

Obituary

Professor Frank Lehmann-Horn, M.D.  
(1948–2018)



Since 2006, Frank Lehmann-Horn, Director of the Division of Neurophysiology at the University of Ulm, had been fighting against various forms of cancer. On 8 May 2018, after an apparently successful bone marrow transplantation, he passed away owing to the sequelae of leukemia. The community of German researchers into neuromuscular diseases has lost one of its most distinguished members. In particular his co-workers at the University of Ulm miss him as their pioneer and sincere friend.

Frank's life-long research interest was mainly devoted to the groups of hereditary myotonias and periodic paralyses. After thorough training in physiology and neurology at the Technical University of Munich (TUM) he started sophisticated voltage-clamp experiments on excised intact muscle fibers from patients with paramyotonia congenita and hypokalemic periodic paralysis. These studies led to the first definition of the defect ion channel proteins in these diseases. In 1982, when he was only 34 years of age, the German Association of neuromuscular patients (DGM) duly bestowed on him and his group its highest award, the Erb-Duchenne Preis. In the following years, after some time training with Prof. Andrew Engel at the Mayo Clinic, Rochester MN, Frank returned to

the TUM to discover several new forms of what he dubbed "channelopathies" e.g. potassium-sensitive myotonia, a severe form of disease caused by mutations in the gene coding for the muscular sodium channel. The numerous mutations of this gene that can cause myotonia congenita to varying degrees of severity, of paramyotonia congenita and of periodic paralysis, defined the volume of his work in the ensuing years.

In 1992, by which time he had already been promoted to Professor of Neurology at the TUM, Frank was offered the Chair of Applied Physiology at the University of Ulm. He gladly accepted it because it released him from routine clinical duties. The Ulm Medical Faculty, however, additionally charged on him the direction of its new Interdisciplinary Center for Clinical Research. During his 6 years in this job, Frank nurtured the center to full fruition. Needless to say, muscle research was a substantial part of its program. This again helped Frank when he later became Chair of the Ulm Neuromuscular Center. In 1995, the City of Ulm bestowed its Scientific Award on him. From 1996 to 2006, Frank also coordinated two EU networks. His key role in this successful collaboration was acknowledged in 2003 by an honorary doctor's degree from the Hungarian University of Debrecen, and in 2004 by the award of the Gaetano Conte Academy of Naples.

Together with his chief co-worker of many years, Karin Jurkat-Rott, Frank then turned to more research into the periodic paralyses. Particularly, he devoted much time to pushing forward treatment for these diseases. His "ability to listen to patients" was repeatedly acknowledged in the USA, i.e. by awards of the Patients' Associations of Las Vegas (2002), Orlando (2007) and Washington DC (2009). The Conference of American Periodic Paralysis Associations decorated him for "Excellence in Research" in 2011. Other activities directed to the benefit of patients were the foundation of a reference center for families concerned with malignant hyperthermia (1995) and a center for rare diseases in Southern Germany (2010).

At home, Frank Lehmann-Horn's scientific achievements were recognized in 2008 by membership of the Heidelberger Akademie der Wissenschaften, and in 2009 by the endowment of a Senior Research Professorship by the German Non-Profit

Hertie Trust. His most recent interests were the investigation of the role of increased intracellular sodium in periodic paralysis and Duchenne muscular dystrophy. After he retired from his Chair of Applied Physiology in 2010, the University of Ulm established in his honour a Division of Neurophysiology, the directorship of which he retained until his death.

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