

Curriculum Vitae

Name: Prof. André Ganswindt
(Endocrine Research Laboratory)

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Date of birth: August 14th, 1971, in Berlin (Germany)

Nationality: German



Research interest

Study behavioural endocrinology and reproductive science in mammals, reptiles, and birds, to address proximate and ultimate questions concerning regulative endocrine mechanisms which in combination with other factors, like social or ecological changes, influence and control animal behavior.

Developing and validating non-invasive tools for monitoring reproductive function and responses to stressors in captive and free-ranging animals, thereby broadening the spectrum of possible applications of behavioural endocrine research.

Combine the disciplines of physiological-endocrine research, behavioural biology, and wildlife ecology to improve the management and welfare of animals in zoological institutions as well as in the wild.

Current position

From 03/13 Associate Professor, Head of the Endocrine Research Laboratory, Dept. of Anatomy & Physiology, Faculty of Veterinary Science, University of Pretoria South Africa

Research Associate at the Mammal Research Institute, Dept. of Zoology and Entomology, University of Pretoria

From 08/13 Research Associate at the National Zoological Gardens of South Africa

Qualifications

09/04 PhD in Biology

05/00 Graduate engineer (University of Applied Sciences, TFH Berlin) in Biotechnology

02/92 Apprenticeship diploma in Biological Lab Technology

Education

06/00 – 09/04 PhD student, Dept. of Behavioral Biology (University of Muenster, Germany) in cooperation with the Dept. of Reproductive Biology (German Primate Centre, Germany)

04/95 – 05/00 Study of Biotechnology, Dept. of Biotechnology (University of Applied Sciences, Berlin, Germany)

09/88 – 02/92 Apprenticeship as biological lab technician at the Schering Group, Berlin, Germany

Employment

01/13 – 02/13 Senior Lecturer, Head of the Endocrine Research Laboratory, Dept. of Anatomy & Physiology, Faculty of Veterinary Science, University of Pretoria, 0110 Onderstepoort, South Africa

01/10 – 12/12 Extraordinary Lecturer, Dept. of Production Animal Studies, Faculty of Veterinary Science, University of Pretoria, 0110 Onderstepoort, South Africa

- 03/09 – 12/12 Research fellow, Mammal Research Institute, Dept. of Zoology and Entomology, University of Pretoria, South Africa
- 02/06 – 02/09 Postdoctoral fellow, Section of Reproduction, Dept. of Production Animal Studies, Faculty of Veterinary Science University of Pretoria, South Africa
- 10/04 – 01/06 Postdoctoral fellow, Dept. of Reproductive Biology (German Primate Centre, Germany) and since 05/05 also affiliated to the University of Surrey Roehampton, UK
- 06/00 – 12/02 Postgraduate assistant, Dept. of Reproductive Biology (German Primate Centre, Germany)
- 07/98 – 12/98 Graduate assistant, Dept. of Genome Research (Max-Delbrück-Centre for Molecular Medicine, Germany)
- 12/95 – 12/96 Community service, Analytical laboratory of the Max-Bürger Hospital, Berlin, Germany
- 02/92 – 11/95 Biological lab technician, Institute for Cell- and Molecular Biology & Dept. for Neuro-Psychopharmacology (Schering Group, Germany)

Practical experience

In establishing, coordinating and conducting research projects including field work, in supervising graduate and post-graduate students, in developing and validating different enzyme-immunoassay systems for assessing gonadal and adrenal function (including ACTH-challenge test and radio metabolism study), in GPS/Radio tracking, behavioural observation, sound recording, and non-invasive sample collection, in different sample preparation techniques (lyophilisation, solvent extraction, hydrolysis), in separating and characterizing urinary and fecal steroid hormone metabolites using reverse phase high pressure liquid chromatography (HPLC) Additional laboratory experience in cell- and molecular biology (PCR, RT-PCR, Plasmid/DNA/RNA isolation, transformation), immuno- and protein chemistry (SDS-PAGE, micro-HPLC, mass spectrometry, Western Blot), experimental toxicology, biochemical and pharmacological *in-vitro* analysis and method development. Computer skills: Microsoft Office, Sigma Plot, Sigma Stat, KyPlot, Statistica, Corel Draw, Photoshop; Languages: German, English

Teaching experience

- From 01/14 Lecturing Physiological Chemistry, Endocrinology, Metabolism, and Thermoregulation in the Physiology FSL 104 Course – Diploma Veterinary Nursing
- 09/13 Guest lecturer at the *Summer School - Non-invasive Monitoring of Hormones*, held at the Leibniz Institute for Zoo and Wildlife Research (IZW), Berlin, Germany
- 02/12 Organization and participation (invited speaker & workshop lecturer) of the *1st National Workshop on Application of Non-invasive Hormone Monitoring to Wildlife Endocrine Assessment*, held at the Lacones Campus, Centre for Molecular and Cellular Biology, Hyderabad, India
- 04/10 Organization and participation (main speaker & workshop lecturer) of the *1st South African Workshop for Non-invasive Hormone Monitoring*, held at the National Zoological Gardens, Pretoria, South Africa

Supervision/co-supervision of visiting students

Since 02/07 I supervised/trained 30 Veterinary students from the University of Utrecht (Netherlands) during their 3 months research orientated internship in South Africa

