	------------------	----

2200008	Equine Genetics	47
2200004	Health & Disease Prevention	50
2200001	Equine Exercise Physiology	53
2200000	Management of the Equine Environment	50
2200011	The Equine Industry	36
2240000	Marketing & Communications in the Equine Industry	22
2200017	Global Perspectives in Equine Welfare	12

**Total Enrollments 917**

## 2016 - 2017 Statistical Profile Equine Studies

### Year to Year Comparison by student geographic location

	2008	2009	2010	2011	2012	2013	2014	2015	2016
CAN	340	457	482	451	459	442	461	451	424
US	27	32	27	19	31	54	38	44	56
INT	13	14	15	17	13	20	23	44	44
	<b>380</b>	<b>503</b>	<b>524</b>	<b>487</b>	<b>503</b>	<b>516</b>	<b>522</b>	<b>539</b>	<b>524</b>

### Year by Year Comparison of the geographic location of Canadian Students

	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/2016	2016/2017
AB	37	47	39	49	54	48	49	48	61
BC	33	38	47	48	64	63	66	70	60
MB	7	7	10	13	10	4	7	14	10
NB	2	5	4	8	7	5	4	6	9
NF	1	2	2	2	3	4	4	7	4
NS	6	5	11	10	15	18	16	13	7
NU	2	0	0	1	0	0	0	0	0
NT	0	1	0	0	0	3	3	1	0
ON	238	313	338	296	275	259	275	249	229
PI	0	2	0	0	4	3	1	2	0
PQ	10	27	19	18	12	21	20	22	29
SK	2	5	10	6	14	14	16	17	15
YT	2	5	2	0	1	0	0	2	0
	<b>340</b>	<b>457</b>	<b>482</b>	<b>451</b>	<b>459</b>	<b>442</b>	<b>461</b>	<b>451</b>	<b>424</b>

## Where are our students coming from?

### Canadian Students

Student numbers	
AB	61
BC	60
MB	10
NB	9
NF	4
NS	7
NU	0
NT	0
ON	229
PI	0
PQ	29
SK	15
YT	0
<b>TOTAL</b>	<b>424</b>

### International Students

Student Numbers	
Australia	12
Belgium	1
Bermuda	1
China	1
Egypt	1
France	3
Germany	1
Ireland	1
Italy	1
Kenya	1
New Zeland	1
Norway	1
Qatar	2
Russia	1
South Africa	3
Singapore	1
Spain	1
Switzerland	3
UAE	3
UK	3
<b>TOTAL</b>	<b>44</b>

### US Students

Student Numbers	
AZ	1
AK	0
AL	0
CA	3
CO	0
CT	2
FL	5
GA	2
HI	1
IL	3
IN	0
KY	2
LA	1
MA	2
MD	2
ME	1
MI	1
MN	2
MT	1
NC	2
NE	1
NJ	3
NM	1
NV	1
NY	5
OH	1
PA	2
TX	3
VA	1
WA	6
WI	1
<b>TOTAL</b>	<b>56</b>

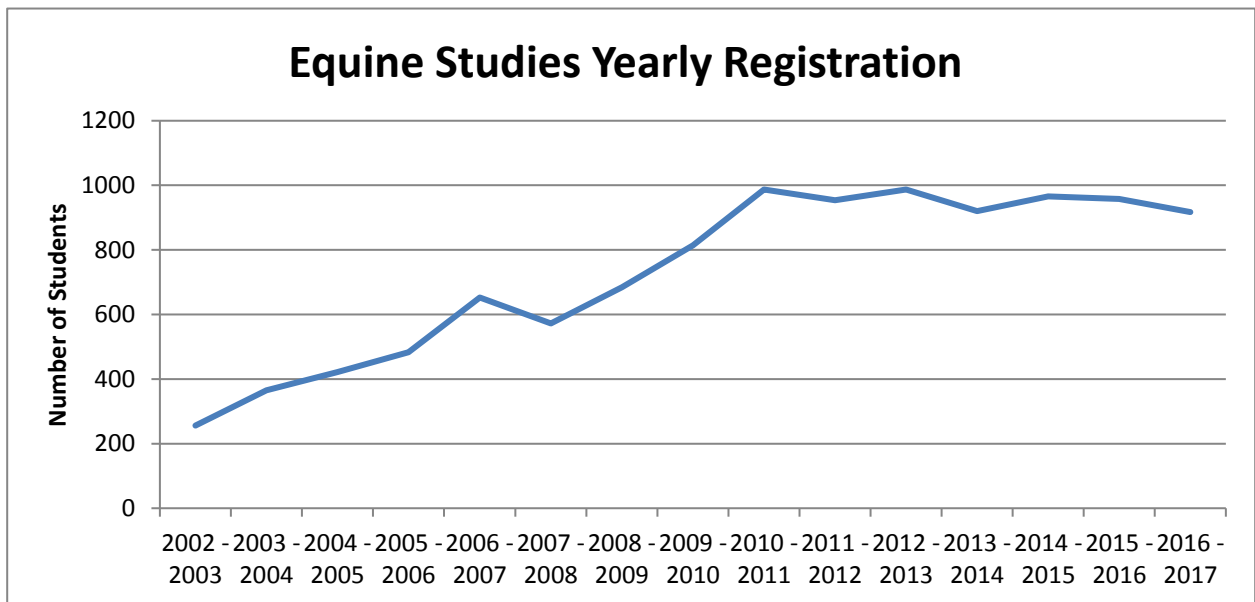
**Number of courses offered each year**

Year	Courses
2002 - 2003	4
2003 - 2004	6
2004 - 2005	8
2005 - 2006	9
2006 - 2007	13
2007 - 2008	10
2008 - 2009	12
2009 - 2010	16
2010 - 2011	19
2011 - 2012	21
2012 - 2013	24
2013 - 2014	21
2014 - 2015	22
2015 - 2016	22
2016 - 2017	23

