

## Program at a glance

	Sunday 7/31	Monday 8/1	Tuesday 8/2	Wednesday 8/3	Thursday 8/4
<b>Morning</b>	Council meeting	Opening Ceremony	Parallel Session	Plenary 3	Plenary 5
	Council meeting	Plenary 1	Parallel Session	Parallel Session	Parallel Session
	Council meeting	Parallel Session	Wood-Gush Memorial Lecture	Parallel Session	Parallel Session
<b>Lunch</b>					
<b>Afternoon</b>	Registration opens	Plenary 2	Excursions	Plenary 4	Plenary 6
		Parallel Session	Excursions	Parallel Session	Parallel Session
		Parallel Session	Excursions	Annual General Meeting	Parallel Session Closing ceremony
<b>Evening</b>	Welcome Reception at the Eiteljorg Museum		Excursions	Banquet at the Hyatt Regency	Farewell Party at the Baseball Game

## Theater Presentations – Titles and Presenting Author

Monday 1 <sup>st</sup> August		
8.00-9.30	Registration Open	
9.00-9.30	Opening Ceremony	
9.30-10.00	<p align="center"><b>Plenary 1 – Pain, Distress &amp; Humane End-Points</b></p> <p align="center">Sex differences in lamb pain sensitivity develop after birth</p> <p align="center"><b><i>Ngaio Beausoleil</i></b></p>	
10.00-10.45	Coffee Break & Posters (odd numbers)	
10.45-12.00	Parallel Sessions	
	<b>Session 1: Pain, Distress &amp; Humane End-Points 1</b>	<b>Session 2: Companion Animal Behavior &amp; Welfare</b>
10.45	Effects of age on piglet distress associated with euthanasia by carbon dioxide or by a carbon dioxide:argon mixture <b><i>Larry Sadler</i></b>	To wee or not to wee: hospitalised female canines ( <i>Canis familiaris</i> ) preferred Astroturf to concrete in a two-way simultaneous presentation choice test <b><i>Louise Buckley</i></b>
11.00	I'm not going there! using conditioned place preference to assess the aversiveness of restraint and blood sampling in piglets <b><i>Puja Wahi</i></b>	Do you think I ate it? Behavioral assessment and owner perceptions of "guilty" behavior in dogs <b><i>Julie Hecht</i></b>
11.15	Non-steroidal anti-inflammatory drugs to mitigate pain in lame sows <b><i>Kathleen Tapper</i></b>	Assessing quality of life in kennelled dogs <b><i>Jenna Kiddie</i></b>
11.30	Validation of assessment of nociceptive responses in pigs' skin <b><i>Pierpaolo Di Giminiani</i></b>	The development of a behavior assessment to identify 'amicable' dogs <b><i>Tammie King</i></b>
11.45	2011 Update of the AVMA Guidelines on Euthanasia <b><i>Gail Golab</i></b>	Unsocialized or simply scared? The validity of methods commonly used to determine socialization status of shelter cats at intake <b><i>Katherine Miller</i></b>
12.00-1.30	Lunch	
1.30-2.00	<p align="center"><b>Plenary 2 – Maternal Behavior &amp; Effects</b></p> <p align="center">Echoes from the past: does maternal heat stress adjust offspring to high temperature? An experiment in quails</p> <p align="center"><b><i>Rie Henriksen</i></b></p>	
2.00-3.00	Parallel Sessions	
	<b>Session 1 (contd): Pain, Distress &amp; Humane End-Points 2</b>	<b>Session 3: Reproductive &amp; Maternal Behavior</b>
2.00	Quantitative sensory testing for assessing wound pain in livestock <b><i>Sabrina Lomax</i></b>	Parturition progress and behaviours in dairy cows with calving difficulty <b><i>Alice Barrier</i></b>
2.15	Exposure to negative events induces chronic stress and increases emotional reactivity in sheep <b><i>Alexandra Destrez</i></b>	Vocal communication in cattle ( <i>Bos taurus</i> ): mother-offspring recognition <b><i>Monica Padilla-De La Torre</i></b>
2.30	Castration as a model for studying pain-triggered behavioral responses in growing calves <b><i>Lily Edwards</i></b>	Reproductive and physiologic effects of bedding substrate on ICR and C57BL/6J mice <b><i>Swan, Melissa</i></b>
2.45	Castration as a model for studying pain-triggered cardiac response in growing calves <b><i>Luciana Bergamasco</i></b>	Maternal care and selection for low mortality affect immune competence of laying hens <b><i>Bas Rodenburg</i></b>
3.00-	Coffee Break & Posters (even numbers)	

