

2016 annual report



About us

Everything under one roof

The Department of Neurology evaluates and treats patients with disorders of the central and peripheral nervous system, neuromuscular transmission and muscles. We provide integrated care by offering an interdisciplinary-treatment chain from emergency care to rehabilitation for our patients.

Competent and patient-focussed

We treat patients with the utmost care based on our outstanding specialist knowledge in the field of neurology. Our work is based on a comprehensive patient-centered approach across medical dimensions, including mental and psychosocial aspects.

Comprehensive & highly specialised

The department offers high-quality treatment ranging from basic neurological care to highly specialised medicine.

The Department of Neurology is nationally and internationally recognised for its highly specialised medical care, including

- its recertified Stroke Centre
- the Centre for Movement Disorders (including deep brain stimulation)
- the Sleep-Wake-Epilepsy Centre (including assessments prior to epilepsy surgery).

Interdisciplinary

The Department of Neurology in Bern is Switzerland's largest neurology clinic. Its proficiency is enhanced through close integration of care within the University Neurocentre, which is one of the three strategic cornerstones of the Insel Gruppe and the Medical Faculty.

Strong in teaching and research

We promote high-quality treatment of our patients with ground breaking research and training. The Department of Neurology provides a unique platform for physiological, translational, clinical and technical research, and is Switzerland's largest specialist training centre for Physicians in Neurology.

Current news

Internationally acclaimed neurologist and MS specialist **Prof. Andrew Chan** took over medical management of the University **Outpatient Neurocentre (Ambulantes Neurozentrum, ANZ)** and the Neurology Polyclinic in February 2016.

In September 2016, the Inselspital Department of Neurology opened a University **Neurorehabilitation** unit with 20 beds in **Spital Riggisberg** to supplement the current rehabilitation unit in the Anna-Seiler-Haus on the Inselspital site. The number of beds will increase to a total of 36 in summer 2017. In early 2017, the rehabilitation unit in the Anna-Seiler-Haus was supplemented with an early rehabilitation unit (8 beds).

The specialist field **Psychosomatic Medicine** under the management of Dr. med. Niklaus Egloff has now been integrated into the Department of Neurology in organisational terms. There is a new specialism of neuropsychosomatic medicine.

In 2016, the **Stroke Centre** was recertified with extremely good results in accordance with the guidelines of the Swiss Neurological Society (SNG).

Department Management (last updated: May 2017)



From left to right: R. Mürli, A. Chan, C.L. Bassetti, R. Wyss, M. Himmelrich.

