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CURRICULUM VITAE

IMKE LÜDERS



DVM, PhD, DipIECZM (ZHM)

European Veterinary Specialist in Zoological Medicine (Zoo Health Management)

Fachtierärztin für Zoo-und Wildtiere (German certified zoo and wildlife veterinarian)

PERSONAL INFORMATION

- Nationality: German
- Date of Birth: 10.10.1980
- Place of Birth: Hamburg, Germany

EDUCATION/ EMPLOYMENT

03/2017-today University of Pretoria, Faculty of Veterinary Sciences, South Africa:
postdoctoral researcher

12/2017-today Allwetterzoo Münster, Germany: *Part-time clinical zoo veterinarian*

10/2010-today GEOLifes, Animal Fertility & Reproductive Research, Hamburg,
Germany: *Scientific freelance, zoo & wildlife veterinarian, reproduction services for
zoos worldwide, www.geolifes.com*

01/2014-today University of Hannover, Veterinary Medicine, Unit for
Reproduction Medicine, Hannover, Germany: *Research Associate (planned
habilitation)*

09/2012-8/2013 University of the Western Cape, Capetown, South Africa:
Postdoctoral researcher

4-10/2010 Zoological Garden Wuppertal, Germany: *Assistant Zoo Veterinarian*

08/2006-03/2010 Leibniz Institute of Zoo-and Wildlife Research, Berlin
Germany: *Ph.D. student, completed 9/2012 with "summa cum laude"*

01/2006-8/2006 Small animal practice, Dr. Dreismann, Tornesch, Germany:
Veterinary Assistant

10/2000-12/2005 Freie Universität Berlin, Germany:
Student of Veterinary medicine

07/1994-07/2000 Ludwig-Meyn-Gymnasium, Uetersen, Germany:
High School

SLECETED INTERNATIONAL STAYS

- 2005 Uganda:** 2 months Queen Elizabeth National Park, large Predator Monitoring, Dr. Ludwig Siefert, Makerere Univeristy, Kampala
- 2005 England:** 1 months Whipsnade Zoo, Dr. Edmund Flach, Dunstable
- 2007 Canada:** 6 months during doctoral thesis at African Lion Safari, Cambridge
- 2009 & 2012 Japan:** 2x 2 months, Tokyo University of Agriculture and Technology, Prof. K. Taya
- 2011-2014 Indonesia:** several stays for elephant health care projects led by VESSWIC, Dr. Christopher Stremme, Medan, Sumatra.
- 2012 Myanmar:** 2 weeks, veterinary knowledge transfer, Dr. Zaw Min O, Myanmar Timber Enterprise
- 2012-2013 South Africa:** 1 year postdoc research, University of the Western Cape, Prof. Gerhard van der Horst

GRANTS/ AWARDS

- 2016** National Geographic Grant
- 2015** International Elephant Foundation Research Grant (Big Tuskers)
- 2014** Rudolf Ippen Young Scientist Award
- 2013** Ernst- Reuter –Award for outstanding dissertation (FU Berlin)
- 2012** CAZA (Canadian Association of Zoos and Aquaria) Grant for giraffe reproductive research
- 2012** Japan Society for the Promotion of Science (JSPS) grant for 2 months endocrine work at the Tokyo University, Vet Faculty
- 2011** International Elephant Foundation (IEF) // U.S. Fish and Wildlife Service (USFWS) African elephant fund, Research Funding, South Africa
- 2010** Poster award, 2nd best poster presentation, EAZWV and IZW joint Conference (Madrid, Spain)
- 2010** GlaxoSmithKline, Conference grant (Madrid, Spain)
- 2009** Japan Society for the Promotion of Science (JSPS), Summer Program, 3 months research stay in Tokyo
- 2009** 3rd best presentation, EAZWV and IZW joint Conference (Hilvarenbek, Netherlands)
- 2008** German Research Society (DFG), Conference grant (Pattaya, Thailand)
- 2008** International Elephant Foundation (IEF), Research Funding
- 2008** 3rd best presentation, Doctoral Student Symposium, Freie Universität Berlin, Faculty of Veterinary Medicine, Germany
- 2007** German Academic Exchange Service (DAAD), Junior scientist travel grant to Canada