3.45	Parallel Sessions	
3.45-5.00	Parallel Sessions	
	<b>Session 1 (contd): Pain, Distress &amp; Humane End-Points 3</b>	<b>Session 4: Communication &amp; Cognition</b>
3.45	Effect of time, parity and meloxicam (Metacam®) treatment on general activity in dairy cattle during the puerperal period <i>Eva Mainau</i>	Are auditory cues useful when training American mink (Neovison vison)? <i>Pernille Svendsen</i>
4.00	The effect of a topical anaesthetic wound dressing on the behavioural responses of calves to dehorning <i>Crystal Espinoza</i>	A development of a test to assess cognitive bias in pigs <i>Antonio Velarde</i>
4.15	The relationship between fearfulness at a young age and stress responses in the later life of laying hens <i>Elske De Haas</i>	Learning how to eat like a pig: effectiveness of mechanisms for vertical social learning in piglets <i>Marije Oostindjer</i>
4.30	A case study to investigate how behaviour in donkeys changes through progression of disease <i>Florence Elphick</i>	Affective qualities of the bark vocalizations of domestic juvenile pigs <i>Winnie Chan</i>
4.45	A novel approach of pain recognition and assessment in donkeys – Initial results <i>Neville Gregory</i>	What do ears positions tell us about horse welfare? <i>Fureix, Carole</i>

<b>Tuesday 2<sup>nd</sup> August</b>		
8.30-10.15	Parallel Sessions	
	<b>Session 5: Engineering environments &amp; measurement technologies for science and welfare</b>	<b>Session 6: Qualitative behavioral assessment</b>
8.30	Environment and the development of feather pecking in a commercial turkey facility <i>Stephanie Torrey</i>	Inter-observer reliability of Qualitative Behaviour Assessment on farm level in farmed foxes <i>Ahola, Leena</i>
8.45	The effect of cage design on mortality of white leghorn hens: an epidemiological study <i>Joe Garner</i>	Qualitative Behavioural Assessment can detect artificial manipulation of emotional state in growing pigs <i>Kenny Rutherford</i>
9.00	Remedies for the high incidence of broken eggs in furnished cages: effectiveness of increasing nest attractiveness and lowering perch height <i>Frank Tuytens</i>	The welfare of pigs in five different production systems in France and Spain: assessment of behavior <i>Deborah Temple</i>
9.15	Non-cage laying hen resource use is not reduced by wearing a wireless sensor after habituation <i>Courtney Daigle</i>	The inter-observer reliability of qualitative behavioural assessments of sheep <i>Clare Phythian</i>
		<b>Session 7: Poultry Behavior &amp; Welfare 1</b>
9.30	Effect of exit alley blocking and back-up incidences on the accessibility of an automatic milking system <i>Jackie Jacobs</i>	Gregarious nesting as a response to risk of nest predation in laying hens <i>Anja Riber</i>
9.45	Change-of-state dataloggers were a valid method for recording the feeding behavior of dairy cows using a Calan Broadbent Feeding System <i>Peter Krawczel</i>	Astroturf® as a dustbathing substrate for laying hens <i>Gina Alvino</i>
10.00	An acclimation and handling protocol for implementation of GPS collars for monitoring beef cattle grazing behavior <i>Angela Green</i>	Feather pecking and serotonin: "the chicken or the egg?" <i>Marjolein Kops</i>

