



International Society of Wildlife Endocrinologists (ISWE)
Annual Conference
Cincinnati Zoo & Botanical Garden
Nov 4-5th, 2010



Thursday, November 4th

8:00-8:30

Register

8:30- 9:00

Welcome & refreshments:

- Welcome by Dr. Terri Roth, Vice President of Conservation & Science and Director of CREW, Cincinnati Zoo & Botanical Garden
- House Keeping and agenda items: Mandi Vick
- Welcome from Janine Brown and Nadja, Wielebnowski, co-chairs of ISWE

9:00-9:50

Key Note Address: "Non-invasive measurement of adrenocortical activity in zoo and wildlife animals." presented by Dr. Rupert Palme *Department of Biomedical Sciences/Biochemistry, University of Veterinary Medicine, Vienna, Austria*

Session I. Methods Development

(Morning Moderator: Nadja Wielebnowski)

A. Comparative studies of sample storage, extraction, assay methods and reliability

9:50 – 10:10

Fecal steroid monitoring in free-ranging Aardwolf (*Proteles cristatus*) –the importance of assessing the fraction of inorganic food intake. A. Ganswindt, C. Muilwijk, M. Engelkes, S. Muenscher, H. Bertschinger, M. Paris, R. Palme, F. Dalerum.

Presenter: Andre Ganswindt, University of Pretoria, Pretoria, Republic of South Africa

10:10 -10:30

What metabolites of testosterone do testosterone hormone assays target in the feces of carnivores? M.L. East, R. Bonnani, B. Wachter, C. Ludwig, H. Hofer, M. Dehnhard.

Presenter: Martin Dehnhard, Leibniz Institute for Zoo & Wildlife Research, Berlin, Germany

10:30 - 10:40

BREAK

10:40 – 11:00

Environmental degradation of black rhino fecal hormone metabolites in Addo Elephant National Park, South Africa. E. W. Freeman, J. M. Meyer, R. M. Santymire.

Presenter: Elizabeth Freeman, George Mason University, Fairfax, VA

11:00 – 11:20

Development, validation and comparison of field steroid extraction and assay techniques with standard laboratory methods for analyzing fecal reproductive steroid profiles of wild cotton-top tamarins *in situ* in Colombia, South America C.J. Wheaton, A. Savage, L. Soto, F. Medina, G. Emeris. **Presenter: Catherine Wheaton, Disney's Animal Kingdom**

11:20-11:40

Environmental Fecal Glucocorticoid Degradation: Impacts for Assessing Non-invasive Adrenal Activity in the Belizean Jaguar (*Panthera onca*). J.B. Mesa, J.L. Brown, M.J. Kelly

Presenter: Bernardo Mesa, Virginia Tech & Smithsonian Conservation Biology Institute

B. Development of new field and laboratory assays and techniques

11:40 – 12:00

Using fecal samples to diagnose pregnancy in wild giraffe M. J. Bashaw, K. Carter, T. S. Tavassolie. **Presenter: Meredith Bashaw, Franklin & Marshall College, Lancaster, PA, USA**

12:00 – 1:00

LUNCH

(Afternoon Moderator: Janine Brown)

1:00 – 1:20

Noninvasive pregnancy diagnosis in carnivores based on fecal prostaglandin F2 α metabolites M. Dehnhard, A. Crosier, D. Kersey, F. Schwarzenberger, S. Walker, K. Jewgenow.

Presenter: Martin Dehnhard, Leibniz Institute for Zoo & Wildlife Research, Berlin, Germany

1:20 -1:40

The development of an enzyme immunoassay to non-invasively measure adrenal activity in the okapi (*Okapia johnstoni*), black rhino (*Diceros Bicornis*) and Asian elephant (*Elephas maximus*). R. Watson, C. Munro, K.L. Edwards, J. Brown, S.L. Walker.

Presenter: Katie Edwards, North of England Zoological Society, Chester Zoo, Chester, UK

1:40 – 2:10

Options for Building Endocrine Enzyme Immunoassays

Presenter: Russell Hart, Arbor Assays

2:10-2:30

The levels of active urinary ceruloplasmin as an indicator of pregnancy status in ursids. E.L.

Willis, D.C, Kersey, B.S. Durrant, A.J. Kouba. **Presenter: Erin Willis, Memphis Zoological Society**

2:30-2:50

Non-invasive monitoring of adrenal activity in the saiga antelope in the north-west pre-caspian region. V.V. Voznessenskaya, A.E. Voznessenskaya, A.A. Lushekina, E. Möstl.

Presenter: Vera Voznessenskaya, A.N.Severtsov Institute of Ecology & Evolution, Moscow, Russia

C. Inter-lab assay repeatability

2:50 – 3:10

Survey of inter-lab variance in hormone assays – Part 2: Effects of extraction methods.

Presenters: Matt Milnes & Alan Fetter, San Diego Zoo's Institute for Conservation Research, San Diego, CA, USA

3:10 – 3:20

BREAK

D. Database development for endocrine methods

3:20 – 3:40

Managing data for wildlife endocrinology. E. Wilkerson, D. Armstrong, R. Santymire.

Presenter: Edward Wilkerson, Lincoln Park Zoo, Chicago, IL, USA

Session II. Innovative Endocrinology

A. Development and application of difficult to analyze or novel hormones

3:40 – 4:00

Determining factors associated with iron overload in the captive black rhinoceros (*Diceros bicornis*) M.M. Vick, D.E. Wildt, M.A. Raghanti, B.A. Wolfe, P.M. Dennis.