**Different individual courses available**

Year	Courses
2002 - 2003	3
2003 - 2004	4
2004 - 2005	6
2005 - 2006	7
2006 - 2007	8
2007 - 2008	7
2008 - 2009	11
2009 - 2010	14
2010 - 2011	15
2011 - 2012	17
2012 - 2013	19
2013 - 2014	16
2014 - 2015	17
2015 - 2016	17
2016 - 2017	17

**Equine Yearly Student Registration Summary**



## All Countries Represented by our Students Since 2002

We now have students from 43 different countries who have joined our international learning community!

Canada	Kenya
Argentina	Korea
Australia	Kuwait
Bahamas	Malaysia
Bavaria	Mexico
Belgium	New Zealand
Bermuda	Netherlands
Cayman Islands	Norway
China	Poland
Columbia	Qatar
Costa Rica	Russia
Denmark	South Africa
Egypt	Singapore
France	South Korea
Germany	Spain
Honduras	Sweden
Hong Kong	Switzerland
Hungary	Trinidad
India	United Arab Emirates
Ireland	United Kingdom
Italy	U.S.A.
Jamaica	

## **Appendix 11: Equine Guelph's Promotional Events**

Another busy year kept the Equine Guelph staff on the road, taking the message of education, lifelong learning, career pathways, safety and horse welfare out to the equine community in Ontario and beyond!

### **Displays and Events for Equine Guelph programs**

#### **Events Calendar – 2016**

Rockwood Fire Department Open House, ON  
April 30

EquiMania! at Brooklin Spring Fair, Brooklin, ON  
June 02 - 05

Winsong Farm 2016 Fundraiser  
June 26

EquiMania! at Horse Capades CNE, Toronto, ON  
July 31 - August 18

EquiMania! at CNE Toronto, ON  
August 19 - September 05

Equine Guelph Fire Safety at International Plowing Match and Rural Expo, Harriston, ON  
September 20 - 24

Dufferin Town and Country Farm Tour  
October 01

Equine Guelph Fire Safety at Erin Fall Fair  
October 07 - 10

EquiMania! at the Royal Winter Fair Toronto, ON  
November 04 - 13

Evening with Ian Millar at University of Guelph, 7pm - 9:30pm  
November 19

Equines and their Natural Environment, Caledon Equestrian Park, Caledon, ON  
November 30

EquiMania! at Central Ontario Agricultural Conference  
March 03 - 04

EquiMania! at FEI World Cup, Omaha, NE  
March 29 - April 02

EquiMania! at Can Am All Breed Equine Expo, New Market, ON  
March 31 - April 02

## **Events Calendar – 2017**

Landowner Workshops, February 10, 2017 by Credit Valley Conservation, February 25, 2017,  
Credit Valley Conservation  
November 30

EquiMania! at Central Ontario Agricultural Conference  
March 03 - 04

Equine Behaviour Clinic with Lindsay Grice, University of Guelph  
March 11

Equine Guelph at System Fencing 30th Anniversary - Rockwood, ON  
March 17 - 18

Research Day, University of Guelph  
March 23

EquiMania! at FEI World Cup, Omaha, NE  
March 29 - April 02

EquiMania! at Can Am All Breed Equine Expo, New Market, ON  
March 31 - April 02

Fire Prevention and Emergency Rescue Training for the Horse Racing Industry, Mohawk Racetrack,  
ON  
April 25 - 26

Large Animal Rescue Operational Rescue Course, Meaford Fire Department Training Centre,  
Meaford, ON (Participants must be active firefighters)  
April 28 – 30



## Appendix 12: Media Coverage Summary

<b>Topic</b>	<b>Articles (May 1, 2016- April 30, 2017)</b>
Research	21
Education	74
Special Projects	143

### Coverage of Special Events and Programs

The Horse Portal	45
Fire Safety	26
Technical Large Animal Emergency Rescue	23
Ontario Racing Industry Survey	17
ThermoRegulator Healthcare Tool Launch	9
Stuart Stocks Tuition Award	7
Care of the Outdoor Horse	6
Gut Microflora and early warning signs of EMS	6
Horse Health Tracker App	4

### **Total Features: 208**

Equine Guelph's media pick up saw uptake in a number of high quality profile industry news distributors. A high quality audience currently following Equine Guelph's releases and re-publishing them include: veterinary practices, equestrian media outlets, stable owners and industry professionals. The caliber of this audience results in further reach to the industry in Ontario and beyond as 100% of the media releases were picked up for further distribution. Equine Guelph's e-communications database continues to grow and the releases go out to over 160 equine media outlets!