LANGUAGES

- **German:** native speaker
- **English:** fluent (written and spoken)
- **French/ Latin:** basic knowledge (Großes Latinum)

Extracurricular Activities:

- Founder of the NGO and German charity registered PRO FETURA e.V.-Alliance for Wildlife Conservation Breeding (www.profetura.com), with several independent and collaborative projects
- Board of Directors at the African Elephant Research Unit, Knysna, South Africa
- Board of Directors of the Ukutula Conservation Center and Biobank, South Africa
- Authorized for Veterinary Research with the South African Veterinary Council (SAVC authorization number R13/12618)
- Animal immobilisation and handling of syringe-firing rifles license for usage of narcotic weapons (9/2007) and license for firearms (1/2017)
- Member of the European Association for Zoo and Wildlife Veterinarians (EAZWV)
- Member of the Zoological Society for the Conservation of Species and Populations (ZGAP)
- Member of the German Veterinary Association for Animal Welfare
- Member of the Virtual Center of Reproductive Medicine, Niedersachsen
- EAZA Biobank working Group Committee Member
- EAZA Group of Zoo Animal Contraception (EGZAC) Advisor
- Great Ape TAG Research Advisor
- Advisor for the International Elephant Endotheliotropic Herpesvirus (EEHV) Advisory Group and member of the European EEHV consortium
- Workshop and course instructor for elephant ultrasound workshops in Canada, Indonesia, Myanmar, UK and Japan

List of Publications (peer reviewed)

2018

(25) **Lueders I** (2017). Chapter 118: Elephant pregnancy and parturition –normal and abnormal. Fowler's Zoo and Wild Animal Medicine, Vol. 9, Saunders, St. Louis, USA.

2017

(24) **Lueders I**, Young D, Maree L, van der Horst G, Luther I, Botha S, et al. (2017). Effects of GnRH vaccination in wild and captive African Elephant bulls (*Loxodonta africana*) on reproductive organs and semen quality. PLoS ONE12(9): e0178270. <https://doi.org/10.1371/journal.pone.0178270>

(23) **Lueders I**, Ludwig C, Kasberg J, Baums CG, Klimke K, Dorner MB, Ströse D, Schmidt V (2017). Unusual outbreak of fatal clostridiosis in a group of captive Brown pelicans (*Pelecanus occidentalis*). *Journal of Avian Medicine and Surgery* 31(4):000–000, 2017

(22) Crosier AE, Wachter B, Schulman M, Lueders I, Koester DC, Wielebnowski N, Comizzoli P, Marker L (2017). Chapter 29: Reproductive Physiology of the Cheetah and Assisted Reproductive Techniques. In: *The Biology and Conservation of the Cheetah*.

(21) Luther I, Jakop U, **Lueders I**, Tordiffe A, Franz C, Schiller J, Kotze A, Müller K (2017) Semen cryopreservation and radical reduction capacity of seminal fluid in captive African lion (*Panthera leo*). *Theriogenology*. 89: 1–10.

(20) Ludwig C, **Lueders I**, Schmidt V, Kempf H (2017) Tracheal resection in a secretarybird (*Sagittarius serpentarius*) with granulomatous, foreign body induced tracheitis. *Journal of Avian Medicine and Surgery*, 31(4):000–000, 2017

(19) Stremme C, Wahyu M, **Lueders I** (submitted Dec. 2016). Construction of a full mouth speculum facilitating oral examinations, bronchoscopy and gastric tubing in Asian elephants (*Elephas maximus*). *Tierärztliche Praxis*

(18) Ewert M, **Lueders I**, Böröcz J, Uphaus J, Distl O, Sieme H (under review). Determinants of gestation length in Thoroughbred mares in German stud farms. *Anim Reprod Sci*

2016

(17) **Lueders I**, Tindall B, Young D, van der Horst G, Botha S, Luther I, Maree L, Bertschinger HJ (2016) Standing sedation with medetomidine and butorphanol in captive African elephants (*Loxodonta africana*). *The Veterinary Journal*. 209: 190–192.

2014

(16) **Lueders I**, Hildebrandt TB, Gray C, Botha S, Rich P, Niemuller C (2014) Suppression of testicular function in a male Asian elephant (*Elephas maximus*) treated with Gonadotropin-releasing hormone vaccines. *J. Zoo Wild. Med.* 45(3): 611–619.

