

# Nutrition Advisory Group Eleventh Conference Schedule

## 26 – 30 September 2015

### Red Lion Hotel on the River, Portland, Oregon

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#### Saturday, 26 September 2015

4:30 - 5:30 PM    Registration    Lobby

6:00 PM            Steering Committee Meeting

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#### Sunday, 27 September 2015

8:00-9:00 AM    Registration    Lobby

9 AM - 4:30 PM    **Workshop: It's not about the blueberries: behavior-centered food enrichment**    Oregon Zoo  
*Bus departs hotel at 9 am*  
*Returns by 4:30 pm*  
*INVITED SPEAKER: Jessica Sheftel*  
*Presenters: Matt Brooks, Katie Kerr, Jennifer Parsons*

6:30 PM            **Icebreaker with AAZV**    River Deck and Patio

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#### Monday, 28 September 2015

7:00 - 8:00 AM    Continental Breakfast    Lobby

7:30 - 8:00 AM    Registration    Lobby

8:00 - 8:20 AM    Introductions, welcome, opening with AAZV    East Salon/Grand Ballroom

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**Primate Gut Health and Nutrition Part I**    Timberline  
*Session Chairs: Barbara Henry and Adam Reppart*

8:20 AM            **Fruit-free diets for primates**  
*INVITED SPEAKER: Amy Plowman*

9:00 AM            **Stronger than yesterday: New nutrient recommendations for lorisine primates**  
*Francis Cabana\*, Ellen Dierenfeld, Giuseppe Donatti, and K.A.I. Nekaris*  
**Participant in the Roy McClements Student-Keeper Paper Competition<sup>#</sup>**

9:20 AM            **Assessment of apple leaves and bark as suitable browse items for herbivorous monogastric species under human care**  
*Sarra Gourlie\*, Jim Atkinson, and Jaap Wensvoort*

9:40 AM            **Case Study: Unintended consequences of addressing GI distress in a siamang (*Symphalangus syndactylus*)**  
*Erin Kendrick, MS\* and Mike Maslanka, MS*

10:00 -10:30 AM **BREAK and POSTER SESSION**      **AAZV:** East Salon Hallway of the Grand Ballroom  
**NAG:** Mt. St. Helens Ballroom Lobby

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***Primate Gut Health and Nutrition Part II***      Timberline  
*Session Chairs: Barbara Henry and Adam Reppert*

10:30 AM      **Medical nutrition therapy for human gastrointestinal disorders and application to captive non-human primates**  
*INVITED SPEAKER: Adam Reppert, MS, RD*

11:10 AM      **Associations between diet, gut microbial communities, and health in red-shanked doucs (*Pygathrix nemaeus*): A model for the subfamily colobinae**  
*J. B. Clayton, D. Knights, F. Cabana\*, H. Huang, L. T. Ha, T. V. Bui, M. V. Vo, D. A. Travis, and T. J. Johnson*

11:30 AM      **Nutritionally complete food-free diets for primates: Potential benefits and concerns**  
*Barbara A. Henry, MS\* and Adam Reppert, MS, RD*

12:00 PM      **LUNCH ON YOUR OWN**

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1:30 - 3:10 PM      ***Nutrition Career Panel, Part I***      Timberline  
*Session Chair: Barbara Toddes*  
*Panelists: Michael Power, Michael Schlegel, Shannon Livingston, Clif Martel, and Mark Edwards*

3:10 - 3:40 PM      **BREAK and POSTER SESSION**      **AAZV:** East Salon Hallway of the Grand Ballroom  
**NAG:** Mt. St. Helens Ballroom Lobby

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3:40 - 5:30 PM      ***Nutrition Career Panel, Part II***      Timberline  
*Session Chair: Barbara Toddes*  
*Panelists: Michael Power, Michael Schlegel, Shannon Livingston, Clif Martel, and Mark Edwards*

5:00 PM      **Student debt relief**  
*INVITED SPEAKER: Amelia Lockhart*

5:30 PM      **DINNER ON YOUR OWN**

7:30 - 9:00 PM      **SCARF BENEFIT** with live-action "Hungry Hungry Hippos"      JB Lounge

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## Tuesday, 29 September 2015

7:00 - 7:45 AM      Continental Breakfast      Lobby

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***Herbivores***      Timberline  
*Session Chair: Katie Sullivan*

7:45 AM      **An analysis of vitamin C supplementation in the drinking water for giant elephant shrews (*Rhynchocyon petersi*) at the Philadelphia Zoo**  
*Amanda Christine Steinagel\*, Barbara Toddes, Donna M. Ialeggio, and Benjamin Golas*  
**Participant in the Roy McClements Student-Keeper Paper Competition<sup>#</sup>**