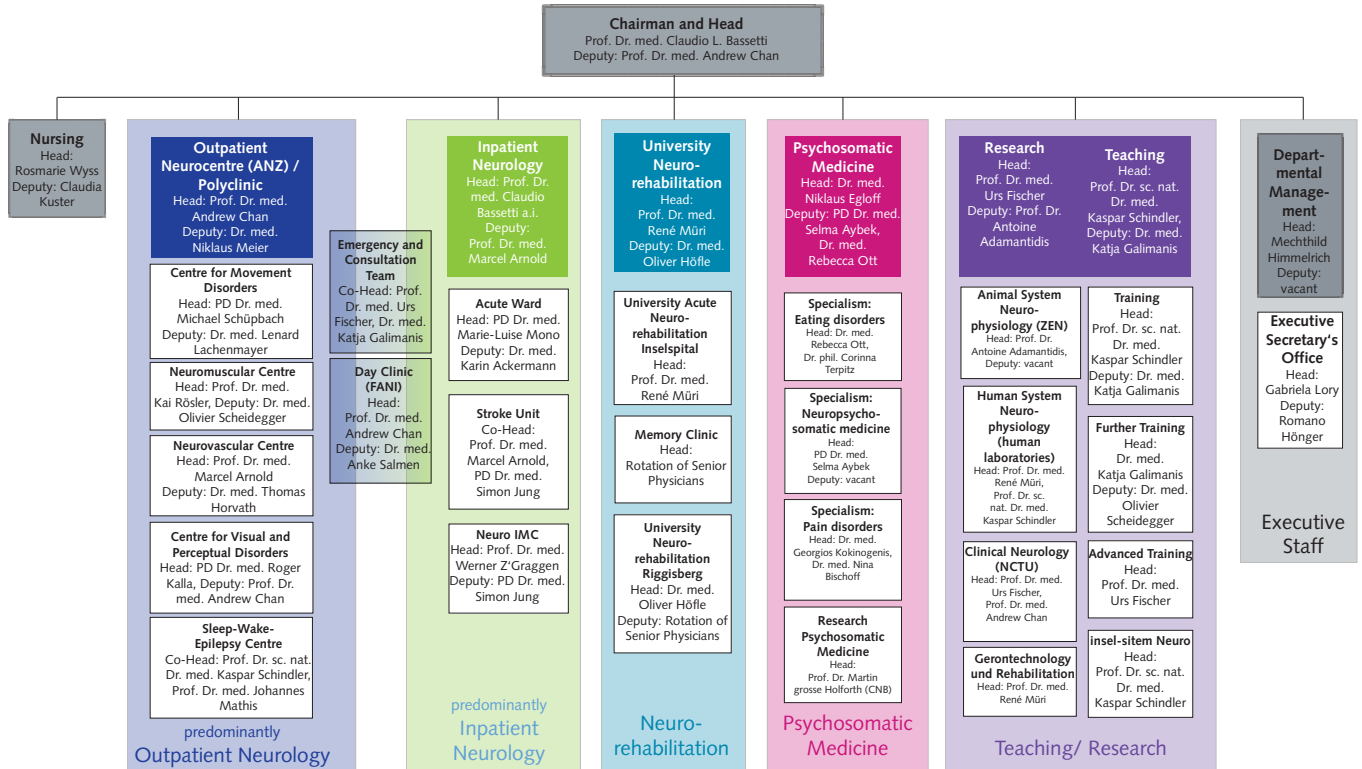
- **Prof. Dr. med. Claudio L. Bassetti**, Chairman and Head
- **Prof. Dr. med. Andrew Chan**, Deputy Head and Physician-in-Chief, Head of University Outpatient Neurocentre and Neurology Polyclinic
- **Mechthild Himmelrich**, Department Manager
- **Prof. Dr. med. René Mürli**, Medical Head of Department, University Neurorehabilitation
- **Rosmarie Wyss**, Head of Nursing

Our services

Outpatient Neurology

- Polyclinic with various special clinics (general neurology, multiple sclerosis, headaches, dizziness, dementia, etc.)
- Emergency appointments and neurology consultations
- Day Clinic for Fast-track Outpatient Neurology Infusion Therapies (FANI)
- Special centres: Centre for Movement Disorders, including botox, Sleep-Wake-Epilepsy Centre, Neuro-muscular Centre, including neuromorphology laboratory, Centre for Visual and Perceptual Disorders, Neurovascular Centre

Organisational chart



Inpatient Neurology

- Acute ward
- Stroke Centre
- Neurological-Neurosurgical Intermediate Care Unit

Neurorehabilitation

- Wards at the Inselspital and Riggisberg sites, early rehabilitation
- Outpatient clinic with Memory Clinic, neurovascular rehabilitation

Psychosomatic Medicine

- Pain and stress diseases, functional somatic syndromes, eating disorders, neuropsychosomatic medicine

Teaching and research

- Centre for Experimental Neurology (*Zentrum für experimentelle Neurologie*, ZEN)
- Neuro Clinical Trial Unit (NCTU)
- Insel-sitem Neuro (Swiss Institute for Translational and Entrepreneurial Medicine)

Key figures 2015-2016 development: strong growth

As in previous years, the Neurology Department treated more patients in 2016, while the average length of stay decreased once more. In the field of highly specialised medicine, epilepsy surgery assessments and stroke, treatments increased again in 2016.