(15) **Lueders I**, Ludwig C, Schröder M, Müller K., Zahmel J, Dehnhard M (2014) Successful non-surgical artificial insemination and hormonal monitoring in an Asiatic golden cat (*Catopuma temmincki*). *J. Zoo Wild. Med.* 45(2):372-379.

2012

(14) **Lueders I**, Niemuller C, Rich P, Gray C, Hermes R, Goeritz F, Hildebrandt TB (2012) Gestating for 22 months: The mechanism of luteal development and pregnancy maintenance in elephants. *Proc Royal Soc B.* 279 (1743): 3687-3696.

(13) Hildebrandt TB, **Lueders I**, Hermes R, Goeritz F, Saragusty J (2012) Anatomical, physiological, behavioral and pathological aspects of the estrous cycle in elephants. *Jpn J Zoo Wildl Med* 17(3): 97-109.

(12) **Lueders I**, Luther I, Scheepers G, van der Horst G (2012) Improved semen collection method for wild felids: Urethral catheterization yields high sperm quality in African lions (*Panthera leo*). *Theriogenology*, 78: 696–701.

(11) Yamamoto Y, Yamamoto T, Yuto N, Hildebrandt TB, **Lueders I**, Wibbelt G, Shiina O, Mouri Y, Sugimura K, Sakamoto S, Kaewmanee S, Nagaoka K, Watanabe G, Taya K (2012) The secretory pattern and source of immunoreactive prolactin in pregnant African (*Loxodonta africana*) and Asian (*Elephas maximus*) elephant. *Journal of Reproduction and Development* 58 (1): 104-110.

2011

(10) **Lueders I**, Taya K, Watanabe G, Niemuller C, Gray C, Yamamoto Y, Yamamoto T, Kaewmanee S, Hildebrandt TB (2011) Role of the double luteinizing hormone peak, luteinizing follicles, and the secretion of inhibin for dominant follicle selection in Asian elephants (*Elephas maximus*). *Biol Reprod* 85: 714-720.

(9) **Lueders I** and Hildebrandt TB (2011) Chapter 66: Female elephant reproduction update. In: Fowler M and Miller E (eds). Zoo and Wild Animal Medicine, current therapy. 7th Edition, Saunders, St. Louis, USA, pp. 503-514.

(8) Hildebrandt TB, **Lueders I**, Hermes R, Goeritz F, Saragusty J (2011) Reproductive cycle of the elephant. *Animal Reproduction Science*, 124(3-4): 176-183.

(7) Kaewmanee S, Watanabe G, Yamamoto Y, Yamamoto T, Kishimoto M, Nagaoka K, Nakthong C, Yindee M, Income N, **Lueders I**, Thitaram C, Ratanakorn P, Taya K (2011) Updated reproductive hormonal profiles in female elephants. *Thai J Vet Med Suppl.* 41: 91-94.

2010

(6) **Lueders I**, Niemuller C, Gray C et al. (2010) Luteogenesis during the estrous cycle in Asian elephants (*Elephas maximus*). *Reproduction* 140: 777-786.

(5) **Lueders I**, Drews B, Niemuller C, Gray C, Rich P, Fickel J, Wibbelt G, Goeritz F, Hildebrandt TB (2010) Ultrasonographically documented early pregnancy loss in an Asian elephant (*Elephas maximus*). *Reproduction Fertility & Development* 22: 1159-1165.

2009

(4) **Lueders I**, Hildebrandt, TB, Pootoolal J, Rich P, Gray C, Niemuller C (2009) Ovarian ultrasonography correlated with fecal progesterone and estradiol during the estrous cycle and early pregnancy in giraffes (*Giraffa camelopardalis rothschildi*). *Biology of Reproduction* 81: 989-995.

(3) **Lueders I**, Niemuller C, Pootoolal J, Rich P, Gray C, Streich, WJ, Hildebrandt TB (2009) Sonomorphology of the reproductive tract in male and pregnant and non-pregnant female Rothschild's giraffe (*Giraffa camelopardis rothschildi*). *Theriogenology* 72: 22–31.

