

Equine Guelph

Update

Spring 2014



Equine Guelph Declares 2014 the Year of 'Full-Circle-Responsibility' in Equine Welfare



Equine Guelph has declared 2014 the year of 'Full-Circle-Responsibility' in equine welfare. From the moment you meet the horse and decide ownership is for you, a lifetime plan should be fully charted as the animal's destiny lies completely in your hands. Equine Guelph has always had a mandate to 'Help Horses for Life'. Economic issues and changes in the racing sector have flagged the importance of welfare for the whole industry. Ever since humans domesticated horses, we have been responsible for their care and education is key.

Equine Guelph director, Gayle Ecker, says, "We look forward to sharing essential horse owner information in 2014, the year of 'Full-Circle-Responsibility' with the goal of reducing disturbing incidences of unwanted horses through education."

Members of Equine Guelph's e-database will receive special feature articles, information sheets and video links discussing life cycle planning from the joyous initial purchase to the more difficult and often unforeseen decisions every horse owner must plan for.

Other monthly topics will include: the cost of ownership, emergency preparedness, transport safety, use of body condition scoring, fire prevention, reducing hazards on your property, biosecurity, end of life decisions, second careers for horses and a feature on rescue facilities.

We will be sending you interactive self-assessment checklists from the new Equine Code of Practice.

Be sure to get your Horse Health Check posters, available through Greenhawk, later this year. Resources including workshops, online programs and welfare training kits are also under development for the OSPCA investigators, province-wide consultants, horse rescue facilities and horse caregivers.

Story By - Jackie Bellamy-Zions

Celebrate the year of the horse by signing up at EquineGuelph.ca for a free e-newsletter which will deliver monthly welfare tips throughout 2014 and announce tools to aid all horse owners in carrying out their 'Full-Circle-Responsibility' to our beloved horses.



Photo: Days End Farm Horse Rescue

Tinkerbell arrives as a Rescue



Photo: Days End Farm Horse Rescue

Tinkerbell thrives in her new career at her new home

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of GUELPH

CHANGING LIVES
IMPROVING LIFE

Genetic Discovery Exciting for Heaves Research

Would it not be amazing if one could tell which horses are likely to be predisposed to respiratory ailments? While we are not at this point, the recent discovery of a genetic split between Equids is giving researchers hope for tracing how Clara Cell Secretory Protein (CCSP, aka secretoglobin 1A1) reacts with neutrophils (the main inflammatory cell within the lung). This CCSP in the lungs may hold the key. The gene for CCSP comes in several versions which were formed 100,000 years ago. The discovery shows horses have three copies of this gene, donkeys have two and zebras possess only one. The protein derived from the different genes interacts differently with neutrophils – the cells that battle inflammation in horses with heaves.

Horses produce two CCSP proteins from their three genes. Ontario Veterinary College researcher, Dr. Dorothee Bienzle explains, “Every cell in the body has the same genes but they are expressed differently.” CCSP is expressed in the lung and the uterus almost exclusively. Two questions under investigation are: What makes the gene produce one CCSP protein or the other in the lung and What stimulates this anti-inflammatory protein to be produced?

Bienzle’s OVC graduate student, Olivier Côté has cloned the two genes and produced recombinant proteins to examine what the protein does to neutrophil function. Tests have been conducted in the presence and the absence of the two CCSP proteins including:

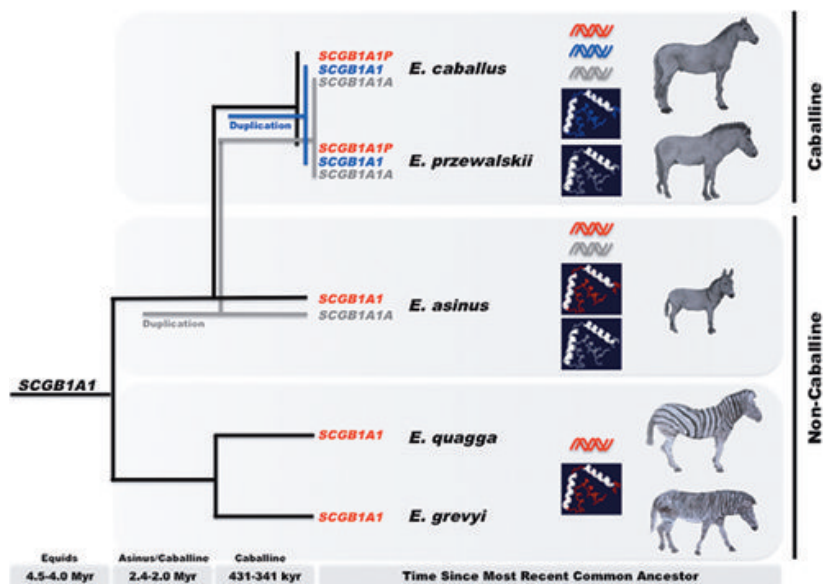
1) phagocytosis – looking at how good neutrophils are at gobbling up bacteria, mold and plant particles, 2) how good they are at killing those invaders and 3) how well neutrophils migrate across epithelial membranes.

