

**Sehr geehrte Leserinnen und Leser, liebe Kolleginnen und Kollegen!**

Vor einem Jahr wurde von uns die Konferenz „Non-invasive monitoring of hormones“ an der Vetmeduni veranstaltet. Dieses Sonderheft der WTM beinhaltet ausgewählte Beiträge dieser Tagung.

Das (ehemalige) Institut für Biochemie beschäftigt sich schon seit mehr als 30 Jahren mit der Etablierung und Weiterentwicklung nicht invasiver Methoden zur Erhebung von Reproduktionsstatus und Belastungen (Stress). Vielen ist wahrscheinlich die routinemäßig an unserem Institut durchgeführte Bestimmung von Östrogenen und Gestagenen in Kotproben von Stuten zur Trächtigkeitsuntersuchung („Rossknödeltest“) bekannt.

Die im Sonderheft abgedruckten Beiträge spiegeln das breite Anwendungsfeld solcher Hormonbestimmungen gut wider. Die Vielfalt betrifft sowohl die besprochenen Tierarten, als auch die untersuchten Hormone und die behandelten Fragestellungen, von denen viele auch für den Tierarzt relevant sind.

Daher hoffen wir, dass für jeden etwas Interessantes dabei ist und wünschen Ihnen eine gewinnbringende Lektüre.

**Dear colleagues,**

From September 23 to 26, 2012 the conference “Non-invasive monitoring of hormones” was held at the Vetmeduni Vienna, Austria. We are glad to present a special issue of the “Wiener Tierärztliche Monatsschrift – Veterinary Medicine Austria” related to the respective conference that was organized by the Institute of Medical Biochemistry together with the International Society of Wildlife Endocrinology (ISWE).

The conference aimed at bringing together scientists of different research fields sharing a common interest in non-invasive methods for monitoring hormones. This meeting was an excellent chance to learn about newest developments and successful applications, to get into contact with experts in the field and to meet old and new collaborators and friends.

It was our pleasure and privilege to welcome almost 150 delegates from 27 countries. We thank all participants for attending our conference and making it such a successful meeting (Fig. 1). Special thanks to those keynote lecturers and speakers who took time and effort to submit their contributions for this special issue. All papers were subjected to anonymous peer review; the expert evaluations of the reviewers being gratefully acknowledged.

We think the diverse contributions make up an interesting issue, dealing with various species (fish, birds and mammals), topics (reproduction and stress) and research fields (basic and applied sciences). The first review authored by SCHWARZENBERGER and BROWN gives an overview of reproductive mechanisms of species from four different taxa and shows the high degree of variability observed between but also within species. The authors highlight the enormous potential of endocrine monitoring to assist breeding and management of wildlife species. DEHNHARD and JEWGENOW demonstrate that measurement of faecal prostaglandins helps to diagnose pregnancy in carnivores, especially when pseudo-pregnancy may be a problem. PALME et al. pinpoint important methodological issues related to extraction which comprises the first step for faecal steroid analysis. MURTAGH et al. present the principle of liquid chromatography and mass spectrometry and its potential for measuring steroids in various body fluids. For fishes, blood sampling is more stressful, injurious and problematic than for higher vertebrates. Thus there is an even stronger need to introduce non-invasive alternatives. ELLIS et al. summarize these methods and discuss their pros and cons. The last two contributions (STÖWE et al. and RETTENBACHER et al.) deal with birds and the measurement of glucocorticoid metabolites in droppings and egg corticosterone. They highlight the influence of a bird's age and the applied immunoassay for

measurement and especially the importance of analytical validations. We think that the quality and diversity of the research topics presented here bodes well for the future application of non-invasive methods in various research fields.

Finally, we gratefully acknowledge the Austrian Society of Veterinarians and the Editor-in-Chief of the WTM for making this special issue possible and wish everyone a good reading.

Prof. Dr. Rupert PALME  
(Guest editor)

Dr. Mandi W. SCHOCK  
(ISWE conference chair)



**Fig. 1:** Participants of the conference grouping in the lecture hall at the Vetmeduni Vienna (© J. Aaltonen)

## ■ References

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