2008

(2) Drews B, Gray C, Hermes R, Goeritz F, **Lueders I**, Hildebrandt TB (2008) Early embryo development in the elephant assessed by serial ultrasound examinations. *Theriogenology* 69: 1120-1128.

(1) Drews B, Goeritz F, Hermes R, Gray C, **Lueders I**, Hildebrandt TB (2007) Beschreibung der Embryonalentwicklung des Asiatischen Elefanten (*Elephas maximus*) mit 3-D-Ultraschall unter Einbeziehung der extraembryonalen Organe. *Europ J Ultras*, 28(S 1), V_13_5.

Conference Contributions

Invited plenary talks/ keynote addresses

- Lueders I** (2016) Assisted Reproduction Technologies: Current applications and future directions for large, endangered mammals. **International Conservation and Commercial Breeding Symposium, Chester, UK, 8.-9.03.2016.**
- Lueders I** (2015) Reproductive traits of elephants, manatees and hyraxes: The Paenungulate Story. **International Conference on Biotechnology and Welfare in Animal Husbandry.** Krakow, Poland, 15.-16.06.2015.
- Lueders I** (2015) Luteinizing hormone peaks and corpus luteum formation in elephants and giraffes- two examples of unique luteal properties. **World Assisted Reproduction Congress, New York, USA, 15-16.10.2015.**
- Lueders I** (2014) Captive elephant breeding-status quo. **Elephant Workshop, Sosto Zoo, Nyiregyhaza, Hungary, 25.-27.08.2014.**

Selected Conference talks

- Lueders I, Gray C, Rich P** (2017) Early EEHV viremia detection and successful treatment of severe EEHV-HD in a two year old Asian elephant calf. *Int. Elephant Endotheliotropic Herpes Virus Workshop 2017, London, UK, 15.-17.05.2017.*
- Lueders I, Ollivet Courtois F, Kranzer K, Whayu M, Stremme C** (2017) A full mouth speculum for elephants facilitating bronchoscopy, gastric tubing and dental health evaluation. *Zoo and Wildl Health Conf, Berlin, Germany, 24-27.05.2017 p.*
- Lueders I** (2017) Assisted Reproduction Technologies & Genetic Resource Banking for Elephant and Rhino Conservation. *Avian and Exotic Medicine and Conservation, Dubai, UAE, 14.-15.04.2017.*
- Lueders I, Luther I** (2017) Assisted Reproduction technologies, biobanking and the One-Plan-Approach to species conservation: Rhino and Elephant as examples. *Veterinary Management of African Wildlife Conference, Pretoria, South Africa 22-25.02.2017, p. 19-21.*
- Lueders I, Kasberg J, Ludwig C, Kummrow M, Luther I, Kotze A** (2016). Transrektaler Ultraschall zur urogenitalen Diagnostik bei Feliden: Befunde und Erfahrungen von der Goldkatze bis zum Tiger. *36. Arbeitstagung der Zootierärzte im deutschsprachigen Raum, 3.-6.11.2016, Krefeld, Deutschland.*
- Ludwig C, **Lueders I, Kasberg J** (2016). Tumorchirurgie beim Igelfisch (Diodontidae)- Möglichkeiten und Grenzen. *36. Arbeitstagung der Zootierärzte im deutschsprachigen Raum, 3.-6.11.2016, Krefeld, Deutschland.*
- Lueders I, Luther I, Bartels P, Müller K** (2016) Sperm and oocyte retrieval for cryopreservation and biobanking - it is high time for wildlife. *Europe Biobank Week, Vienna, Austria, Sept.15th-18th, 2016; p.158.*
- Lueders I, Stremme C** (2015). Dr. GAJAH: Elefantenmedizin in Asien (*Elephas maximus sumatranus*). *35. Arbeitstagung der Zootierärzte im deutschsprachigen Raum, 3.-6.11.2015, Rapperswil, Switzerland.*
- Lueders I, Ludwig C. & Weber H.** (2015). Nonsurgical artificial insemination in felids: Asiatic golden cat (*Catopuma temincki*) and Persian leopard (*Panthera pardus saxicolor*). *Int. Conf. Dis. Zoo. Wild. Anim., Barcelona, Spain, June 2015, p.59.*
- Lueders I, Tindall B, Young D, van der Horst G, Botha S, Luther I, Maree L, Bertschinger HJ** (2014). GnRH Vaccination of African elephant bulls for contraception and behavioural management. *Int. Conf. Dis. Zoo. Wild. Anim., Warsaw, Poland, May 2014, p. 10.*
- Lueders I, Pootoolal J, Lecu A.** (2013). Giraffe tamer training: hooftrims, blood collection and ultrasound made easy. *Int. Conf. Dis. Zoo. Wild. Anim., Vienna, Austria, 2013, p.32.*