Equine Guelph continues to maintain a presence on many social media platforms including Facebook and Twitter. Followers include: Woodbine Entertainment Group, Spruce Meadows, Canadian Horse Racing News, Talking Horses TV (HBPA), Equestrian Hour (networking in UK), EquiMed, the Royal Agricultural Winter Fair, Veterinary Daily, Ont. Vet Med Assc., and Canadian Vet Medical Association. Our Facebook followers have increased 15% over last year. In response to a focus on increasing our twitter activity we have 19% more followers than last year.

Early 2016 began with a tragic fire at a prominent racing barn in Ontario. As a result of this, Equine Guelph launched an awareness campaign on Fire Safety and Prevention that continues into 2017 and beyond as part of its communications and education programs. The team at Equine Guelph is ready to help develop supportive programs for current concerns effecting the industry. Programming will continue on this topic.

Many links to pages of Equine Guelph’s website continue to be developed by a variety of industry groups including educational websites, provincial equine associations, veterinary pages, student graduates of our program and many of our sponsors. Equine Guelph’s membership with American Horse Publications (AHP) results in a much wider audience as 2 media articles per month are distributed to top U.S. equine publications.

### **Media Coverage List**

<b>Date</b>	<b>Media outlet</b>	<b>Title</b>
16-Apr	Atlantic Horse & Pony	Working and Learning (Equine Guelph courses)
16-Apr	Horse Sport	The Heart of the Horse (Dr. Physick-Sheard, Arroyo, Rossi)
16-Apr	Greenhawk Flyer	Be Empowered - Get the App
16-May	Harnesslink.com	Avoiding a Lameness Exam
16-May	Horse Sport	Yeast Culture for Digestive Health (Dr. Weese quoted)
16-May	OVC ebulletin	OAHN and Equine Guelph links to May E-news
16-May	TheStar.com	Rare Grey Horses Among Hopefuls for Kentucky Derby (EG genetic instructor quoted)
16-May	Horse-Canada.com	Playing with Red Robin and Whisper (Mention of Whinnie's Equine Guelph Fundraiser)
16-May	theHorse.com	Getting Back to Work this Spring? Keep Your Horse Sound
16-May	OAHN.ca	Top Animal Health Links (May 2 - 8) EG online course mention
16-May	EquiMed.com	First Annual Research Day a Success!
16-May	Horse-Canada.com	Can-Am Art Auction Raises over 3000 for Equine Guelph
16-May	Horse Industry Association of Alberta	Equine Guelph seeks input from equine rescue organizations
16-May	KPPUSA.com	Avoiding a Lameness Exam
16-May	Harnesslink.com	Avoiding a Lameness Exam
16-Jun	Harnesslink.com	Fire Prevention Outreach Program for Racing
16-Jun	Harnesslink.com	Hoofprints that cannot Be erased
16-Jun	HorseTalk.co.nz	Hoofprints that cannot Be erased
16-Jun	Barnmice.com	Large Animal Training Provides Hands on Tips and Techniques

16-Jun	Harnesslink.com	Large Animal Training Provides Hands on Tips and Techniques
16-Jun	EquiMed.com	Large Animal Training Provides Hands on Tips and Techniques
16-Jun	Equine Info Exchange	Large Animal Training Provides Hands on Tips and Techniques
16-Jun	American Horse Publications	Large Animal Training Provides Hands on Tips and Techniques
16-Jun	Ontario Equestrian Federation Facebook	Large Animal Training Provides Hands on Tips and Techniques
16-Jun	Canadian Veterinary Equine Welfare Council	From Equine Guelph: The Equine Biosecurity Risk Calculator
16-Jun	EquiMed.com	2016 - The Year of Biosecurity to Prevent Contagious Horse Diseases
16-Jun	HorseTalk.co.nz	Remembering Friends on new Hoofprints Tribute Page
16-Jun	EquiMed.com	Fire Prevention Outreach Program for Horse Racing
16-Jun	Horse-Canada.com	Fire Prevention Outreach Program for Racing
16-Jun	TheHorse.com	Equine Guelph Introduces Fire Prevention Outreach Program
16-Jun	Iowa State University Equine Science	Equine Guelph Introduces Fire Prevention Outreach Program (enews June)
16-Jun	OVC Bulletin	Large Animal Training Provides Hands on Tips and Techniques
8-Jun	Harnesshorse.us	Fire Prevention Outreach Program for Racing
16-Jun	TheHorse.com	Equine Guelph courses (ad)
16-Jun	The Rider	First Annual Equine Research Presentations a Success
16-Jun	The Rider	Avoiding a Lameness Exam With a well-planned training program
16-Jun	The Illinois Horse Network	Avoiding a Lameness Exam With a well-planned training program
16-Jun	Equine Monthly	Gunshot Method Gone
16-Jul	Horse-canada.com	Vaccinations: Giving Immunity a boost
16-Jul	horse-canada.com	Does my horse have EMS? (UofG mentioned in latest research)
16-Jul	horse-canada.com	Vital Signs (horse health tracker app mention)
16-Jul	thehorse.com	Large Animal Rescue Training Provides Hands on Tips
16-Jul	EC insider	Find out your farm's biosecurity score (EC July enews & on website)
16-Jul	TheRider	Large Animal Training Provides Hands on Tips and Techniques
16-Jul	TheRider	Hoofprints That Cannot be Erased
16-Jul	The Rider	Fire Prevention Outreach Program for Racing
16-Jul	Equine Disease Quarterly	Mcr-1 and Other New Resistance Genes: What is the Threat to Horses? (Weese)
16-Jul	American Farriers Journal	Changing Forces and Tensions (Dr. Thomason)
16-Jul	American Horse Publications	Gunshot Method Gone
16-Jul	The Northwest Horse Source	Avoiding a Lameness Exam With a well-planned training program
16-Aug	Horse Sport Magazine	New Cells, New Hope