Patients	2015	2016	Change in %, rounded
Number of emergency neurology patients	5 554	6 100	+10
Number of initial outpatient appointments	14 542	15 120	+4
Number of discharged inpatients*	1 890	2 324	+23
Number of nursing days*	10 051	12 149	+21
Average length of stay in days*	5.3	5.23	-1
Case mix index (CMI)* / **	1.49	1.29	-11

Neurorehabilitation:

Number of cases	202	290	+43
Number of nursing days	6 153	8 910	+44

* without Neurorehabilitation

** CMI reflects the degree of severity/complexity of cases

Beds	2016	2017
Acute ward	35	35
Stroke Unit (Hirnschlagzentrum)	12	12
University Acute Neurorehabilitation	20	28
University Neuro-rehabilitation Riggisberg*	20	36
Total number of beds	87	111

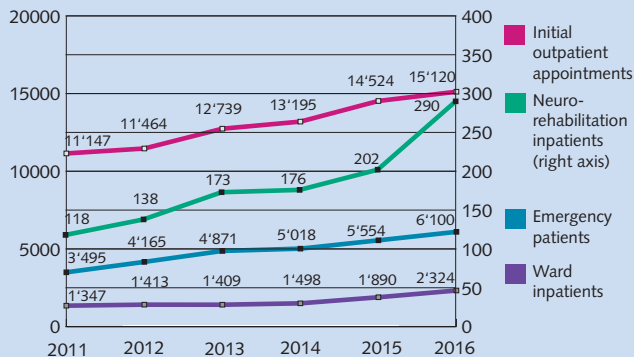
* from September 2016

Highly specialised medicine 2014-2016

Number of operations	
Deep brain stimulation	128
Number of pre-epilepsy surgery assessments	108
Number of stroke patients (Hirnschlagpatienten)	4 463

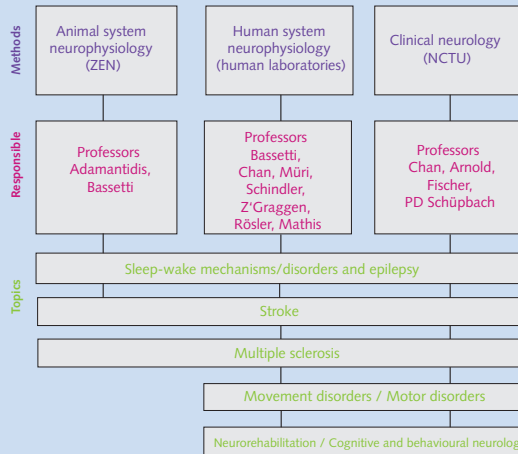
Staff	2015	2016	Change in %
Number of full-time equivalent positions as of 31.12., rounded	263	283	+8

Number of patients



Teaching and research

Main research interests: approaches and methods



With more than 50 employed residents, the Department of Neurology is Switzerland's largest neurology **training centre**. It offers comprehensive neurological training with a variety of different fellowships and part-time scientific positions.

In 2016, Prof. Dr. med. Andrew Chan took over management of the **Multiple Sclerosis and Neuroimmunology Research Group**.

Neuropsychosomatic research was also strengthened by the appointment of PD Dr. med. Selma Aybek.

Prof. Dr. Antoine Adamantidis received an **ERC Consolidator Grant** for his "All-optical deconstruction of thalamic control of sleep-wake states" project.

In 2016 there were 12 ongoing **projects supported by the Swiss National Science Foundation** (total amount for 2016: about 1.25 million CHF) in the Department of Neurology, including the four-year interdisciplinary multi-million CHF project "Early Sleep Apnea Treatment in Stroke: A Randomized, Rater-Blinding, Clinical Trial of Adaptive Servo-Ventilation" (main applicant: Prof. Claudio L. Bassetti).