10.15-11.00	Coffee Break & Posters (odd numbers)	
11.00-12.00	<p align="center"><b>Wood-Gush Memorial Lecture</b></p> <p align="center">Social Behavior: An Emergent and Adaptive Property of the Mammalian Autonomic Nervous System</p> <p align="center"><b>Stephen Porges</b></p>	
12.00-6.00	Lunch & Excursions	

<b>Wednesday 3<sup>rd</sup> August</b>		
9.00-9.30	<p align="center"><b>Plenary 3 – Laboratory Animal Behavior, Welfare &amp; Enrichment</b></p> <p align="center">Modifications induced by an enriched environment on reproductive physiology and postnatal development of Albino Swiss mice</p> <p align="center"><b>Marina Ponzio</b></p>	
9.30-10.15	Parallel Sessions	
	<b>Session 8: Laboratory Animal Behavior, Welfare &amp; Enrichment 1</b>	<b>Session 9: Feeding Behavior &amp; Welfare 1</b>
9.30	Effects of predictability on feeding and aversive events in captive rhesus macaques (Macaca mulatta) <b>Daniel Gottlieb</b>	Tail biting alters feeding behavior of victim pigs <b>Elina Viitasaari</b>
9.45	Exercise pens as an environmental enrichment for laboratory rabbits <b>Lena Lidfors</b>	The effects of diet ingredients on gastric ulceration and stereotypies in gestating sows <b>Stephanie Wisdom</b>
10.00	Does the presence of a human affect the preference of enrichment items in young isolated pigs? <b>Shelly Deboer</b>	Energy balance and feeding motivation of sheep in a demand test <b>Amanda Doughty</b>
10.15-11.00	Coffee Break & Posters (even numbers)	
11.00-12.00	Parallel Sessions	
	<b>Session 8 (contd): Laboratory Animal Behavior, Welfare &amp; Enrichment 2</b>	<b>Session 9 (contd): Feeding Behavior &amp; Welfare 2</b>
11.00	Playful handling before an intra-peritoneal injection induces a positive affective state in laboratory rats <b>Sylvie Cloutier</b>	Effect of milk feeding level on the development of feeding behaviour patterns in dairy calves <b>Emily Miller-Cushon</b>
11.15	The naked truth: breeding performance in outbred and inbred strains of nude mice with and without nesting material <b>Winnicker, Christina</b>	Behavioural patterns of dairy heifers fed different diets <b>Angela Greter</b>
11.30	Unpredictable repeated negative stimulations modulates effects of environmental enrichment in birds <b>Laurence, Agathe</b>	The effect of lameness on feeding behavior of dairy cows <b>Petro Tamminen</b>
11.45	Effects of conditioning on blood draw in cats <b>Jessica Lockhart</b>	How do different amounts of solid feed in the diet affect time spent performing abnormal oral behaviours in veal calves? <b>Laura Webb</b>
12.00-1.30	lunch	
	<b>Plenary 4 – Social Behavior in Swine</b>	

1.30-2.00	Oxytocin reduces separation distress in piglets when given intranasally <b>Jean-Loup Rault</b>	
2.00-3.00	Parallel Sessions	
	<b>Session 8 (contd): Laboratory Animal Behavior, Welfare &amp; Enrichment 3</b>	<b>Session 10: Sow Housing</b>
2.00	Is hair and feather pulling a disease of oxidative stress? <b>Giovana Vieira</b>	Policy changes to enable sows to express behavioural needs in intensive housing conditions <b>Cheryl O'Connor</b>
2.15	Implications for animal welfare: Habituation profiles of 129S2, 129P2 and 129X1 mouse strains <b>Hetty Boleij</b>	Determining the floor space requirement for group housed sows <b>Fiona Rioja-Lang</b>
2.30	Identification methods in newborn C57BL/6 mice: A developmental and behavioural evaluation <b>Magda Joao Castelhana-Carlos</b>	Alleyway width in a free-access stall system influences gestating sow behavior and welfare <b>Laurie Mack</b>
2.45	Behavioral and physiological thermoregulation in mice with nesting material <b>Brianna Gaskill</b>	Action-reaction: using Markov analysis to elucidate social behavior when unacquainted sows are mixed <b>Jeremy Marchant-Forde</b>
3.00-3.30	Coffee Break & Posters (all)	
3.30-5.30	ISAE Annual General Meeting	
7.00-11.00	Congress Banquet at Hyatt Regency Hotel	