16-Aug	Horse-Canada.com	New Cells, New Hope
16-Aug	GrandRiverRaceway.com	GRAS donation benefit Equine Guelph & Fergus Agricultural Society
16-Aug	TheHorse.com	Exploring the Equine Microbiome
16-Aug	The Northwest Horse Source	Gunshot Method Gone
16-Sep	HCBC.ca	Get your barn ready for winter with Equine Guelph's Barn Fire Prevention Tool
16-Sep	AlbertaEquestrian.com	Get your barn ready for winter with Equine Guelph's Barn Fire Prevention Tool
16-Sep	TheHorse.com	Study: Gut Microflora Changes Could Point to EMS
16-Sep	horsetalk.co.nz	Changes in Gut bacteria could provide early warning of Equine Metabolic Syndrome
16-Sep	StandardbredCanada.ca	Stocks Memorial Award Details
16-Sep	OSPCA blog	OSPCA talks about Horse Health Tracker App
16-Sep	OSPCA podcast	OSPCA talks about Horse Health Tracker App (Podcast)
16-Sep	StableManagement.com	Get your barn ready for winter with Equine Guelph's Barn Fire Prevention Tool
16-Sep	TheNorthWestHorseSource.com	Get your barn ready for winter with Equine Guelph's Barn Fire Prevention Tool
16-Sep	Horse-Canada.com	Online Barn Fire Prevention Tool
16-Sep	horsetalk.co.nz	Fighting fire with knowledge: New barn fire prevention tool for horse farm owners
16-Sep	Kentucky Performance Products	Changes in Gut microflora could provide early warning of EMS
16-Oct	Horsesandpeople.com.au	Changes in Gut microflora could provide early warning of EMS
16-Oct	Horse-Canada.com	Changes in Gut microflora could provide early warning of EMS
16-Oct	HorseTalk.co.nz	Changes in Gut microflora could provide early warning of EMS
16-Oct	Horsesandpeople.com.au	Senior Horse Tool
16-Oct	Farms.com	Online Barn Fire Prevention Tool Launched by Equine Guelph
16-Oct	Whoa ebulletin	Get your barn ready for winter with Equine Guelph's Barn Fire Prevention Tool
16-Oct	Whoa ebulletin	Announcing new short courses
16-Oct	TheHorse.com	Equine Guelph Introduces Barn Fire Prevention Tool
16-Oct	Ohio State University Vet website	Dog Infectious Disease Risk Calculator (link to EG Biosecurity Risk Calculator)
16-Oct	HorseNation.com	Fire Prevention with Equine Guelph
16-Oct	Woodbine Program	Equine Guelph Announces Groom Scholarship
16-Oct	EquiMed.com	EquiMania! Celebrates 10 Years at Royal Agricultural Winter Fair
16-Oct	Horse-Canada.com	Ontario Racing Horse Health Survey

16-Oct	OEF enews	Help us Help Ontario Racing- Take the Survey
16-Oct	StandardbredCanada.ca	Take the Equine Survey
16-Oct	OntarioRacing.com	Equine Guelph: Racing Industry Survey
16-Oct	QHROOI enews	Help the Ontario Racing Industry
16-Oct	TheHorse.com	Equine Guelph Conducting Ontario Racing Industry Survey
16-Oct	COSAonline.com	Take the Equine Survey
16-Oct	CBC.ca	Researcher wants to learn more about horse flu on P.E.I.
16-Oct	OHHA.ca	Help the Ontario Racing Industry - Take the Survey
16-Oct	cthsont.com	Help the Ontario Racing Industry - Take the Survey
16-Oct	HorseTalk.co.nz	Youth in the saddle - and out of it: Accidents with horses under scrutiny
16-Oct	HBPA.on.ca	Help the Ontario Racing Industry - Take the Survey
16-Oct	ThoroughbredHighlight	Help us Help Ontario Racing- Take the Survey (button on webpage)
16-Oct	PaulickReport.com	Equine Guelph Creates Barn Fire Prevention Tool
16-Nov	StableManagement.com	Reducing the Risk of Barn Fires
16-Nov	NiagaraThisWeek.com	A year after his death, man honoured for research on racehorses
16-Nov	Niagara This Week	A Life's Work Uncovered
16-Nov	GuelphToday.com	Taking Half an Hour for Horses
16-Nov	Horse-Canada.com	Last Chance to Take Ontario Racing Survey
16-Nov	StandardbredCanada.ca	Equine Guelph Wants Your Input
16-Nov	Bloodhorse.com	Equine Guelph Continues Ontario Racing Survey
16-Dec	OVC Bulletin	From the Dean: Innovative equine programs at the University of Guelph...
16-Dec	StandardbredCanada.ca	Innovative Equine Programs at UofG
16-Dec	PaulickReport.com	Winter Management of the Outdoor Horse
16-Dec	NCRHHA.ca	Winter Management of the Outdoor Horse
16-Dec	TheHorse.com	Winter Management of the Outdoor Horse
16-Dec	HBPA.on.ca	Equine Guelph Dec Enews reposted
16-Dec	HarnessLink.com	Innovative Equine Programs at Guelph
16-Dec	HarnessLink.com	Ontario Racing Industry Survey Coming Down Final Stretch
16-Dec	Wellington Advertiser	Help the Ontario Racing Industry - Take the Survey

