DFG Research Unit (FOR) 1103

The **Research Unit 1103**, established in 2009 and funded by the German Research Foundation (DFG), studied the pathogenesis of re- and degenerative processes in the canine central nervous system (CNS) and possible therapeutic consequences.

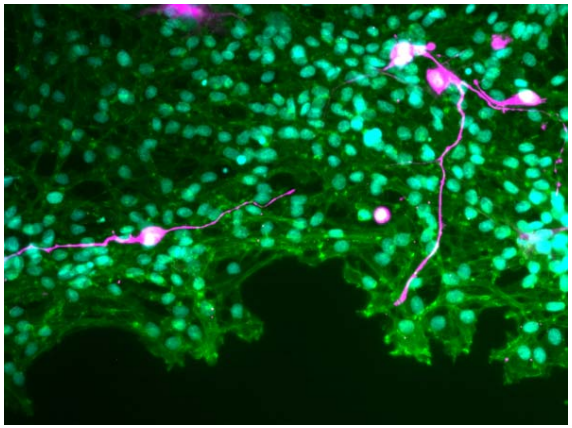
The **aim** of this Research Unit was to obtain new scientific knowledge in a defined field of biomedical science for the canine species.

Among all relevant species in veterinary medicine dogs are most often presented with neurological problems.

Hence, there is a great need for research in this field for a better understanding of canine CNS disease and to develop new therapeutic approaches and strategies. In addition, the canine species represents a highly suitable translational model for human CNS diseases.

Within the Research Unit 1103 the studies of regenerative and degenerative processes in the CNS were conducted on three selected, commonly occurring canine diseases: **canine distemper**, **traumatic lesions of the spinal cord**, and **epilepsy**.

Canine distemper is a viral infection resulting in neuropathological changes resembling lesions in human multiple sclerosis.



As in humans, **traumatic lesions of the spinal cord** in dogs represent a frequently observed consequence of intervertebral disc prolapse.

In dogs as well as in humans, **epilepsy** ranks among the most common chronic neurological disorders. It often develops after brain insults such as injuries, inflammation, febrile convulsions or tumours.

Upcoming questions and formulated hypotheses were tested by means of studies in dogs and rodent models as well as tissue cultures. The interdisciplinary Research Unit 1103, composed of experts from the fields of veterinary medicine, biology and human medicine, allowed a unique comparative study of (a) degenerative processes and (b) the regenerative potential in the canine CNS, as well as (c) development and realization of novel therapeutic approaches.

The results of the studies undertaken during the 6 year funding period will be presented during the *Third International Workshop of Veterinary Neuroscience* as concluding colloquium of the FOR 1103.

Third International Workshop of Veterinary Neuroscience

February 14th 2016
Hannover

Medizinische Hochschule Hannover

General Information

Congress Venue:

Department of Pathology
University of Veterinary Medicine Hannover
Bünteweg 17
30559 Hannover
Germany

Registration:

Please use the registration form on our website:
www.tiho-hannover.de/neuroscience2016

Further information will be given upon registration.
Participation is free of charge, yet registration is mandatory.

Dealine for registration: **December 31st 2015**

Call for abstracts:

Abstracts on all aspects of veterinary neuroscience are welcome. The Scientific Committee reserves the right to allocate abstracts to poster or oral presentation as suitable.

Please use the abstract form on our website:
www.tiho-hannover.de/neuroscience2016

Deadline for abstract submission: **December 1st 2015**

Contact:

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Congress language: English

Miscellaneous:

- ATF credit: requested
- Open for undergraduate students (max. 50)

Joint Meeting on Neuroinfectiology and Veterinary Neuroscience February 14th – 16th, 2016:

The *Third N-RENNT Symposium on Neuroinfectiology* will take place on February 15th and 16th. For futher information please visit: **www.tiho-hannover.de/nrennt**

Preliminary Schedule — Sunday, February 14th 2016

8.00 – 8.45 Registration

8.45 – 9.00 **Opening words and presentation of DFG Research Unit 1103**
W. Baumgärtner (TiHo)

9.00 – 10.00 State-of-the-art lecture on neurogenetics:
Rare canine genetic diseases – a powerful resource to learn more about their genes and their functions in the nervous system
T. Leeb (Vetsuisse faculty, University of Bern)

10.00 – 10.15 Coffee break and poster display

Spinal cord injury – Pathogenesis, Schwann cell and mesenchymal stem cell therapy

10.15 – 11.15 State-of-the-art lecture on spinal cord injury:
Canine intervertebral disc herniation: A model for translational SCI research
J.M. Levine (Texas A&M University)

11.15 – 12.45 **Mesenchymal stem cell therapy in demyelinating diseases: Hype or hope?**
F. Hansmann, W. Baumgärtner (TiHo)

Schwann cells – source of hope?
V. Stein, A. Tipold (TiHo)

Degeneration versus regeneration in the injured canine spinal cord: Who tips the scales?
I. Spitzbart, R. Ulrich, W. Baumgärtner (TiHo)

Cell transplantation strategies for spinal cord repair: The past, the present and the future
C. Radtke (Hannover Medical School)

Cells stop and go with NO and CO
G. Bicker (TiHo)

Discussion

12.45 – 13.45 Lunch and poster display

13.30 – 13.45 Meeting of the Consortium of Veterinary Neuroscience in Europe (CVNE)

Novel approaches, treatment strategies and underlying mechanisms in epilepsy

13.45 – 15.10 **Introduction**
W. Löscher (TiHo)

Novel approaches to prevent epilepsy – From animal models to the clinic
W. Löscher (TiHo)

Targeted drug or cell therapy for epilepsy
M. Gernert (TiHo)

Advances in understanding mechanisms of epileptogenesis
H. Potschka (Ludwig Maximilians University Munich)

Epilepsy in dogs – current treatment concepts
A. Tipold (TiHo)

Discussion

15.10 – 15.25 Coffee break and poster display

15.25 – 16.15 **Non-infectious encephalitis in dogs: brain biopsy based diagnosis and stem cell therapy**
T. Flegel (Leipzig University)

The two faces of regulatory T cells in demyelinating disorders
A. Beineke (TiHo)

16.15 – 17.45 Selected oral presentations and poster flash

17.45 – 18.30 Fingerfood

18.30 – 20.30 **Interactive Veterinary Neurology-Neuropathology Mini-Symposium "Lessons learned from real life" – Oncology, infectious and non-infectious inflammatory changes**
D. Gorgas, A. Oevermann (Vetsuisse Faculty, University of Bern)
A. Tipold, V. Stein, A.Beineke, W. Baumgärtner (TiHo)

20.30 – 20.45 Coffee break

20.45 – 22.00 **Interactive Veterinary Neurology-Neuropathology Mini-Symposium "Lessons learned from real life" – Oncology, infectious and non-infectious inflammatory changes**
D. Gorgas, A. Oevermann (Vetsuisse Faculty, University of Bern)
A. Tipold, V. Stein, A.Beineke, W. Baumgärtner (TiHo)

22.00 – 22.05 Closing remarks
W. Löscher (TiHo)