<b>Thursday 4<sup>th</sup> August</b>		
9.00-9.30	Plenary 5 – Zoo Animal Behavior, Welfare & Enrichment Behavior in natural and captive environments compared to assess and enhance welfare of zoo animals <b>Paul Koene</b>	
9.30-10.15	Parallel Sessions	
	<b>Session 11: Zoo Animal Behavior, Welfare &amp; Enrichment 1</b>	<b>Session 12: Dairy Behavior &amp; Welfare 1</b>
9.30	Effects of enclosure size and complexity on captive African elephant activity patterns <b>Nancy Scott</b>	Separating the stressors: a pilot study investigating the effect of pre-mixing calves on the behavior and performance of dairy calves in a novel environment <b>Stanton, Amy</b>
9.45	Gender differences in stereotypical behavior can be predicted by gender differences in activity in okapi <b>Deborah Fripp</b>	Dairy welfare in three housing systems in the upper Midwest <b>Marcia Endres</b>
10.00	Personality and stereotypy components in okapi <b>Jason Watters</b>	The effect of distance to pasture on dairy cow preference to be indoors or at pasture <b>Gemma Charlton</b>
10.15-11.00	Coffee Break & Posters (all)	
11.00-12.00	Parallel Sessions	
	<b>Session 11 (contd): Zoo Animal Behavior, Welfare &amp; Enrichment 2</b>	<b>Session 13: Human-Animal Interactions</b>

11.00	Individuals interacting with environmental enrichment: a theoretical approach <b>Becca Franks</b>	Owner visitation: Clinical effects on dogs hospitalized in an intensive care unit <b>Rebecca Johnson</b>
11.15	Do impoverished environments induce boredom or apathy in mink? <b>Rebecca Meagher</b>	Robot milking does not seem to affect whether or not cows feel secure among humans <b>Sine Norlander Andreassen</b>
11.30	Effects of shade on feeding behaviour and feed intake of female goat kids <b>Lorenzo Alvarez</b>	Relationship between amount of human contact and fear of humans in turkeys <b>Naomi Botheras</b>
11.45	Zoo-housed chimpanzees and gorillas are highly selective in their space use: Implications for enclosure design, captive management and animal welfare. <b>Stephen Ross</b>	Characteristics of stockperson interactions with pigs in swine finishing barns <b>Sara Crawford</b>
12.00-1.30	lunch	
1.30-2.00	<b>Plenary 6 – Engineering environments &amp; measurement technologies for science and welfare</b>  Perceptual threshold for cold stress in dairy cows  <b>Lindsay Matthews</b>	
2.00-3.00	Parallel Sessions	
	<b>Session 11 (contd): Zoo Animal Behavior, Welfare &amp; Enrichment 3</b>	<b>Session 14: Free Papers</b>
2.00	The effect of diet on undesirable behaviors in zoo gorillas <b>Elena Hoellein Less</b>	Animal abuse and cruelty: An evolutionary perspective <b>Emily Patterson-Kane</b>
2.15	How animals win the genetic lottery: biasing birth sex ratio results in more grandchildren <b>Collette Thogerson</b>	Behavioural and physiological methods to evaluate fatigue in sheep following treadmill exercise <b>Michael Cockram</b>
2.30	Reliability and validity of a subjective measure to record changes in animal behaviour over time <b>Joanna Bishop</b>	Do differences in the motivation for and utilisation of environmental enrichment determine how effective it is at eliminating stereotypic behaviour in American mink? <b>Jamie Dallaire</b>
2.45	The positive reinforcement training effect: reduction of an animal's latency to respond to keepers' cues <b>Samantha Ward</b>	The effect of pasture availability on the preference of cattle for feedlot or pasture environments <b>Caroline Lee</b>
3.00-3.45	Coffee Break & Posters (all)	
3.45-4.30	Parallel Sessions	
	<b>Session 15: Poultry Behavior &amp; Welfare 2</b>	<b>Session 16: Dairy Behavior &amp; Welfare 2</b>
3.45	Mobile laying hens <b>Gebhardt-Henrich, Sabine</b>	Physiological and behavioral response of crossbred zebu dairy cows submitted to different shade availability on tropical pasture <b>Carlos Machado Filho</b>
4.00	Open water provision for pekin ducks to increase natural behaviour requires an integrated approach <b>Marko Ruis</b>	Changes in dairy cattle behaviour as a result of therapeutic hoof block application <b>Janet Higginson</b>
4.15	Does water resource type affect the behaviour of pekin ducks (Anas platyrhynchos)? <b>Donald Broom</b>	Effect of different environmental conditions in loose housing system on claw health in Finnish dairy cattle <b>Johanna Haggman</b>
4.30-5.00	Closing of Conference	
6.00-10.30	Farewell Party at Victory Field, Indianapolis	