17-Jan	Equinechronicle.com	Winter Management of the Outdoor Horse
17-Jan	HarnessLink.com	Stuart Stocks Memorial Winners
17-Jan	StandardbredCanada.ca	Stuart Stocks Memorial Winners
17-Jan	Saskatchewan Horse Federation	SHF Members Take Advantage of Joining the Horse Portal
17-Jan	Alberta Equestrian Federation	Responsible for a Horse
17-Jan	Horse-Canada.com	Equine Guelph Offers New Online Horse Industry Training & Education
17-Jan	StandardbredCanada.ca	Inaugural Courses Added to Portal
17-Jan	The Rider	Equine Guelph Partners with 10 Equestrian Federations on New Training Portal
17-Jan	Horse-Canada.com	Does My Horse Have Equine Metabolic Syndrome? (with files from Weese research story)
17-Jan	EquineErin.com	Check out Equine Guelph's New HorsePortal.com
17-Jan	HarnessLink.com	TheHorsePortal.ca - Join the Herd!
17-Jan	Topix.com	TheHorsePortal.ca - Join the Herd!
17-Jan	1newsNewzealand.com	TheHorsePortal.ca - Join the Herd!
17-Jan	EquineYukon.weebly.com	EAY and Equine Guelph launch the Horse Portal
17-Jan	CosaOnline.com	Inaugural Courses Added to Equine Guelph Portal
17-Jan	NSEF	Upcoming Equine Guelph Courses (NSEF Discount)
17-Jan	AmericanHorsePubs.org	Join the Herd on New Global Training Portal
17-Jan	RealTime.rediff.com	Equine Guelph Offers new online horse industry training
17-Jan	Bulletin.OVC.uoguelph.ca	Equine Guelph TheHorsePortal.ca
17-Jan	ManitobaHorseCouncil.ca	A Partnership in Training and Certification
17-Jan	Horsechannel.com	New Online Horse Care Courses Offered by Equine Guelph
17-Jan	HorseJournals.com	Equine Guelph Partners with 10 Equestrian Federations on New Training Portal
17-Jan	My-horse-world.com	Equine Guelph Offers New Online Horse Industry Training & Education - Horse-Canada.com
17-Jan	HorseJournals.com	Winter Management For the Outdoor Horse
17-Jan	The Rider	From the Dean: Innovative equine programs at the University of Guelph...
17-Jan	The Rider	Steward Stocks Memorial Equine Award Winners Announced
17-Jan	The Rider	Advancements in equine health and welfare focus of research update
17-Jan	The Rider	Winter Management For the Outdoor Horse
17-Jan	OntarioRacing.com	Join The Herd! Equine Guelph Launches Industry Training For Grooms and Trainers
17-Jan	AllAboutHorses.com	Equine Guelph Offers New Online Horse Industry Training & Education
17-Feb	Alberta Equestrian Federation	Join Our Horse Community Across Canada to Learn the New National Standards
17-Feb	HorseNation.com	Equine Guelph Launches ThermoRegulator Healthcare Tool
17-Feb	Horse-Canada.com	New Online ThermoRegulator Tool
17-Feb	Horsetalk.co.nz	To Rug or Not to Rug? That is the question for horse owners
17-Feb	LinkedIn	Join the herd on new global training portal
17-Feb	Omega Alpha	Join the herd on new global training portal