Supervision/co-supervision of students in a B. Tech Program

- Mr. Joseph Raporoto Mabusetsa Makalo; Project title: Comparison of two processing methods for faecal hormone extraction in Giraffe (*Veterinary Technology - Twshane University of Technology*)
- Mr. Jambwa Kudakwashe; Project title: Defecation frequency, gastrointestinal transit time, and faecal water content in Samango Monkeys (*Cercopithecus mitis erythracus*) (*Veterinary Technology - Twshane University of Technology*)
- Ms. Marina du Preez; Project title: The assessment of stress in trained African elephants performing elephant back safaris (Animal Health – University of South Africa)

Postgraduate Supervision

Supervision/co-supervision of MMedVet students:

- Ms. Silke Pfitzer (Faculty of Veterinary Science, University of Pretoria, South Africa)
Project title: Comparing physiological parameters of farmed Nile crocodiles (*Crocodylus niloticus*) captured manually and by means of electrical immobilisation
- Ms. Kouba Grobler (Faculty of Veterinary Science, University of Pretoria, South Africa)
Project title: Effect of Hot-iron branding on the cheek or upper hind limb on cortisol levels, behaviour, and production in feedlot calves, Degree obtained 04/13

Supervision/co-supervision of MSc/Mphil students:

- Mr. Peter Mueller (Institute of Biology, Humboldt University Berlin, Germany)
Project title: Faecal Androgen Excretion in the Male Asian Elephant and its Relation to Musth, Degree obtained 04/08
- Mr. Bart Vlamings (Faculty of Veterinary Medicine, University of Utrecht, Netherlands)
Project title: Dog appeasing pheromone - potential application to reduce aggression and stress in captive African wild dogs (*Lycaon pictus*), Degree obtained 2011
- Mr. Ncube Hlengisizwe (National University of Science and Technology, Zimbabwe)
Project title: Reproductive rates in the plains zebra *Equus quagga*: non-invasive pregnancy diagnosis using faecal 20-oxopregnane and oestrogen metabolites, Degree (Mphil) obtained 2011
- Mrs. Melodie Bates (Faculty of Veterinary Science, University of Pretoria, South Africa)
Project title: Endocrine correlates of free-ranging African elephants (*Loxodonta africana*) treated with porcine zona pellucida vaccine, Degree obtained 04/12
- Ms. Gabriela Benavides Valades (Faculty of Veterinary Science, University of Pretoria, South Africa)
Project title: Induction of anoestrus in female African elephants (*Loxodonta africana*) using an injectable gonadotropin releasing hormone vaccine, Degree obtained 04/12
- Ms. Elize Fourie (Department of Zoology & Entomology, University of Pretoria, South Africa)
Project title: The influence of predators on physiological, hormonal and behavioural indicators of stress in plains zebra (*Equus quagga burchelli*), Degree obtained 09/12
- Mr. Peter Seeber (Faculty of Veterinary Science, University of Pretoria, South Africa)
Project title: Reproductive behaviour and its endocrine correlates in free-ranging male Angolan Giraffe (*Giraffe camelopardis angolensis*), Degree obtained 09/12
- Mr. John Birrell (Faculty of Veterinary Science, University of Pretoria, South Africa)
Project title: The effects of GnRH vaccination in reducing post-surgical castration complications carried out under field conditions in colts
- Ms. Elize van Vollenhoven (Faculty of Veterinary Science, University of Pretoria, South Africa)
Project title: Monitoring stress-related physiological indicators during rectal palpation in teaching mares.
- Mr. Norbert Mangwiro (Faculty of Veterinary Science, University of Pretoria, South Africa)
Project title: Validation of salivary and faecal glucocorticoid metabolites in pigs

Supervision/co-supervision of PhD students:

- Mr. Jozua Viljoen (Department of Zoology & Entomology, University of Pretoria, South Africa)
Project working title: Translocation of elephants in a South African Savanna – Studies on endocrinological changes, vocalization and feeding behaviour, Degree obtained 04/13
- Ms. Annemieke van der Goot (Institute of Agriculture, University of Western Australia)
Project title: Investigating reproductive physiology in the free-living White rhinoceros: providing new insights towards enhanced breeding success in captivity
- Mr. Ruan de Bruin (Department of Zoology & Entomology, University of the Free State, South Africa)
Project working title: The endocrinology of paternal care in bat-eared foxes (*Otocyon megalotis*)

- Mr. Juan Scheun (Department of Zoology & Entomology, University of Pretoria, South Africa)
Project title: As Time Goes By: gonadal and adrenocortical endocrine function in the lesser bushbaby (*Galago moholi*)
- Ms. Tanja Wolf (Department of Anatomy & Physiology, University of Pretoria, South Africa)
Project working title: Impact of social and ecological variability on the endocrine pattern in free-ranging male giraffe

Supervision/co-supervision of postdoctoral students:

- Dr. Peter N Laver (Department of Anatomy & Physiology, University of Pretoria, South Africa)
Project working title: Assessing southern African aquatic integrity with non-invasive keystone species stress assays