## Poster Presentations – Titles and Presenting Author

1. Using behavior and physiology to assess the welfare of a rat model of multiple sclerosis  
**Hickman, Debra**
2. Handling of painful procedures in dairy calf management in Santa Catarina state, Brazil  
**Cardoso Costa, João**
3. Strain variations in behavioral traits under heat stress in laying hens  
**Cheng, Heng-wei**
4. Daily heart rate patterns of dairy cows in intensive farming conditions  
**Speroni, Marisanna**
5. Euthanasia practice in Canadian animal shelters  
**Caffrey, Niamh**
6. Shelter dog behavior improvement: Dog walking as enrichment  
**McKenney, Charlotte A**
7. A new behavioural test for kittens before adoption  
**Onodera, Nodoka**
8. Relaxing effect of four types of aromatic odors in dogs  
**Kuwahara, Yukari**
9. The effects of space allowance and exercise for greyhounds on welfare  
**Jongman, Ellen**
10. Behavioral assessment in dogs during animal-assisted interventions (MTI)  
**Glenk, Lisa Maria**
11. Behavioral and physiological evaluation of welfare in shelter dogs in two different forms of confinement  
**Dalla Villa, Paolo**
12. Reactions of mother-bonded vs. artificial rearing in dairy calves to isolation and confrontation with an unfamiliar conspecific in a new environment  
**Wagner, Kathrin**
13. Sleep in dairy cows recorded with a non-invasive EEG technique  
**Ternman, Emma**
14. Effects of sloped standing surfaces on cattle behavior and muscle physiology  
**Rajapaksha, Eranda**
15. Goats might experience motion sickness during road transportation  
**Aoyama, Masato**
16. The reliability of rumination data recorded by a commercial rumination monitor  
**Rutter, Mark**
17. Sampling frequency and duration for behavioural analysis and effectiveness of electronic tracking  
**Sales, Tatiana**
18. Nesting behaviour of laying hens housed in enriched environment  
**Pereira, Danilo Florentino**
19. Effect of cage design on consistency of orientation and location during oviposition of laying hens  
**Engel, Joanna**
20. The effect of ramp slope on heart rate, handling and behaviour of market pigs at unloading  
**Goumon, Sébastien**