17-Feb	Equimarket.equestrianc nnection.com	AD: TheHorsePortal.ca
17-Feb	Wellington Advertiser	Join the herd on new global training portal
17-Feb	Equestrian.ca	Equestrian Canada Joins Equine Guelph as national Training Partner of TheHorsePortal.ca
17-Feb	HarnessLink.com	Going Under Cover - Blanketing decisions
17-Feb	Horse Sport Magazine	Responsible for a horse?
17-Feb	HarnessLink.com	Love Horses - Learn Welfare
17-Feb	QROOI	Fire Prevention and Emergency Rescue Training for the Horse Racing Industry
17-Feb	Horse-Canada.com	AD: (free) Top 10 Checklist Barn Fire Safety
17-Feb	Horse Sport Magazine	AD: TheHorsePortal.ca
17-Feb	Trot Magazine	AD: TheHorsePortal.ca
17-Feb	StandardbredCanada.ca	Do You Know the Code?
17-Feb	bulletin.ovc.uoguelph.ca	Do You Know the Code?
17-Feb	StandardbredCanada.ca	Going Under Cover - Blanketing decisions
17-Feb	Harnesshorse.us	Going Under Cover - Blanketing decisions
17-Feb	Kentucky Performance Products	Going Under Cover - Blanketing decisions
17-Feb	Hay-net.co.uk	Going Under Cover - Blanketing decisions
17-Feb	Wellington Advertiser	Going Under Cover - Blanketing decisions
17-Feb	Allabouthorses.com	Love Horses - Learn Welfare
17-Feb	Equimed.com	Love Horses - Learn Welfare
17-Feb	Harnesshorse.us	Love Horses - Learn Welfare
17-Feb	Nova Scotia Equestrian Federation	Love Horses - Learn Welfare
17-Mar	Horse-Canada.com	AD- Horse Portal
17-Mar	Standardbred Canada	AD- Top 10 Checklist Barn Fire Safety
17-Mar	OAHN.ca	Check out Equine Guelph's Research Update - Lots of great information for vets and horse owners
17-Mar	Standardbred Canada	AD - Horse Portal - Biosecurity
17-Mar	Standardbred Canada	AD - TLAER course for Racing Industry
17-Mar	The Rider	AD - TLAER course for Racing Industry
17-Mar	The Rider	AD - Horse Portal - Biosecurity
17-Mar	Horse-Canada.com	AD - TLAER course for Racing Industry

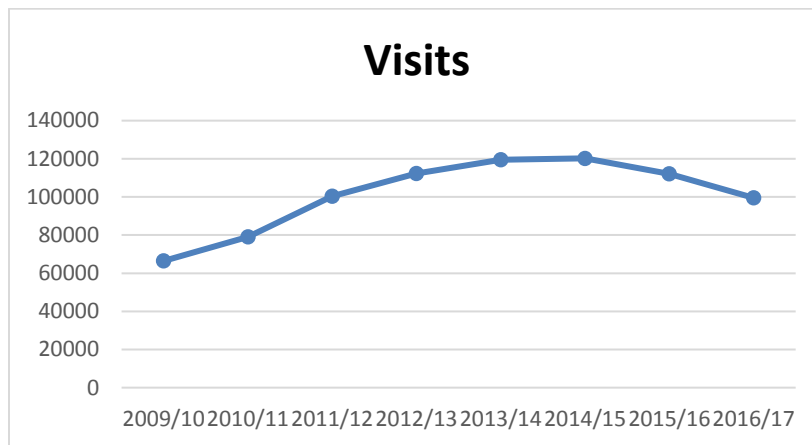
17-Mar	Horse-Canada.com	Fire Prevention and Emergency Rescue Training Clinics
17-Mar	Horse-Canada.com	Fire Safety Tips From Equine Guelph
17-Mar	HarnessLink.com	Inquiring Minds Want To Know About Biosecurity
17-Mar	uhcroundup.weebly.com	Love Horses - Learn Welfare
17-Mar	The Rider	Love Horses - Learn Welfare
17-Mar	The Rider	AD - TLAER course for Racing Industry
17-Mar	The Rider	TLAER Course for Racing Industry
17-Mar	OVC Bulletin	TLAER Course for Racing Industry
17-Mar	Ontarioracing.com	TLAER Course for Racing Industry
17-Mar	The Rider	Biosecurity - What Inquiring Minds Want to know
17-Mar	Nova Scotia Equestrian Federation	Biosecurity - What Inquiring Minds Want to know
17-Mar	CEREC	Biosecurity - What Inquiring Minds Want to know
17-Mar	The Rider	Diligence and details for fire safety
17-Mar	Equimed.com	Diligence and details for fire safety
17-Mar	Horsetalk.co.nz	Diligence and details for fire safety
17-Mar	The Rider	Ad - Equimania at Can-Am
17-Mar	Standardbred Canada	Equimania! Double Play
17-Mar	Equine Erin	Equimania! Double Play
17-Mar	The Rider	AD - Intercity Insurance Ad featuring Equine Guelph & Colic Resources
17-Apr	TLAER Ads:	Barn Mice, Equestrian Connections, Facebook & FB groups, Linked In, Twitter, OVC Equine Club
17-Apr	Horse-Canada.com	Spaces Still Available in Emergency Rescue Clinics
17-Apr	Ontario SPCA	Portal and TLAER
17-Apr	Standardbred Canada	Reduce your risk of spring colic
17-Apr	Ontarioracing.com	Reduce your risk of spring colic
17-Apr	prmusicmanagement.ca	Reduce your risk of spring colic
17-Apr	Horsetalk.co.nz	Reduce your risk of spring colic
17-Apr	PaulickReport.com	Reduce your risk of spring colic
17-Apr	NRCHHA.ca	Reduce your risk of spring colic
17-Apr	CTV News Barrie	Fire Crews Train to Rescue Large Animals During Emergencies



17-Apr	CTV Kitchener News	Fire Crews Train to Rescue Large Animals During Emergencies
17-Apr	Race Line	Equine Guelph's Barn Safety Checklist
17-Apr	Race Line	Equine Guelph's New Horse Portal
17-Apr	Race Line	Ontario's Horse Racing Industry: Who Does What? Equine Guelph (Tools and Education)