- 8:18 AM **Understanding the interactions of diet and lighting on frogs and their symbiotic bacteria to improve ex situ husbandry of amphibians**  
*Rachael E. Antwis, PhD, Christopher J. Michaels, PhD, Richard Preziosi, PhD, and Andrea L. Fidgett, PhD\**
- 8:30 AM **Considerations to maximize nutrient supplementation of feeder insects**  
*Shannon E. Livingston, MSc,\* Kathleen E. Sullivan, MS, and Eduardo V. Valdes, PhD*
- 8:42 AM **Non-healing subcutaneous hemorrhage in a colony of vampire bats (*Desmodus rotundus*) due to suspected vitamin C deficiency**  
*Jennifer C. Hausmann, DVM\*, Jordan Manasse, BVMS, Howard Steinberg, VMD, PhD, Dipl ACVP, Victoria L. Clyde, DVM, and Roberta Wallace, DVM*
- 8:54 AM **Body weight changes of leopard tortoises (*Stigmochelys pardalis*) fed two isoenergetic diets**  
*Breanna P. Benson\* and Mark S. Edwards, PhD*
- 9:06 AM **Evaluation of the nutritional status of rehabilitated green sea turtles (*Chelonia mydas*) utilizing nutritional markers, stable isotopes, and metagenomics**  
*Jennifer C.G. Bloodgood, MS\*, Terry M. Norton, DVM, Dipl ACZM, Lisa A. Hoopes, PhD, and Sonia M. Hernandez, DVM, Dipl ACZM, PhD*
- 9:18 AM **Ex situ amphibian nutrition: recent findings and future directions**  
*Elizabeth A. Koutsos, MS, PhD\* and Eduardo Valdes, MS, PhD*
- 9:34 AM **Questions and Answers**
- 9:45 - 10:30 AM **BREAK** Mt. St. Helens Ballroom
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- Timberline
- Carnivores, Part I**  
*Session Chair: Katie Kerr*
- 10:30 AM **Cheetah nutrition: Recent advances and revised SSP recommendations**  
*Ellen Dierenfeld\*, Katherine Kerr, and Katherine Whitehouse-Tedd*
- 10:50 AM **Utilization of pork and pork by-products for nutritional management of captive exotic felids**  
*Cayla Iske\*, Cheryl Morris, and Kelly Kappen*
- 11:10 AM **Feeding strategies in wild carnivores: Progress report of a model approach**  
*Annelies De Cuyper\*, Marcus Clauss, Myriam Hesta, and Geert P.J. Janssens*  
**Participant in the Roy McClements Student-Keeper Paper Competition<sup>#</sup>**
- 11:30 AM **A comparative nutrient analysis of fish species consumed by managed and free-ranging common bottlenose dolphins, *Tursiops truncatus*, with respect to ammonium urate nephrolithiasis**  
*Amanda J. Ardente\*, Richard C. Hill, Karen C. Scott, Brian J. Vagt, and Randall S. Wells*
- 11:50 AM **A targeted metabolomics assay to measure purines in the diet of managed and free-ranging common bottlenose dolphins, *Tursiops truncatus***  
*Amanda J. Ardente\*, Timothy J. Garrett, Karen C. Scott, and Richard C. Hill*
- 12:10 - 1:15 PM **LUNCH ON YOUR OWN**
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<b><u>Carnivores, Part II</u></b>		Timberline
<i>Session Chair: Katie Kerr</i>		
1:15 PM	<b>Hypovitaminosis A: Influence of three diets or topical treatment on hepatic, adipose, and plasma retinoid concentrations and presence of squamous metaplasia in Mississippi gopher frogs (<i>Rana capito servosa</i>)</b> <i>Christina Ploog*, Robin Clunston, Cheryl Morris, Cayla Iske, William Blanner, and Allen Pessier</i>	
1:35 PM	<b>A review of the nutrient content of commercial feeder insects and strategies for increasing their nutrient content</b> <i>Mark Finke</i>	
1:55 PM	<b>Nutrient composition of the milk of the giant anteater (<i>Myrmecophaga tridactyla</i>)</b> <i>Michael Power</i>	
2:20 PM	<b>Case Study: Anorexic Anteater</b> <i>Heidi Bissell</i>	
2:30-3:15 PM	<b>BREAK</b>	Mt. St. Helens Ballroom
<b><u>General Topics</u></b>		Timberline
<i>Session Chair: Heidi Bissell</i>		
3:15 PM	<b>A different angle on geometrical analysis of diets: Developing a tool for using geometry to communicate nutrition to laypeople</b> <i>Heidi Bissell</i>	
3:35 PM	<b>Case Study: What goes around, comes around. The case for transfaunation</b> <i>Mike Maslanka, MS* and Amanda Guthrie, DVM, Dipl. ACZM</i>	
4:00-5:00 PM	<b>MEMBERSHIP MEETING including program updates and conference summary</b> <i>Mike Maslanka, MS and Barbara Henry, MS</i>	
6:00 PM	<b>NAG BANQUET</b>	JB Lounge

#The Roy McClements Student-Keeper Paper Competition is sponsored by  
**Central Nebraska Packing, Inc.**