Awards / bursaries

01/11	Awarded a C1-rating from the National Research Foundation (NRF), South Africa
03/09 – 02/13	Research Fellowship of the University of Pretoria, South Africa
03/07 – 02/09	Postdoctoral Fellowship of the Claude Leon Foundation, South Africa
03/06 – 02/08	Postdoctoral Fellowship of the University of Pretoria, South Africa
10/02 – 09/04	Postgraduate Fellowship of the Evangelisches Studienwerk e.V. Villigst, Germany
11/00	Studies of Biotechnology pass with distinction

Publications

Publications in peer-reviewed or refereed journals

- De Bruin R, Medger K, Bennett CN, **Ganswindt A** (2014) Non-invasive assessment of reproductive function in South African Spiny mice (*Acomys spinosissimus*) by measurement of faecal progestagens and androgens. IN: African Zoology, *accepted*
- Schulman ML, Becker A, Ganswindt SB, Guthrie AJ, **Ganswindt A** (2014) The effect of consignment to Broodmare Sales on physiological stress measured by faecal glucocorticoid metabolites in pregnant Thoroughbred mares IN: BMC Veterinary Research, 10:25 doi:10.1186/1746-6148-10-25
- Ghosal R, **Ganswindt A**, Seshagiri PB, Sukumar R (2013) Endocrine correlates of musth in free-ranging Asian elephants (*Elephas maximus*) determined by non-invasive faecal steroid hormone metabolite measurements. IN: PlosOne, 8(12): e84787
- Seeber PA, Duncan P, Fritz H, **Ganswindt A** (2013) Androgen changes and flexible rutting behavior in male Giraffes. IN: Biology Letters, <http://dx.doi.org/10.1098/rsbl.2013.0396>
- Le Roux A, Beishuizen R, Brekermans W, **Ganswindt A**, Paris M, Dalerum F (2013) Innovative parental care in a myrmecophageous mammal. IN: Acta Ethologica, DOI 10.1007/s10211-013-0157-1
- Van der Goot AC, Dalerum F, **Ganswindt A**, Martin GB, Millar RP, Paris MCJ (2013) Faecal progestagen profiles in wild southern white rhinoceros (*Ceratotherium simum*). IN: African Zoology, 48(1): 143-151
- Viljoen JJ, Reynecke HC, Panagos MD, Langbauer Jr WR, **Ganswindt A** (2013) Seasonal selection preferences for woody plants by breeding herds of African elephants (*Loxodonta africana*) in a woodland savanna. IN: International Journal of Ecology, Article ID 769587, <http://dx.doi.org/10.1155/2013/769587>
- Codron J, Kirkman K, Duffy KJ, Sponheimer M, Lee-Thorp JA, **Ganswindt A**, Clauss M, Codron D (2013) Stable isotope turnover and variability in tail hairs of captive and free-ranging African elephants (*Loxodonta africana*) reveal dietary niche differences within populations IN: Canadian Journal of Zoology, 91: 124-134
- Ludwig C, Wachter B, Silinski S, **Ganswindt A**, Bertschinger H, Hofer H, Dehnhard M (2013) Characterization and validation of an enzyme-immunoassay for the non-invasive assessment of faecal glucocorticoid metabolites in cheetahs (*Acinonyx jubatus*) IN: General and Comparative Endocrinology, 180(1): 15-23
- Marneweck DG, **Ganswindt A**, Rhodes S, Bellem A, Bryant J, Wielebnowski N, Dalerum F (2013) Reproductive endocrinology of zoo-housed aardwolves IN: Acta Theriologica, 58: 223-232
- **Ganswindt A**, Tordiffe ASW, Stam E, Howitt MJ, Jori F (2012) Determining adrenocortical endocrine activity as a measure of stress in African buffalo (*Syncerus caffer*) based on faecal analysis. IN: African Zoology, 47(2): 261-269