## Appendix 13: Web Site Report

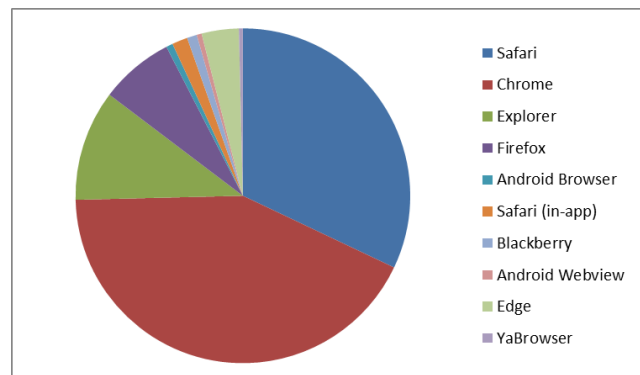
Visits	MAY 01, 2016-APRIL 30, 2017	99,476
New Sessions		49,253
New Users		50,497
Page Views		307,830
Avg. Session Duration		00:02:41



## TOP 10 BROWSERS – OPERATING SYSTEM

(sessions, plus % new sessions)

1. Chrome	42,067	48.78%
2. Safari	31,677	46.29%
3. Internet Explorer	10,571	52.58%
4. Firefox	7,053	53.78%
5. Edge	3,546	46.31%
6. Safari (in-app)	1,481	92.23%
7. Blackberry	944	31.67%
8. Android Browser	638	40.91%
9. Android Webview	474	84.60 %
10. YaBrowser	377	86.74%



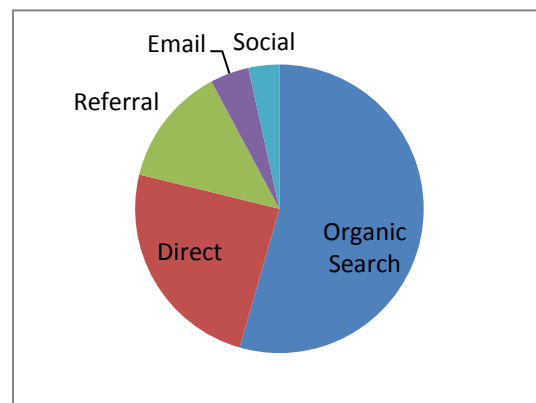
## TECHNOLOGY OVERVIEW

(sessions, plus % new sessions)

1.	Desktop	56,594	52.18%
2.	Mobile	32,612	46.96%
3.	Tablet	10,270	42.96%

## ACQUISITION CHANNELS

1.	Organic Search	54,152	45.60%
2.	Direct	24,242	53.45%
3.	Referral	13,304	58.13%
4.	Email	4,324	55.60%
5.	Social	3,440	73.78%
6.	(other)	71.43	



## TOP REFERRAL SOURCES

1.	equineguelph.ca	2,969	17.73%
2.	m.facebook.com	1,697	10.13%
3.	ovc.uoguelph.ca	1,111	6.64%
4.	facebook.com	1,067	6.37%
5.	standardbredcanada.ca	1,019	6.09%
6.	site-auditor online	781	4.66%
7.	hbpa.on.ca	443	2.65%
8.	aaep.org	401	2.39%
9.	equimania.ca	386	2.31%
10.	l.facebook.com	362	2.16%

## TRAFFIC SOURCES SOCIAL MEDIA

Social Network	Sessions	% Sessions
1. Facebook	3,202	93.08%
2. Twitter	121	3.52%
3. LinkedIn	35	1.02%
4. reddit	34	0.99%
5. Pinterest	33	0.96%
6. Stack Exchange	6	0.17%
7. Blogger	5	0.15%
8. Weebly	3	0.09%
9. Naver	1	0.03%

## CONTENT

### TOP 10 LANDING PAGES

(sessions, plus % new sessions)

1. /jobtrack/jobs.php	37,362	35.54%
2. /index.php	18,375	51.25%
3. /education/programs_list.php	3,533	74.55%
4. /jobtrack/index.php	3,232	40.47%
5. /education/index.php	1,484	50.54%
6. /Tools/biosecurity.php	1,423	68.45%
7. /Tools/fireprevention.php	1,417	63.16%
8. /education/indiv_courses.php	1,386	69.99%
9. /Tools/equiplanner.php	1,305	72.57%
10. /education/healthcare.php	1,023	34.70%

## Appendix 14: Sponsors

Equine Guelph would like to thank the following sponsors for their contributions and support of Equine Guelph's program.