Lueders I (2013). Elephant Birth Management. *British Irish Association of Zoos and Aquaria, Elephant Focus Group Meeting, Chester, England, March, 2013*

Lueders I, Tindall B, Young D, van der Horst G, Botha S, Luther I, Maree L, Bertschinger HJ (2012). Fertility and Aggression control through GnRH vaccination in African elephant bulls. Elephant Reproduction Pre-conference Seminary, *International Congress on Animal Reproduction (ICAR), Vancouver, Canada, August 2012*

Lueders I, Rich P, Gray C, Whelan N (2011). Successful treatment of corneal lesions in two Asian elephants. *International Conference on Diseases of Zoo and Wild Animals, Lisbon, Portugal, June 2011, p.48.*

Lueders I, Hildebrandt TB, Niemuller C, Gray C, Yamamoto Y, Yamamoto T, Kaewmanee S, Watanabe G, Taya K (2010). Are luteinizing follicles a pre-condition for ovulatory follicle deviation? An endocrine and ultrasound study throughout the estrous cycle in Asian elephants. *International Elephant Conservation and Research Symposium, Pretoria, South Africa, January 2010.*

Lueders I, Gray C, Niemueller C, Rich P, Hildebrandt TB (2009). Early embryonic loss in an Asian elephant (*E. maximus*). *International Conference on Diseases of Zoo and Wild Animals. Hilvarenbek, Netherlands, May 2009, p.129.*

Lueders I, Niemueller C, Gray C, Rich P, Hildebrandt TB (2008). Luteogenesis in pregnant and cycling Asian elephants. *International Elephant Conservation and Research Symposium, Pattaya, Thailand, November 2008.*

Selected Poster Presentations

Lueders I, Young D, Maree L, van der Horst G, Luther I, Botha S, Tindall B, Fosgate G, Ganswind A, Bertschinger HJ (2016). Effect of the GnRH vaccine Improvac® on testicular size and ultrasonographic appearance in African elephants (*Loxodonta africana*). *International Elephant and Rhino Conservation and Research Symposium, Singapore, Nov. 2016.*

Kasberg J, **Lueders I**, Luther I, van der Horst G, Kotze A, Tordiffe A, Jakop U, Müller K (2015). Preliminary results on transrectal ultrasonography of the male reproductive tract and semen characteristics in African lions (*Panthera leo*). *10th International Conference on Behaviour, Physiology and Genetics of Wildlife, Berlin, Sept. 2015.*

Jakop U, Luther I, Nimptsch A, **Lueders I**, Tordiffe A, Kotze A, Müller K, Schiller J (2015). Body mass index and lysolipid accumulation in spermatozoa of African lion (*Panthera leo*) and men. *10th International Conference on Behaviour, Physiology and Genetics of Wildlife, Berlin, Sept. 2015.*

Lueders I, Pootoolal, Taya K, Watanabe G, Yamamoto Y, Niemuller C, Chenier T, Scholtz E (2014). Assisted Reproduction in Giraffes. *Int. Conf. Dis. Zoo. Wild. Anim., Warsaw, Poland 2014, p. 170.*

Lueders I, Luther I, Müller K, Scheepers G, Tordiffe A, van der Horst G (2013) Semen collection via urethral catheter in exotic feline and canine species: a simple alternative to electroejaculation. *Int. Conf. Dis. Zoo. Wild. Anim., Vienna, Austria, 2013, pp. 161-163.*

Lueders I, Niemueller C, Gray C, Hildebrandt TB (2010). Evaluation of the Estrous Cycle Stage via Ultrasound in Elephants. *Int. Conf. Dis. Zoo. Wild. Anim., Madrid Spain, May 2010, p.210*