- Seeber PA, Ciofalo I, **Ganswindt A** (2012) Behavioural inventory of the giraffe (*Giraffa camelopardalis*) IN: BMC Research Notes, 5:650 doi:10.1186/1756-0500-5-650
- Stoeger AS, Heilmann G, Zeppelzauer M, **Ganswindt A**, Hensman S, Charlton B (2012) Visualizing sound emission of elephant vocalizations: evidence for two rumble production types. IN: PLoS ONE 7(11): e48907. doi:10.1371/journal.pone.0048907
- Benavides G, **Ganswindt A**, Annandale H, Schulman ML, Bertschinger HJ (2012) Induction of anoestrus in free-ranging African elephants (*Loxodonta africana*) cows using a gonadotropin-releasing hormone vaccine. IN: BMC Reproduction Biology and Endocrinology, 10:63 doi:10.1186/1477-7827-10-63
- Laver P, **Ganswindt A**, Ganswindt SB, Williams M, Alexander K (2012) Non-invasive monitoring of glucocorticoid metabolites in banded mongooses (*Mungos mungo*) in response to biological and physiological challenges IN: General and Comparative Endocrinology, 179(2): 178-183
- Ahlers MJ, **Ganswindt A**, Münscher S, Bertschinger HJ (2012) Endocrine correlates of free-ranging African elephants (*Loxodonta africana*) treated with porcine zona pellucida vaccine. IN: Theriogenology, 78: 77-85
- **Ganswindt A**, Muilwijk C, Engelkes M, Muenscher S, Bertschinger H, Paris, M, Palme R, Cameron E, Bennett N, Dalerum F (2012) Validation of Noninvasive monitoring of adrenocortical endocrine activity in ground-feeding Aardwolves (*Proteles cristata*): Exemplifying the influence of consumption of inorganic material for fecal steroid analysis IN: Physiological and Biochemical Zoology, 85(2): 194-199
- Seeber PA, Ndlovu HT, Fritz H, **Ganswindt A** (2012) Grazing behaviour of the Giraffe (*Giraffa camelopardalis*) in Hwange National Park. IN: African Journal of Ecology, 50(2): 247-250
- Barnier F, Grange S, **Ganswindt A**, Ncube H, Duncan P (2012) Inter-birth interval in Zebras is longer following the birth of male foals than after female foals. IN: Acta Oecologica, 42: 11-15
- **Ganswindt A**, Brown J, Freeman E, Kouba A, Penfold L, Santymire R, Vick M, Wielebnowski N, Willis E, Milnes M (2012) International Society for Wildlife Endocrinology: the future of endocrine measures for reproductive science, animal welfare, and conservation biology IN: Biology Letters, 8: 695-697
- Ncube H, Duncan P, Grange S, Cameron EZ, Barnier F, **Ganswindt A** (2011) Pattern of faecal 20-oxopregnane and oestrogen concentrations during pregnancy in free-ranging plains zebra mares. IN: General and Comparative Endocrinology, 172: 358-362
- Hulsman A, Dalerum F, **Ganswindt A**, Muenscher S, Bertschinger H, Paris M (2011) Non-invasive monitoring of glucocorticoid metabolites in brown hyena faeces. IN: Zoo Biology, 30: 451-458
- Hulsman A, Dalerum F, Swanepoel L, **Ganswindt A**, Sutherland C, Paris M (2010) Patterns of latrine use by brown hyenas (*Hyaena brunnea*) in the Highveld region of South Africa. IN: Wildlife Biology, 16: 445-451
- **Ganswindt A**, Muenscher S, Henley M, Palme R, Thompson P, Bertschinger H (2010) Concentrations of faecal glucocorticoid metabolites in physically injured free-ranging African elephants (*Loxodonta africana*). IN: Wildlife Biology, 16: 323-332
- **Ganswindt A**, Muenscher S, Henley M, Henley S, Heistermann M, Palme R, Thompson P, Bertschinger H (2010) Endocrine correlates of musth and the impact of ecological and social factors in free-ranging African elephants (*Loxodonta africana*). IN: Hormones and Behavior, 57: 506-510
- Viljoen JJ, **Ganswindt A**, du Toit JT, Langbauer Jr WR (2008) Translocation stress and faecal glucocorticoid metabolite levels in free-ranging African savanna elephants. IN: Journal of Wildlife Management, 38(2): 146-152
- Rasmussen HB, **Ganswindt A**, Douglas-Hamilton I, Vollrath F (2008) Endocrine and behavioural changes in male African elephants: linking hormone changes to sexual state and reproductive tactic. IN: Hormones and Behaviour, 54: 539-548
- Viljoen JJ, **Ganswindt A**, Palme R, Reynecke HC, du Toit JT, Langbauer Jr WR (2008) Measurement of faecal glucocorticoid concentrations in free-ranging African elephants: baseline values from the Kruger National Park IN: Koedoe, 50(1): 18-21
- Laws N, **Ganswindt A**, Harris M, Harris S, Heistermann M, Sherwin C (2007) A case-study: Faecal corticosteroid and behaviour as indicators of welfare during relocation of an Asiatic Elephant. IN: Journal of Applied Animal Welfare Science, 10(4): 349-358
- Fichtel C, Kraus C, **Ganswindt A**, Heistermann M (2007) Influence of reproductive season and rank on fecal glucocorticoid levels in free-ranging male Verreaux's sifakas (*Propithecus verreauxi*) IN: Hormones and Behavior, 51(5):640-648

- Wittemyer G, **Ganswindt A**, Hodges JK (2007) The impact of ecological variability on the reproductive endocrinology of wild female African elephants. IN: *Hormones and Behavior*, 51(3): 346-354
- Heistermann M, Palme R, **Ganswindt A** (2006) Comparison of different enzymeimmunoassays for assessment of adrenocortical activity in primates based on fecal analysis IN: *American Journal of Primatology*, 68(3): 257-273
- **Ganswindt A**, Heistermann M, Hodges JK (2005) Physical, physiological and behavioural correlates of musth in captive African elephants (*Loxodonta africana*). IN: *Physiological and Biochemical Zoology*, 78 (4): 505-514
- **Ganswindt A**, Rasmussen HB, Heistermann M, Hodges JK (2005) The sexually active states of free-ranging male African elephants (*Loxodonta africana*): Defining musth and non-musth using endocrinology, physical signals, and behaviour. IN: *Hormones and Behavior*, 47 (1): 83-91
- **Ganswindt A**, Heistermann M, Palme R, Borrigan S, Hodges JK (2003) Non-invasive assessment of adrenal function in the male African elephant (*Loxodonta africana*) and its relation to musth. IN: *General and Comparative Endocrinology*, 134(2): 156-166
- **Ganswindt A**, Heistermann M, Borrigan S, Hodges JK (2002) Assessment of testicular endocrine function in captive African elephants by measurement of urinary and fecal androgens. IN: *Zoo Biology*, 21: 27-36

