LECTURE

The identification of modifiers of amyotrophic lateral sclerosis.

DR. WIM ROBBERECHT

He graduated as an MD at the University of Leuven (KU Leuven) in 1984 and trained as a neurologist at the University Hospital Leuven, the University Medical Center of the University of Virginia, Charlottesville, Virginia and the Massachusetts General Hospital, Harvard University, Boston, Massachusetts. He graduated as a PhD at the Laboratory for Cell Pharmacology of the University of Leuven, being a fellow of the Research Fund Flanders (FWO Vlaanderen), and as a postdoc, worked in the Cecil Day Laboratory for Neuromuscular Disease of the Massachusetts General Hospital, Boston (directed by Dr RH Brown).

In 1992, Dr Robberecht was appointed assistant Professor at the University of Leuven and joined the department of Neurology at the University Hospital Leuven. He founded the laboratory for Neurobiology at the University of Leuven and became Clinical Investigator of the FWO Vlaanderen. In 1994 he became associate Professor and in 1997 Professor at the University of Leuven. He was appointed director of the Neuromuscular Reference Center of the University Hospital in Leuven in 1999.

In 2001, Dr Robberecht became full Professor and Chairman of the department of Neurology at the University Hospital Leuven. In 2007, he was appointed group leader in the Vesalius Research Center, VIB, Leuven. In 2013, he started a term as Chairman of the Biomedical Sciences and vice rector of the University of Leuven.

The focus of Dr Robberecht's research interest is the mechanism and treatment of motor neuron degeneration such as seen in amyotrophic lateral sclerosis (ALS) and frontotemporal lobe degeneration (FTLD). His research is both basic and clinical. In his laboratory, cellular, fish and rodent models are used to study this disease. In addition, through his clinical work, he contributes to the genetics and the development of treatments for this fatal disease.

Dr Robberecht is the chairman of the scientific advisory board of the Thierry Latran Foundation for ALS research and member of the executive board of the European Network for the Cure of ALS (ENCALS). He received the Sheila Essey Award for ALS research from the American Academy of Neurology in 2008 and the 2010 Chair of the Franqui Foundation, Belgium. In 2014 he received an award of the Medical Foundation Queen Elisabeth, and was awarded an ERC advanced grant.

Five recent representative publications:

-Swinnen B and Robberecht W. The phenotypic variability of amyotrophic lateral sclerosis. Nat Rev Neurol, 10; 661-70; 2014

-Philips T, Bento-Abreu A, Nonneman A, Haeck W, Staats K, Geelen V, Hersmus N, Kusters B, Van Den Bosch L, Van Damme P, Richardson WD and Robberecht W. Oligodendrocyte dysfunction in the pathogenesis of amyotrophic lateral sclerosis. Brain, 136; 471-82; 2013
-Van Hoecke A, Schoonaert L, Lemmens R, Timmers M, Staats KA, Laird AS, Peeters E, Philips T, Goris A, Dubois B, Andersen PM, Al-Chalabi A, Thijs V, Turnley AM, van Vught PW, Veldink JH, Hardiman O, Van Den Bosch L, Gonzalez-Perez P, Van Damme P, Brown RH, Jr., van den Berg LH and Robberecht W. EPHA4 is a disease modifier of amyotrophic lateral sclerosis in animal models and in humans. Nat Med, 18; 1418-22; 2012
-Robberecht W and Philips T. The changing scene of amyotrophic lateral sclerosis. Nat Rev Neurosci, 14; 248-64; 2013
-Lemmens R, Van Hoecke A, Hersmus N, Geelen V, D'Hollander I, Thijs V, Van Den Bosch L, Carmeliet P, Robberecht W. Overexpression of mutant superoxide dismutase 1 causes a motor axonopathy in the zebrafish. Hum Mol Genetics, 16,2359-65;2007