The Department of Neurology published a total of 161 **papers** in 2016, including 121 original works.

2016 publications: a selection

Causal evidence for the role of REM sleep theta rhythm in contextual memory consolidation. Boyce, R; Glasgow, SD; Williams, S; Adamantidis, A (2016) in: *Science*, 352(6287), p. 812-816.

Direct Mechanical Intervention Versus Combined Intravenous and Mechanical Intervention in Large Artery Anterior Circulation Stroke: A Matched-Pairs Analysis. Broeg-Morvay, A; Mordasini, P; Bernasconi, C; Buhmann, M; Pult, F; Arnold, M; Schroth, G; Jung, S; Mattle, HP; Gralla, J; Fischer, U (2016) in: *Stroke*, 47(4), p. 1037-1044.

Hypothalamic feedforward inhibition of thalamocortical network controls arousal and consciousness. Herrera, CG; Cadavieco, MC; Jago, S; Ponomarenko, A; Korotkova, T; Adamantidis, A (2016) in: *Nat Neurosci*, 19(2), p. 290-298.

Eye Gaze Behavior at Turn Transition: How Aphasic Patients Process Speakers' Turns during Video Observation. Preisig, BC; Eggenberger, N; Zito, G; Vanbellingen, T; Schumacher, R; Hopfner, S; Gutbrod, K; Nyffeler, T; Cazzoli, D; Annoni, JM; Bohlhalter, S; Muri, RM (2016) in: *J Cogn Neurosci*, 28(10), p. 1613-1624.

Ictal time-irreversible intracranial EEG signals as markers of the epileptogenic zone. Schindler, K; Rummel, C; Andrzejak, RG; Goodfellow, M; Zubler, F; Abela, E; Wiest, R; Pollo, C; Steimer, A; Gast, H (2016) in: *Clin Neurophysiol*, 127(9), p. 3051-3058.

Role Of Sleep-Disordered Breathing And Sleep-Wake Disturbances For Stroke And Stroke Recovery. Herrmann DM, Bassetti CL (2016) in: *Neurology*, 87(13), 1407-1416.



Advanced training

The Department of Neurology offers a high-quality and balanced advanced training programme for established neurologists, GPs and hospital doctors.

Current overview: www.neuro-bern.ch

How to contact us

Patients can be referred to us at any time between 08.00 - 17.00 h (with the exception of emergencies, which are accepted at any time).

Physicians can also refer their patients on-line or using an electronic form on www.neuro-bern.ch.

Emergencies (contact with physician)

(including stroke) Tel. 031 632 17 02

General enquiries

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Inselspital, 3010 Bern
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neurozentrum@insel.ch

Executive Secretary's Office

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Fax 031 632 96 79
neurologie.direktion@insel.ch

Outpatient Neurology

Patient registration Department of Neurology
Inselspital, 3010 Bern
Tel. 031 632 70 00
Fax 031 632 03 21
neurozentrum@insel.ch

Contact with physician Tel. 031 632 17 02

Inpatient Neurology

Patient registration Tel. 031 632 78 93
Fax 031 632 05 21

Contact with physician Tel. 031 632 17 02

Neurorehabilitation

Patient registration

University Acute Neuro-
rehabilitation Inselspital
3010 Bern
Tel. 031 632 30 86
Fax 031 632 97 70
sekretariat-nreh@insel.ch

Contact with physician

Tel. 031 632 21 11
(Request Physician on Duty for
Neurorehabilitation)

Psychosomatic Medicine

Patient registration

Specialist field of
Psychosomatic Medicine
C.L. Lory-Haus
Inselspital
3010 Bern

& contact with physician

Tel. 031 632 21 11
(Request Physician on Duty for
Psychosomatic Medicine)
Fax 031 632 05 39
psychosomatik@insel.ch

Sleep-Wake-Epilepsy Centre

Patient registration

University Sleep-Wake
Epilepsy Centre
Inselspital
3010 Bern

& contact with physician

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