The relationship between CCSP proteins and neutrophils, and how they influence the environment around them has also been under investigation. They have discovered that only one of the proteins down-regulates neutrophil function.

The current belief is that the lungs of a horse suffering from heaves become exhausted over years of exposure to bacteria, dust and molds and no longer produce enough CCSP, particularly the type that down-regulates neutrophil function. At this point, damage becomes irreversible. Collaboration has begun with a researcher in the U.S. who specializes in making recombinant proteins for humans and there is great interest in pursuing this technology for horses.

Funding to date for this research has been provided by Equine Guelph, Canada Research Chairs program (CRC) and the Ontario Ministry of Agriculture and Food. An Ontario Veterinary College fellowship has been awarded for graduate student Olivier Côté. Equine Guelph thanks all individuals who have donated to research funding – your contributions help support equine welfare through funding research projects.

Story By - Jackie Bellamy-Zions



Przewalski's and domestic horses separated from donkeys and zebras approximately 2 to 2.4 million years ago. This emergence of distinct equid species is paralleled by formation of 3 copies of CCSP genes in horses, 2 gene copies in donkeys and 1 gene copy in zebras.

Graphic credit: Reprinted from Molecular Phylogenetics and Evolution, December 2013, Olivier Côté, Laurent Viel, Dorothee Bienzle, Phylogenetic relationships among Perissodactyla: Secretoglobin 1A1 gene duplication and triplication in the Equidae family, Pages 430-436, Copyright (2014), with permission from Elsevier

Respiratory Health Tips

1 The practice of feeding round bales is discouraged as inhalation of dust and molds can stress a horse's respiratory system often causing irreversible damage.

2 Give horses plenty of time to heal after colds so the lungs can completely recover. It is believed repeat exposure to colds, particularly in foals, can lead to heaves later in life. Rest your sick horse in a non-dusty environment until all nasal discharge, coughing and fever has stopped and then gradually return to exercise.

3 Coughing at the start of exercise should be investigated by a veterinarian as this could be an indication of chronic irritation. The horse could be reacting to dust or mold content in their hay.

EquiMania! – Continues to Grow



It seems Equine Guelph's interactive youth education attraction never grows dull. With all the old favorites including "Shorty Legs" the fiberglass horse everyone wants to ride and new additions such as the Equine Welfare display, there is something for every horse lover no matter what age!

Thanks to generous continued support from Shur-Gain, Kubota Canada, Ontario Equestrian Federation, SSG Gloves, System Fencing, Workplace Safety and Prevention

Bring EquiMania! to your Event – Contact horses@uoguelph.ca

Services and Zoetis, Equine Guelph is looking forward to another busy year of touring with EquiMania!

The next stop for EquiMania! will be at Can-Am Equine All Breeds Emporium, March 28 - 30 at the Orangeville Fairgrounds.

Are You Ready for the Next Emergency?

"Plan and prepare" is the mantra that Ontario Veterinary College graduate, Cathy Furness, would like every horse caretaker and first responder to know. A message Furness has taken to heart throughout her own journey of becoming an advocate for equine welfare — first by becoming a veterinarian and then by furthering her knowledge in emergency preparedness. During her residency at the OVC, Cathy studied recurrent airway obstruction (heaves) with Dr. Laurent Viel. Dr. David Kelton of the OVC was Cathy's advisor for research pertaining to emergency preparedness and planning for livestock. She credits both mentors for being hugely supportive encouraging her interests in equine welfare which led to a trip to North Carolina, U.S. in 2010 for an emergency preparedness course specializing in large animal rescue.

"The Technical Large Animal Emergency Rescue (TLAER) course really opened my eyes to the need for large animal preparedness," exclaims Furness. "The need to have a plan is of utmost importance. Emotions tend to play a role in how we deal with horses and can lead to impulsive decisions which end up jeopardizing the safety of both the horse and the handler in an emergency situation."

In her new position as Lead Veterinarian for Preparedness and Planning at the Ontario Ministry of Agriculture and Food, Furness works with colleagues at the Animal Health and Welfare Branch to help people be prepared in case of an emergency. "People have great intentions but do not always think of their own safety first," says Furness. Understanding horse behaviour, shock and physiology is crucial to the safety of all involved in a rescue situation. This education can be the difference between saving a horse or adding another



Safety of horse and handler needs to be considered in rescue situations

casualty. Furness has diverse roles at OMAF including monitoring disease and supporting practitioners, industries and the community as

to what to do in event of a disease outbreak. Helping people plan and prepare for livestock emergencies is another role which Furness sees as a topic lacking in resources. Furness looks forward to making presentations to fire departments in the future to aid in the education of first responders.