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**POSTERS**

**AAZV:** East Salon Hallway of the Grand Ballroom

**NAG:** Mt. St. Helens Ballroom Lobby

*Visit with the authors Monday 9/28 at 10:00 am and 3:10 pm and Tuesday 9/29 at 9:35 am.*

**Analysis of nutrients, vitamin stability, and moisture loss in primate browse harvested at the San Diego Zoo**

*Rhianne M. Maxwell, BS\* and Michael L. Schlegel, PhD, PAS, Dipl ACAS*

**Participant in the Roy McClements Student-Keeper Paper Competition<sup>#</sup>**

**Birth weights and growth rates of giraffe and okapi at Disney's Animal Kingdom**

*Shannon Livingston\*, Kathleen Sullivan, Katherine Kerr, and Eduardo Valdes*

**Calibration development for rapid assessment of fish species for dolphins in human care using near infrared reflectance spectroscopy (NIRS)**

*Scott Williams\*, Kathleen Sullivan, Shannon Livingston, Katherine Kerr, and Eduardo V. Valdes*

**Commercial aquatic diets and water quality**

*Katherine Kerr\*, Matthew Dawson, Kathleen Sullivan, Amber Thomas, Shannon Livingston, Andy Stamper, Charles Staples, and Eduardo V. Valdes*

**Common aquatic ingredient nutrient analyses: balancing practical feeding with long term aquatic health**

*Kathleen Sullivan\*, Shannon Livingston, Katherine Kerr, Scott Williams, and Eduardo V. Valdes*

**Designing an online hand-rearing resource center: first steps**

*Gail E. Hedberg, RVT\*, Kimberly Thompson, DVM, Laurie J. Gage, DVM, Louise Peat, Kimberly Robertson, and Ellen S. Dierenfeld, PhD*

**Effect of dietary soluble fiber on gut microbiota in the sugar glider (*Petaurus breviceps*): a pilot study**

*Lindsey Solden, Ellen S. Dierenfeld\*, and Kelly Wrighton*

**Evaluating the nutrition of a flock of non-breeding great flamingos (*Phoenicopterus ruber roseus*) at the San Diego Zoo Safari Park**

*Michael L. Schlegel, PhD, PAS, Dipl. ACAS-Nutrition\*, Angela Ray, BS, and Jennifer Tibbot, BS*

**Evaluation of a commercial vitamin and mineral supplement in milk replacers on serum nutrients in pre-ruminants**

*Michele Gaffney\*, MS and Michael L. Schlegel, PhD, PAS, Dipl. ACAS*

**Evaluation of browse composition: Vitamin E**

*Katherine Kerr\*, Kathleen Sullivan, Shannon Livingston, Charles Staples, and Eduardo V. Valdes*

**Feeding Frenzy: Turning the science of zoo nutrition into a game for kids**

*Bethany Fisher\* and Heidi Bissell*

**Participant in the Roy McClements Student-Keeper Paper Competition<sup>#</sup>**

**The growth responses of two polar bear (*Ursus maritimus*) cubs to regimented dietary energy**  
*Jaap Wensvoort\**, *Gregory Thiemann*, *Dawn Mihailovic*, *Jim Atkinson*, and *Ian Duncan*

**Hand-rearing and growth of a grey seal (*Halichoerus grypus*)**  
*Erin Kendrick\**, *Michael Maslanka*, and *Rebecca Sturniolo*

**Impact of dietary n-3 and n-6 PUFA on oxidative status and inflammation in yellow-rumped warblers**  
*Morag F Dick\**, *Laura A. Rooney*, and *Christopher G. Guglielmo*  
**Participant in the Roy McClements Student-Keeper Paper Competition<sup>#</sup>**

**Interpreting vitamins and mineral concentrations in serum of exotic species: Lab values are not infallible**  
*Kathleen E. Sullivan\**, *Shannon Livingston*, *Katherine Kerr*, and *Eduardo V. Valdes*

**Investigation of a new diet formula for captive short-beaked echidnas (*Tachyglossus aculeatus*)**  
*Hayley J. Stannard*, *Jamie M. Bekkers*, and *Michelle Shaw\**

**Managing diabetes in black-footed tree rats (*Mesembriomys gouldii*) and greater stick-nest rats (*Leporillus conditor*) through diet**  
*Corinne Lendon*, *Frances Hulst*, and *Michelle Shaw\**

**Nutritional analysis of mixed produce for exotic species using near infrared reflectance spectroscopy (NIRS)**  
*Scott Williams\**, *Kathleen Sullivan*, *Shannon Livingston*, *Katherine Kerr*, and *Eduardo V. Valdes*

**Preliminary investigations into circulating vitamin E concentrations in captive okapi (*Okapia johnstoni*)**  
*Kerri Slifka, MS\** and *Janis Raines, DVM*

**So you (don't) think you need a nutritionist**  
*Mike Maslanka, MS\**, *Barbara Henry, MS*, and *Ann Ward, MS*

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