Books and/or chapters in books

- Bertschinger H, Delsink A, van Altena JJ, Kirkpatrick J, Killian H, **Ganswindt A**, Slotow R, Castley G (2008) Chapter 6: Reproductive control of elephants In: *Elephant Management: A Scientific Assessment for South Africa* (Eds. RJ Scholes, KG Mennell). Wits University Press, 1 Jan Smuts Avenue, Johannesburg, South Africa, pp. 257-328
- **Ganswindt A**, Muenscher S (2008) Take a nap: sleeping behaviour of free-ranging male African elephants (*Loxodonta africana*) during the day IN: 4th CPB Meeting in Africa: Mara 2008. "Molecules to migration: The pressures of life" (Ed S. Morris & A. Vosloo). Medimond Publishing Co, via Maserati 6/2, 40124 Bologna, Italy, pp. 441-448
- **Ganswindt A** (2008) Physical, physiological, and behavioural changes associated with male African elephant (*Loxodonta africana*) sexual activity and the phenomenon of musth. IN: 4th CPB Meeting in Africa: Mara 2008. "Molecules to migration: The pressures of life" (Ed S. Morris & A. Vosloo). Medimond Publishing Co, via Maserati 6/2, 40124 Bologna, Italy, pp. 449-456

Conference proceedings

- De Bruin R, Medger K, Bennett CN, Ganswindt A (2013) Monitoring of male and female reproductive function in southern African spiny mice based on faecal hormone analysis, 4th Annual meeting of the International Society for Wildlife Endocrinology, Chicago, USA, p.24
- Ganswindt SB, Myburgh JG, Ganswindt A (2013) Non-invasive assessment of adrenocortical function as a measure of stress in captive Nile crocodiles (*Crocodylus niloticus*), Annual Symposium of the Zoological Society of Southern Africa, University of Venda, South Africa, p. 41
- Ganswindt A (2012) *Omnis amans amens* - Endocrine correlates of male reproductive behaviour in terrestrial megaherbivores, 105th annual meeting of the German Zoological Society (DZG), University of Konstanz, Germany, p. 9
- Scheun J, Ganswindt A, Nowack J, Benett N (2012) As Time Goes By: gonadal and adrenocortical endocrine function in the lesser bushbaby (*Galago moholi*), 10th annual symposium of the Primate Ecology and Genetics Group (PEGG), Bloemfontein, South Africa, pp. 8-9
- Seeber PA, Duncan P, Fritz H, Ganswindt A (2012) Endocrine drivers of flexible rutting behaviour in male Giraffes (*Giraffa camelopardalis*), 3rd Annual meeting of the International Society for Wildlife Endocrinology, Vienna, Austria, pp. 33-34
- Vlamings B, Paris MCJ, Ganswindt A, Bertschinger HJ Dog appeasing pheromone®: A useful tool to minimize stress and aggression in African wild dogs (*Lycaon pictus*)? 3rd Annual meeting of the International Society for Wildlife Endocrinology, Vienna, Austria, pp. 53-54
- Van der Goot AC, Dalerum F, Ganswindt A, Martin GB, Millar RP, Paris MCJ (2012) Faecal progesterone patterns in wild African white rhinoceros (*Ceratotherium simum*), 3rd Annual meeting of the International Society for Wildlife Endocrinology, Vienna, Austria, p. 36