- Website
- Senior Horse Challenge



- ThermoRegulator Tool



- EquiMania! Exhibit



- EquiMania! Youth Safety Initiative
- National Training Partner



- EquiMania! • First Aid Kit
- HEALTHflash
- Horse Health Check Poster



- Barn Fire Safety Tool



- Colic Risk Rater Tool
- Hoofprints Tribute Program
- Education Patron
- Risk Series Brochures



- EquiMania! Youth Safety Initiative



- HEALTHflash



- Welfare Initiative



- EquiMania! Youth Safety Initiative



- EquiMania! Racing Exhibit



- EquiMania! Exhibit



- EquiMania! Nutrition Display



- EquiMania! Youth Safety Initiative
- Research Radio



- EquiMania! Youth Industry Display



- EquiMania! Youth Safety Initiative
- HEALTHflash



- Equine Biosecurity Risk Calculator Tool



- EquiMania! Youth Safety Initiative

**Equine Guelph Financial Report 2016-2017**  
As at April 30th, 2017

	Holding Accounts					To Program Support	Programs						Total Equine Guelph	
	E. P. Taylor	HIP/QH	SRA	HBPA	General Research		Education	Communi-cations	Develop-ment	Research Support	Sponsorship	3 yr OMAF-TP		1 yr OMAF-TP
	710655	045878	046069	046071	046960	046073	046077	046079	046851	048865	048864	051180 <sup>4</sup>	053007	
<b>FUND BALANCE, Previous Year-end</b>	171,085	175,385	-	109,030	43,447	-	404,710	130,941	12,182	13,275	119,524	6,862	-	1,186,440
<b>REVENUE</b>														
Funds Received from Funding Agencies	91,425 <sup>1</sup>	-	-	75,000	-	-	-	-	-	-	-	-	-	166,425
HIP Funds	-	153,000 <sup>2</sup>	-	-	-	-	-	-	-	-	-	-	-	153,000
Quarter Horse Program	-	17,000 <sup>2</sup>	-	-	-	-	-	-	-	-	-	-	-	17,000
OMAF TP	-	-	-	-	-	-	-	-	-	-	-	-	160,000	160,000
Alumni House Donations (individuals)	-	-	-	-	3,336	-	12,559	15,357	-	-	-	-	-	31,252
Tuition & Workshops (S16,F16,W17)	-	-	-	-	-	-	91,802	-	-	-	-	-	-	91,802
Other University Contributions	-	-	-	-	-	-	-	-	-	-	-	-	-	-
External Contributions	-	-	-	-	-	-	230,400	-	-	-	60,995	-	-	291,395
<b>TOTAL REVENUE</b>	<b>91,425</b>	<b>170,000</b>	<b>-</b>	<b>75,000</b>	<b>3,336</b>	<b>-</b>	<b>334,762</b>	<b>15,357</b>	<b>-</b>	<b>-</b>	<b>60,995</b>	<b>-</b>	<b>160,000</b>	<b>910,875</b>
<b>INTERNAL TRANSFERS:</b>														
From Agency Fund to Overhead	-	(34,000)	-	(15,000)	-	49,000	-	-	-	-	-	-	-	-
From Agency Fund to Program	-	-	-	-	-	-	-	-	-	-	-	-	-	-
From Overhead to Program	-	-	-	-	-	(49,000)	-	32,830	-	16,170	-	-	-	-
Transfers b/w EG accounts	-	-	-	-	-	-	11,402	9,000	-	(14,000)	-	(1,911)	(10,000)	(5,508)
Transfer from Sponsorship	-	-	-	-	-	-	70,500	-	-	(65,500)	-	-	-	5,000
<b>TOTAL TRANSFERS</b>	<b>-</b>	<b>(34,000)</b>	<b>-</b>	<b>(15,000)</b>	<b>-</b>	<b>-</b>	<b>81,902</b>	<b>41,830</b>	<b>-</b>	<b>2,170</b>	<b>(65,500)</b>	<b>(1,911)</b>	<b>(10,000)</b>	<b>(508)</b>
<b>PROGRAM EXPENDITURES</b>														
Research Projects	(101,915)	(165,505)	-	(72,160)	-	-	-	-	-	-	-	-	-	(339,580)
Research Support	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Education	-	-	-	-	-	-	(469,824)	-	-	-	-	-	-	(469,824)
Communications	-	-	-	-	-	-	-	(82,966)	-	-	-	-	-	(82,966)
Development	-	-	-	-	-	-	-	-	(419)	-	-	-	-	(419)
Sponsorship	-	-	-	-	-	-	-	-	-	-	(9,509)	-	-	(9,509)
Welfare/Racing	-	-	-	-	-	-	-	-	-	-	-	(4,889)	(121,436)	(126,325)
<b>TOTAL PROGRAM EXPENDITURES</b>	<b>(101,915)</b>	<b>(165,505)</b>	<b>-</b>	<b>(72,160)</b>	<b>-</b>	<b>-</b>	<b>(469,824)</b>	<b>(82,966)</b>	<b>(419)</b>	<b>-</b>	<b>(9,509)</b>	<b>(4,889)</b>	<b>(121,436)</b>	<b>(1,028,622)</b>
<b>FUND BALANCE as at April 30, 2017</b>	<b>160,595</b>	<b>145,880</b>	<b>-</b>	<b>96,870</b>	<b>46,783<sup>3</sup></b>	<b>-</b>	<b>351,549</b>	<b>105,162</b>	<b>11,764</b>	<b>15,445</b>	<b>105,509</b>	<b>63</b>	<b>28,564</b>	<b>1,068,184</b>

1 - 2017-2018 E.P Taylor revenue. To be carried over to 17/18 fiscal year.

2- Rec'd first installment 2016-2017 HIP/QH funds (85%). Awaiting 15% holdback from 2015-2016.

3 - Allocated to J. Thomason research project

4 - New account number for 1 year TPA was opened in Q4. Expenses charged to 3 year TPA grant number were reallocated to 053007