21. The comparison of two rating systems for Qualitative Behaviour Assessment in two situations  
**Winckler, Christoph**
22. A comparison of three cattle temperament assessment methods  
**Sant'anna, Aline**
23. When a duck leads, do others follow?  
**Liste, Guiomar**
24. Different behavioural reactions to open field in growing broiler and layer chickens  
**Baranyiová, Eva**
25. The Effects of Using Different Levels and Sources of Zinc with Wire vs. Solid Sided Cages on Laying Hen Feather Quality  
**Purdum, Sheila**
26. Stress following caging of shelter cats (*Felis silvestrus catus*)  
**Ellis, Jacklyn**
27. Bathing behavior of captive Orange-Winged Amazon parrots (*Amazona amazonica*)  
**Murphy, Shannon**
28. Decline in aggression in cotton rats through the use of enrichment  
**Neubauer, Teresa**
29. Effects of stressors on the behavior and physiology of domestic cats  
**Stella, Judi**
30. Dairy cattle preferences for feed bunks with or without sprinklers in summer  
**Chen, Jennifer**
31. Effects of alternative housing and feeding systems on the behavior and performance of dairy heifer calves  
**Pempek, J.A.**
32. Evaluation of the relationship between temperament, time spent at the feed trough and weight gain of finishing weight feedlot cattle  
**Soares, Désirée Ribeiro**
33. Effects of providing a roof and locating food in an outside yard on behaviour of sheep kept in winter conditions  
**Jørgensen, Grete**
34. Evaluation of conventional and large group auto-sort systems for grow/finish pigs  
**Brown, Jennifer,**
35. Effects of ractopamine on stress-related hormone levels of purebred Berkshire swine  
**Betts, Katherine**
36. Use of flavour association and preference tests in pigs to assess the palatability of pea diets  
**Rajendram, Janardhanan**
37. The influence of Acid-Buf™ mineral supplement on behaviour and salivary cortisol concentrations of uncastrated male and female growing pigs  
**Boyle, Laura**
38. Conditioned place preference: a tool to determine hungry broiler diet preferences  
**Sandilands, Vicky**
39. Feeding motivation and metabolites in pregnant ewes with different body condition scores  
**Verbeek, Else**
40. The relationship between aggression, feeding times and injuries in pregnant group-housed sows  
**Verdon, Megan**



41. Changes in aggression over time in pregnant sows post-mixing  
**Rice, Maxine**
42. Feeding enrichment for Moloch Gibbons, *Hylobates moloch*  
**Wells, Deborah**
43. The effect of visitors on the behaviour of zoo-housed chimpanzees and gorillas  
**Cooper, Tara**
44. Olfactory enrichment in the gorilla  
**Hepper, Peter**
45. Exotic animal seasonal acclimatization determined by non-invasive measurements of coat insulation  
**Langman, Vaughan**
46. Effect of social rank and lactation number on milk parameters in a grazing dairy herd  
**Tresoldi, Grazyna**
47. Does walking through water stimulate cows to eliminate?  
**Villettaz Robichaud, Marianne**
48. Factors predicting horse welfare outcomes from a recreational horse owner's performance of key horse husbandry practices  
**Hemsworth, Lauren**
49. Moderate exercise affects finishing cattle behavior and cortisol response to handling  
**Glynn, Hayley**
50. Humans' perception of dogs in a research setting: Is there a difference between real dogs and virtual dogs?  
**Stetina, Birgit**
51. Finding information on animal behavior and welfare: best practices for starting the literature review process  
**Adams, Kristina,**
52. An assessment of the general activity of horses kept in large groups in a feedlot environment  
**Robertshaw, Marissa**
53. The Animal Welfare Judging & Assessment Competition: a review of the 1st 10 years  
**Heleski, Camie**
54. Differences in the behavior of the progeny of different sire lines of Japanese Black cattle  
**Uetake, Katsuji**
55. Difference in pawedness between male and female blue foxes (*Vulpes lagopus*)  
**Mononen, Jaakko**
56. Effect of an absence of wires from electric fences on movement of goats in the early stage of avoidance  
**Kakihara, Hidetoshi**
57. Beef cattle preferences for sprinklers  
**Tucker, Cassandra**
58. Correlations between fearfulness in a temperament test and activity levels in the home pen in cross bred beef steers  
**Mackay, Jill**
59. Differences behavioural in Nelore cows before and after use of intravaginal device of progesterone  
**Rueda, Paola Moretti**