- Laver P, Ganswindt A, Muenscher S, Alexander K (2012) Urban habitat moderates seasonality in the stress physiology, movement ecology, and foraging behavior of free-ranging banded mongooses. ESA Mid-Atlantic Chapter Annual Meeting, p. 76
- Ganswindt A, Tordiffe, ASW, Stam E, Howitt M, Jori F (2011) Identification of a suitable enzyme immunoassay for assessment of adrenocortical endocrine function in African buffalo (*Syncerus caffer*) based on faecal analysis, 2nd NZG Annual Research Symposium, Pretoria, South Africa, p. 19
- Fourie E, Tordiffe ASW, Münscher SB, Cameron EZ, Ganswindt A (2011) Non-invasive assessment of adrenocortical activity as an endocrine response to stress in Plains zebra (*Equus burchelli*), 2nd NZG Annual Research Symposium, Pretoria, South Africa, p. 23
- Ghosal R, Ganswindt A, Seshagiri PB, Sukumar R (2011) Endocrine and behavioural correlates of musth in the two phenotypes of male Asian elephants (*Elephas maximus*), 2nd Annual meeting of the International Society for Wildlife Endocrinology, Toronto, Canada, pp. 10-11
- Ganswindt A, Tordiffe, ASW, Stam E, Howitt M, Jori F (2011) Identification of a suitable enzyme immunoassay for assessment of adrenocortical endocrine function in African buffalo (*Syncerus caffer*) based on faecal analysis, 2nd Annual meeting of the International Society for Wildlife Endocrinology, Toronto, Canada, p. 7
- Ganswindt A, Gierhahn D, Bellem A, Wielebnowski N (2011) Monitoring of reproductive steroid hormones in female Aardvarks (*Orycteropus afer*) – evidence for embryonic diapause, 2nd Annual meeting of the International Society for Wildlife Endocrinology, Toronto, Canada, pp. 7-8
- Muenscher S, Myburgh JG, Cameron EZ, Ganswindt A (2011) Assessment of adrenocortical endocrine function in captive Nile crocodiles (*Crocodylus niloticus*) by measuring glucocorticoids or their metabolites in serum and faecal samples, 8th International Conference on Behaviour, Physiology and Genetics of Wildlife, Berlin, Germany, pp.120-121
- Ganswindt A, Tordiffe, ASW, Stam E, Howitt M, Jori F (2011) Non-invasive assessment of adrenocortical endocrine function in African buffalo (*Syncerus caffer*) by measurement of glucocorticoid metabolites in faeces, 8th International Conference on Behaviour, Physiology and Genetics of Wildlife, Berlin, Germany, pp. 68-69
- Grobler MJ, Ganswindt A, Shakespeare AS, Thompson P (2011) Welfare issues around hot iron branding in South African feedlot cattle, 30th World Veterinary Congress, Cape Town, South Africa, *submitted*
- Marneweck D, Cameron E, Ganswindt A, Wielebnowski N, Dalerum F (2011) Monitoring of reproductive and adrenocortical steroid hormones in captive bred aardwolves, *Proteles cristatus*, 51st Conference of the Zoological Society of Southern Africa
- Ganswindt A, Wielebnowski N (2011) Take a break – endocrinological indications for embryonic diapause in the Aardvark (*Orycteropus afer*), 11th African Small Mammal Society conference, Kwaluseni, Swaziland, pp.19-20
- Ganswindt A, Muilwijk C, Engelkes M, Muenscher S, Bertschinger H, Paris M, Palme R, Dalerum F (2010) Faecal steroid monitoring in free-ranging Aardwolf (*Proteles cristatus*) – the importance of assessing the fraction of inorganic food intake, 1st Annual meeting of the International Society for Wildlife Endocrinology, Cincinnati, USA, p.3
- Dalerum, F., Bennett, N.C., Cameron, E.Z., De Vries, L., Ganswindt, A., Kotze, R., Marneweck, D., Pirk, C.W.W. Sarli, J. Theron, C. (2010) Causes and consequences of mammalian resource specializations - What can we learn from South African myrmecophages? 7th Kimberley Biodiversity Research Symposium, Kimberley, South Africa
- Ganswindt A, Muenscher S, Henley M, Henley S, Heistermann M, Palme R, Thompson P, Bertschinger H (2010) Endocrine correlates of musth and the role of socioecological factors in free-ranging African elephants (*Loxodonta africana*), 13th International Behavioral Ecology Congress, Perth, Australia, p.72
- Hulsman A, Dalerum F, Ganswindt A, Muenscher S, Bertschinger H, Paris M (2009) Evaluation of non-invasive monitoring of stress hormones in brown hyena (*Hyaena brunnea*), 7th International Conference on Behaviour, Physiology and Genetics of Wildlife, Berlin, Germany, p.97
- Ganswindt A, Muenscher S, Henley M, Henley S, Bertschinger H (2009) Endocrine correlates of musth and the role of ecological and social factors in free-ranging African elephants (*Loxodonta africana*) within the Kruger National Park, 50th Anniversary conference of the Zoological Society of Southern Africa, p.28