Presenter: Mandi Vick, Smithsonian Conservation Biology Institute, the Wilds, & Cleveland Metroparks Zoo, Cleveland, OH, USA

4:00 – 4:20

Development of an anti-Müllerian hormone assay for veterinary use: Assessing the fertility of older females N. J. Place, A.J. Conley, B.A. Ball.

Presenter: Ned Place, Cornell University, Ithaca, NY, USA

Session III. Recent Advances in Basic Endocrinology as it applies to:

A. Health

4:20 – 4:40

Decreased baseline fecal glucocorticoid concentrations associated with skin and oral lesions in black rhinoceros, *Diceros bicornis*. C. Dorsey, P.M. Dennis, G. Guagnano, T. Wood, J.L. Brown.

Presenter: Candice Dorsey, Smithsonian Conservation Biology Institute, Front Royal, VA, USA & Association of Zoos and Aquariums, Silver Springs, MD, USA

B. Management and/or stress

4:40 – 5:00

Using fecal hormone monitoring and behavioral observation to investigate factors that influence breeding success in pied tamarins. D. Armstrong and R.M. Santymire.

Presenter: Diane Armstrong, Lincoln Park Zoo, Chicago, IL, USA

5:00- 5:20

Use of urinary biomarkers of ovarian function to enhance captive breeding success in the Indian rhinoceros (*Rhinoceros unicornis*) M. A. Stoops, S.T. Ferrell, G.D. West, T.L. Roth, N.P. Lung.

Presenter: Monica Stoops, Cincinnati Zoo & Botanical Garden, Cincinnati, OH, USA

5:20 – 5:30

Closing remarks & Walk to the Lodge for DINNER

5:30 & 6:00

Tours of CREW –Center for Conservation & Research of Endangered Wildlife

6:45

Return transport to Hotel

Friday November 5th

8:30-9:00 Welcome & refreshments

Continue Session III. Recent Advances in Basic Endocrinology as it applies to:

B. Management and/or stress

(Morning Moderator: Mandi Vick)

9:00 – 9:20

Associations between social behavior and adrenal activity in female Barbary Macaques (*Macaca sylvanus*); Consequences of study design. K.L. Edwards, S.L. Walker, R.F. Bodenham, S. Shultz.

Presenter: Katie Edwards, North of England Zoological Society, Chester Zoo, Chester, UK & School of Biological Sciences, University of Liverpool, Liverpool, UK

9:20 – 9:40

The effects of management practices on cortisol metabolites in the Indian rhinoceros (*Rhinoceros unicornis*). J.M. Capiro, M.A. Stoops, E. W. Freeman, D. Clawson, M.M. Vick.

Presenter: Jon Michelle Capiro, Cincinnati Zoo & Botanical Garden, Cincinnati, OH, USA & George Mason University, Fairfax, VA, USA

9:40 – 10:00

Evaluating the relationships between age and stress in male Belding's ground squirrels using fecal glucocorticoid metabolites. E. Loeding and J. Mateo.

Presenter: Erin Loeding, University of Chicago, Chicago, IL, USA

10:00 – 10:20

Factors affecting tiger adrenal activity in the wild. S.V. Naidenko, V.S. Lukarevskii, J.A. Hernandez-Blanco, P.A. Sorokin, A.K. Kotlyar, M.N. Litvinov, V.V. Rozhnov.

Presenter: Sergey Naidenko, A.N. Severtsov Institute of Ecology and Evolution, Moscow, Russia

10:20 -10:30

BREAK

C. Reproduction

10:30 – 10:50

Basic hormonal and behavioral patterns of reproduction in the hylobatids M.L. Rafacz, R. M. Santymire, S. Margulis.

Presenter: Michelle Rafacz, University of Chicago & Lincoln Park Zoo, Chicago, IL, USA

10:50- 11:10

Non cat-like endocrine pattern in female lynx – methodical miracle or physiological luteal function to ensure monoestrous?

K. Jewgenow, F. Goeritz, M. Dehnhard.

Presenter: Katarina Jewgenow, Leibniz Institute for Zoo & Wildlife Research, Berlin, Germany

11:10 – 11:30

Non-invasive endocrine monitoring: a unique method for the study of the critically endangered chinchilla (*Chinchilla lanigera*) reproductive physiology. M.F. Ponzio, R.D. Ruiz, M. Fiol de Cuneo.

Presenter: Marina Ponzio, Universidad Nacional de Córdoba, Córdoba, Argentina.

11:30 – 11:50

Corticosterone concentrations are higher in nulliparous than parous captive female southern white rhinoceros (*ceratotherium simum simum*) L.C. Metrione and J.D. Harder.

Presenter: Lara Metrione, the Ohio State University, Columbus, OH, USA

11:50 – 12:10

Population of poo: Using fecal hormones to assess reproductive parameters of wild dugongs E.A. Burgess, T. Keeley, J.M. Lanyon.

Presenter: Elizabeth Burgess, The University of Queensland, Brisbane, Australia & Western Plains Zoo, Dubbo, Australia.

12:10

LUNCH

Note: Participants NOT continuing in the afternoon working groups can return to the hotel after lunch (1pm) or are free to explore the Cincinnati Zoo and return to the hotel with the others (5pm).