

Conference spotlight: 9th Swiss Movement Disorders Symposium

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Abstract

The 9th Swiss Movement Disorders Symposium, held in Lucerne, Switzerland, included didactic as well as scientific sessions. This conference report highlights selected lectures and presentations.

Keywords

Report, neurodegeneration, Swiss, Parkinson, conference, symposium, annual, meeting

The 9th Swiss Movement Disorders Symposium was held in Lucerne, Switzerland, August 31–September 1, 2017, under the leadership of Prof. Claudio Bassetti, Prof. François Vingerhoets, and Dr. Daniel Waldvogel (Figure 1). As in recent years, the symposium started with the video dinner session, giving all attendees the opportunity to discuss the semiology and etiology of interesting movement disorder cases. The various sessions of the symposium included didactic lectures as well as scientific presentations. Prof. Andrew John Lees started with an exceptional lecture celebrating the 200th anniversary of James Parkinson's landmark publication "An Essay on the Shaking Palsy." His inspiring talk outlined the lessons we have learnt from James Parkinson and future perspectives. Following, Dr. Soledad Esposito presented recent findings on brainstem circuits for movement control. Dr. Esposito and the team around Prof. Silvia Arber of the Friedrich Miescher Institute for Biomedical Research were able to show that in mice the caudal brainstem encompasses functionally heterogeneous neuronal subpopulations, which have differential effects on locomotion and are distinguishable by location, neurotransmitter identity, and connectivity.¹

Life Career Award for Prof. Hans-Peter Ludin

Prof. Hans-Peter Ludin was honored with the Life Career Award for his work for patients with Parkinson's disease in Switzerland. Prof. Ludin, former president of the Swiss Neurology Society (SNG), received the main part of his neurological education in Copenhagen and Bern. He served for

10 years as the head of the neurology department of the Kantonsspital St. Gallen. Together with the Neurosurgeon Prof. Siegfried he founded the Swiss Parkinson Association in 1985. After his retirement, he still continued to dedicate his activity in the field of Parkinson's disease and participated in the foundation and development of a neuro-rehabilitation center for patients with Parkinson's disease in Zihlschlacht, Switzerland.

One session was dedicated to research projects funded by Parkinson Schweiz in 2016. Stefanie Kübel from Kantonsspital Luzern presented a functional magnetic resonance imaging study in order to investigate the underlying neural mechanisms of neural mechanisms of limb kinetic apraxia in Parkinson's disease. The study revealed a differential activation of the left praxis network underlying dexterous deficits in Parkinson's disease, corroborating the behavioral dissociation of limb kinetic apraxia and bradykinesia. Moreover, altered connectivity of the praxis networks might reflect an insufficient compensatory mechanism that possibly adds to dexterous deficits.²

Dr. Fabian Büchele, from University Hospital Zürich, highlighted the results of a phase II trial of pyridostigmine bromide in Parkinson's disease, which failed to display a positive effect of pyridostigmine bromide on orthostatic hypotension in Parkinson's disease patients.³

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Figure 1. The Swiss Movement Disorder Symposium: an annual event for clinicians and scientists.

Affif Zaccaria from the University Hospital of Geneva presented interesting results of brain tissue imprints obtained from Parkinson patients during deep brain stimulation (DBS) surgery. Immunofluorescence analyses confirmed that the *in vivo* approach allowed to harvest distinct neurotransmitter markers of many neural cells. Shotgun proteomic and transcriptomic analyses provided for the first time molecular information from DBS-associated brain samples, and confirmed the compatibility of this new type of sample with poly-omic approaches.⁴

As a new event, one teaching session was dedicated to the “Swiss Young Neurologists,” which was very well accepted by the audience and should be continued in 2018. Clinical algorithms to approach myoclonus as well as essential diagnostics and therapies of common forms of adult-onset dystonia were covered by the presentations of Dr. Georg Kägi and Prof. Joseph-Andre Ghika, respectively.

Best Movement Disorders Paper Award 2016

The Best Movement Disorders Paper Award was presented to Dr. Sebastian Schreglmann (Kantonsspital St. Gallen) for his publication “Unilateral cerebellothalamic tract ablation in essential tremor by MRI-guided focused ultrasound” in *Neurology*.⁵ and to Dr. Tim Vanbellinggen, Luzerner Kantonsspital, for “Home based training for dexterity in Parkinson’s disease: A randomized controlled trial.” published in *Parkinsonism & Related Disorders*.⁶ Schreglmann et al. were able to show that unilateral ablation of the

cerebellothalamic tract by transcranial MRI-guided focused ultrasound was highly efficacious in reducing contralateral hand tremor in essential tremor without affecting fine motor function and dexterity over 6 months of follow-up and with only mild and transient adverse events. In the first and largest randomized home-based trial for dexterity in Parkinson’s disease, Vanbellinggen et al. were able to show that an intensive, task specific home-based dexterity program significantly improved fine motor skills in Parkinson’s disease.

The Symposium was rounded off by the speech of Prof. Alim Louis Benabid, one of the founders of the DBS. In his fascinating talk, he provided a historical account of DBS and future perspectives. In particular, he focused on pre-clinical results on the effects of photoacceptor molecules on the mitochondrial metabolic activity in Parkinson’s disease. The application of near infrared illumination of the substantia nigra in 1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine (MPTP) monkeys has shown a remarkable neuroprotective effect. A clinical trial in early Parkinson’s disease based on these data is expected to start soon.

In summary, the 9th Swiss Movement Disorders Symposium was very well organized and well attended and brought together clinicians and scientists, promoting further discussion and collaborations.

Declaration of conflicting interests

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