- Muenscher S, Henley M, Henley S, Bertschinger H, Ganswindt A (2009) Behavioural and endocrinological changes in free-ranging African elephants (*Loxodonta africana*) with physical injury, 50th Anniversary conference of the Zoological Society of Southern Africa, p.72-73
- Ganswindt A, Münscher S (2009) Non-invasive assessment of adrenocortical activity as an endocrine response to stress in African elephants (*Loxodonta africana*). 7th Annual Savanna Science Network Meeting, p.121
- Ganswindt A, Münscher S (2008) Endocrine changes in male African elephants in relation to reproductive activity and ecological variability. *Elephant Management & Owners Association (EMOA) Workshop*, EMOA meeting and AGM agenda, p.6-7
- Ganswindt A, Münscher S (2008) Take a nap: sleeping behaviour of free-ranging male African savannah elephants during the day. 4th International Conference in Africa for Comparative Physiology & Biochemistry, p.121
- Ganswindt A (2008) Physical, physiological and behavioural correlates of musth in African elephants (*Loxodonta africana*). 4th International Conference in Africa for Comparative Physiology & Biochemistry, pp. 66-67
- Ganswindt A, Münscher S (2008) Take a nap: sleeping behaviour of free-ranging male African elephants (*Loxodonta africana*) during the day, 6th Annual Kruger National Park Science Network Meeting, p.88
- Ganswindt A, Rasmussen HB (2007) Musth and sexually active non-musth: a comparison of endocrine correlates of two sexually active states in free-ranging male African elephants. *Elephant Management & Owners Association (EMOA) Workshop*
- Ganswindt A, Münscher S, Bertschinger HJ (2006) Non-invasive assessment of testicular and adrenocortical activity in male African Elephants using enzyme immunoassays. *Elephant Management & Owners Association (EMOA) Workshop*, EMOA meeting and AGM agenda, p.6
- Laws N, Harris M, Sherwin C, Ganswindt A, Heistermann M (2006) A case-study: Faecal corticosteroid and behaviour as indicators of welfare during relocation of an Asiatic Elephant. 40th ISAE International Congress, P2/129 in the poster programme, p.11
- Ganswindt A, Heistermann M, Hodges JK (2006) Musth in African elephants (*Loxodonta africana*). *Proceedings of the 22nd EAZA Conference*
- Heistermann M, Palme R, Ganswindt A (2005) Assessing stress in primates using faecal glucocorticoids: the importance of validation; Congress of the European Federation for Primatology 2005, *Primate Report 72*, p.43
- Ganswindt A (2005) Charakterisierung des Musth-Phänomens bei Afrikanischen Elefanten (*Loxodonta africana*). *Beiträge zur Elefantenhaltung in Europa*, pp.29-34
- Ganswindt A, Rasmussen HB, Heistermann M, Hodges JK (2004) Characterisation of sexually active states in free-ranging male African elephants (*Loxodonta africana*) using endocrinological and external physical signs. *Advances in Ethology 38*, p.106
- Ganswindt A, Heistermann M, Palme R, Borragan S, Hodges JK (2002) Non-invasive assessment of adrenal function in the male African elephant (*Loxodonta africana*) and its relation to musth. *Advances in Ethology 37*, p.167
- Ganswindt A, Heistermann M, Borragan S, Hodges JK (2001) Faecal glucocorticoid and androgen metabolite excretion in male African elephants (*Loxodonta africana*). *Recent Research on Elephants and Rhinos*, p.85
- Ganswindt A, Heistermann M, Borragan S, Hodges JK (2000) Non-invasive assessment of testicular endocrine function in the African elephant (*Loxodonta africana*) by measurement of testosterone metabolites in faeces. *Advances in Ethology 35*, p.56

Non-refereed scientific publications or popular scientific articles

- Ganswindt A, Parys A, Wielebnowski N, Lehmann T (2011) Non-invasive assessment of reproductive and adrenocortical steroid hormones in captive Aardvarks (*Orycteropus afer*). *AFROTHERIAN CONSERVATION Newsletter of the IUCN/SSC Afrotheria Specialist Group*, Issue 8, Pages 17-18
- Ganswindt A, Bertschinger HJ (2006) Trigger and regulatory mechanisms of musth in African elephants (*Loxodonta africana*). *EAZA annual meeting Research Committee Newsletter*
- Ganswindt A, Heistermann M, Hodges JK (2006) Endocrine, physical and behavioural correlates of musth in African elephants (*Loxodonta africana*). *EAZA annual meeting Research Committee Newsletter*

- Ganswindt A (2005) Characterisation of the phenomenon of musth in African elephants. *Journal of European Elephant Keeper and Manager Association*, Volume 8, Issue 3&4, 2005. Pages 3-7
- Ganswindt A (2005) Endocrine, physical and behavioural correlates of musth in African elephants (*Loxodonta africana*). *Mitteilungsblatt Ethologische Gesellschaft e.V.*, 54 (7/05), p.14
- Ganswindt A, Heistermann M, Palme R, Borragan S, Hodges JK (2004) Endocrine and behavioural correlates of musth in captive African elephants (*Loxodonta africana*). *EAZA annual meeting Research Committee Newsletter 10/2004*, pp.89-90
- Ganswindt A, Heistermann M, Hodges JK (2002) Endocrine and behavioural correlates of musth in captive African elephants (*Loxodonta africana*) *EAZA annual meeting Research Committee Newsletter 03/2002*, p.51

Further participation in conferences, workshops and short courses

- 2013 - 4th NZG Annual Research Symposium in Pretoria, South Africa
- 2012 - 3rd NZG Annual Research Symposium in Pretoria, South Africa
- 2012 - Invited speaker at the Leibniz Institute for Zoo and Wildlife Research (IZW), Berlin, Germany
- 2012 - Invited speaker at the 105th annual meeting of the German Zoological Society (DZG), University of Konstanz, Germany
- 2012 - Invited speaker at a Workshop for Non-invasive Hormone Monitoring at the Centre for Molecular and Cellular Biology, Hyderabad, India
- 2010 - hosted the 1st SA Workshop for Non-invasive Hormone Monitoring at NZG in Pretoria, South Africa
- 2010 - Annual Meeting of GRI-Biodiversity & Global Change in Southern Africa in Stellenbosch, South Africa
- 2007 - 5th Annual Kruger National Park Science Network Meeting in Sukuza, South Africa
- 2004 - 15th Symposium on Tropical Animal Health and Production in Utrecht, Netherlands
- 2003 - Multidisciplinary Summer school of the Evangelischen Studienwerk e.V. Villigst, Germany
- 2002 - Practical course "Social systems of mammals" at the University of Muenster, Germany
- 2001 - Practical course "Methods of behavioural biology" at the University of Muenster, Germany