Furness also sits on the planning committee for an upcoming Equine Guelph program which will bring internationally renowned TLAER course conductor Dr. Rebecca Gimenez to Canada for two hands-on workshops. The first will cover emergency preparedness followed by an intensive large animal rescue component. Furness can attest to usefulness of the practical hands-on knowledge she gained while training with Dr. Gimenez. "She is just phenomenal! I don't think I have ever experienced such an enthusiastic and knowledgeable instructor," states Furness. Stay tuned to EquineGuelph.ca for more details on this workshop. Please contact Susan Raymond at sraymon@uoguelph.ca

Story By - Jackie Bellamy-Zions

You Can Help Horses for Life

Your donations make a difference in the lives of horses. Contributions to Equine Guelph are directed towards research into health issues and education/training programs which support equine welfare.

We value your support.

For donations by phone or mail, please contact:

1-888-266-3108.

To donate online please visit: www.EquineGuelph.ca and click on "Donations".

Donations to Equine Guelph can also be made by credit card (Visa or Mastercard) or by cheque. Please make cheques payable to University of Guelph/Equine Guelph. An official tax receipt will be sent for donations over \$10. Our charitable registration number is 10816 1829 RR 0001.

Please return to:

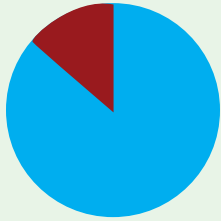
Equine Guelph, c/o Alumni House, University of Guelph, Guelph, ON, N1G 2W1



UPDATE ON EQUINE GUELPH'S WORK

HEALTHflash – Your Seasonal Healthcare Reminder

Equine Guelph would like to thank everyone who provided us with feedback on HEALTHflash. This input will help shape the content of upcoming seasonal issues.



HEALTHflash survey participants told us:

90% of participants answered they vaccinate for tetanus

84% of respondents vaccinate for West Nile

79% for rabies

77% for flu

73% for WEE/EEE

Equine Guelph offers a number of online healthcare tools including the Vaccination Equi-Planner which discusses core vaccines and risk factors. This interactive tool also generates guidelines for a personalized immunization schedule for your horse. Discuss individual needs with your veterinarian who will be well informed of risk factors in your geographic location.

Equine Guelph looks forward to bringing horse owners more timely information in 2014 with seasonal health reminders and special alerts in case of disease outbreaks. Sign up for HEALTHflash at EquineGuelph.ca

Equine Guelph thanks our HEALTHflash partners

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GREENHAWK
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Learn Horsemanship through Understanding Behaviour

2-week online short-course for anyone handling horses

- March 10 – 23, 2014
- \$75 + tax
- Then HOST YOUR OWN CLINIC (for Coaches and Industry Professionals)

Register at: EquineGuelph.ca

sponsored by:



EVENTS

Mark your calendar!

March 10 - 23
Behaviour & Safety eWorkshop

March 28 – 30
EquiMania! at Can-Am Equine All Breeds Emporium

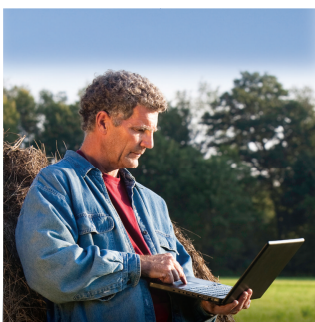
April 19 - 20
Equine Anatomy Wet labs

May 12 – August 3
Equine Guelph's Online Courses (Summer Offerings)

Anyone wishing to excerpt Equine Guelph should contact:
Jackie Bellamy-Zions, ext 54756
jbellamy@uoguelph.ca

How to Collect Manure for a Fecal Egg Count

With all the concerns over possible growing resistance to parasite products, it makes sense to check your horses' fecal egg count before implementing a parasite control program. Collecting a manure sample is easy. Equine Guelph thanks Vétoquinol for sponsoring this informative video: <http://equineguelph.ca/videos.php>



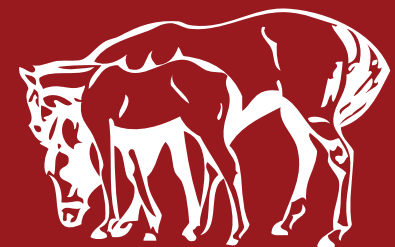
educating horsepeople



funding industry research



promoting health & performance



EQUINE GUELPH
helping horses for life™

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