Membership in national and international bodies

- International Society for Wildlife Endocrinology (Vice Chair)
- Institute for Breeding Rare and Endangered African Mammals (Advisory Board member)
- Elephant Specialist Advisory Group – South Africa (associated member)
- Zoological Society of Southern Africa (member)
- International Society for Behavioral Ecology (member)
- Ethologische Gesellschaft e.V. (member)
- Association for the study of animal behaviour (ASAB) (member)
- Samango Monkey Working Group (member)
- National Research Foundation South Africa (reviewer)
- Koedoe - Research Journal for the South African National Parks (reviewer)
- Diversity and Distributions – A journal of Conservation Biogeography (reviewer)
- Journal of General and Comparative Endocrinology (reviewer)
- Zoo Biology (reviewer)
- Animal Conservation (reviewer)
- Laboratory Animals (reviewer)
- Methods in Ecology and Evolution (reviewer)
- Theriogenology (reviewer)
- African Journal of Ecology (reviewer)
- European Journal of Wildlife Research (reviewer)
- Folia Primatologica (reviewer)
- Hormones and Behavior (reviewer)
- African Zoology (reviewer)
- Journal of Chemical Ecology (reviewer)
- Animal Welfare (reviewer)

- Ceylon Journal of Science (reviewer)
- Functional Ecology (reviewer)
- Zoological Studies (reviewer)
- Journal of Zoology (reviewer)
- Physiological and Biochemical Zoology (reviewer)
- Journal of Mammalogy (reviewer)
- Journal of Applied Animal Welfare Science (reviewer)
- EMU – Austral Ornithology (reviewer)
- PLOS ONE (reviewer)
- Journal of Applied Ecology (reviewer)
- Reproductive Biology (reviewer)
- Wiener Tierärztliche Monatsschrift (reviewer)
- Behavioral Ecology (reviewer)
- African Journal of Biotechnology (reviewer)
- Physiology and Behavior (reviewer)

Visits to universities or research institutes as researcher

- 2013 - Leibniz Institute for Zoo and Wildlife Research (IZW), Berlin, Germany
- 2012 - Leibniz Institute for Zoo and Wildlife Research (IZW), Berlin, Germany
- 2012 - Dept. of Mol. Reproduction, Develop. & Genetics, Indian Institute of Science, Bangalore, India
- 2011 - CNRS field research station, Hwange National Park, Zimbabwe
- 2010/11 - Dept. of Mol. Reproduction, Develop. & Genetics, Indian Institute of Science, Bangalore, India
- 2010 - Dept. of Reproductive Biology, German Primate Centre, Göttingen, Germany
- 2009 - Centre of Ecological Science, Indian Institute of Science, Bangalore, India
- 2009 - Institute of Biochemistry, University of Veterinary Medicine, Vienna, Austria
- 2006 - Transboundary elephant research, Save the elephants, South Africa
- 2006 - School of Human and Life Sciences, University of Surrey Roehampton, UK
- 2005 - School of Human and Life Sciences, University of Surrey Roehampton, UK
- 2003 - Dept. of Zoology & Experimental Psychology, University of Oxford, UK
- 2002 - Samburu elephant research project, Save the elephants, Kenya
- 2002 - Institute of Biochemistry, University of Veterinary Medicine, Vienna, Austria

Teamwork and collaboration with others

Australia

University of Tasmania, School of Zoology (Prof E Cameron)
University of Western Australia, School of Zoology (Prof G Martin)

Austria

University of Veterinary Medicine, Dept of Biomedical Sciences (Prof R Palme)
University of Vienna, Dept. of Cognitive Biology (Dr A Stöger-Horwath)

Botswana

Elephants for Africa (Dr K Evans)

France

CNRS, Chizé Centre for Biological Studies (Dr P Duncan, Dr H Fritz)

Germany

German Primate Centre, Reproductive Biology Unit (Dr M Heistermann)
Leibniz Institute for Zoo and Wildlife Research, Reproduction Biology (Dr M Dehnhard)
Senckenberg Research Institute and Natural History Museum Frankfurt (Dr T Lehmann)
University of Hamburg, Dept for Animal Ecology and Nature Conservation (Ms J Novak)

Great Britain

University of Cambridge, Dept of Zoology (Dr B Dantzer)
Angelia Ruskin University, Dept Life Sciences (Dr A Smith)

India

Indian Institute of Science
Centre for Ecological Sciences (Prof R Sukumar)
Dept of Molecular Reproduction, Development & Genetics (Prof PB Seshagiri)

South Africa

University of Pretoria
Mammal Research Institute (Prof B Millar & Prof N Bennett)
Faculty of Veterinary Science, PAS (Prof H Bertschinger & M Schulman)
Faculty of Veterinary Science, Paraclinical Science (Dr J Myburgh)
University of Cape Town, Samango Monkey Project (Dr K Wimberger)
National Zoological Gardens of South Africa (Dr A Tordiffe)
Save the Elephants (Dr M Henley)
Elephants for Africa Forever (Mr S Hensman)

The Netherlands

Institute for Breeding Rare & Endangered African Mammals, IBREAM (Dr M Paris)
University of Utrecht, Faculty of Veterinary Medicine (Dr T Stout)

USA

Oregon Zoo (Dr N Wielebnowski)
Franklin & Marshall College, Department of Psychology (Dr MJ Bashaw)