

The key lies in cell metabolism: Neuroscientist and neurologist Luisa Klotz wins renowned Heinrich-Pette-Award



Münster. For the third time the renowned neuroscience award “Heinrich Pette prize” goes to Münster, as this year Luisa Klotz was rewarded with the prestigious award for neuroscience researchers and clinicians at the congress of the German Society of Neurology in Stuttgart.

Neurologist and Neuroscientist Luisa Klotz received the award for her outstanding research in the field of Multiple Sclerosis

and related neuroinflammatory disorders. She succeeds the director of the department of neurology Prof. Heinz Wiendl (2009) and the director of the institute of translational neurology Prof. Sven Meuth (2014).

Like her predecessors Luisa Klotz builds a bridge between bench and bedside. Her main focus is the role of immune cell metabolism for immune cell function to address the question what distinguishes the function of diseased immune cells from the ones of healthy individuals? She could show for the first time that immune cells from MS patients display a disturbed cellular metabolism, resulting in aberrant immune function. “We now realize that targeted correction of immune cell metabolism represents a highly promising strategy to treat autoimmune diseases such as Multiple Sclerosis (MS)”. She and her team could demonstrate that this strategy can explain immune modulatory effects of the MS drug teriflunomide, and in the meantime extended these findings to other MS treatment options.

These findings open new avenues for novel treatment strategies in MS: “Future studies might help to further decipher disturbances in immune cell metabolism in distinct autoimmune diseases and develop more tailored treatment approaches”, Luisa Klotz explains. This is a highly attractive scenario, as current treatment options often target many immune cell populations at the same time, regardless of their specificity. This can impair immune function in the context of infections and thus development of severe side effects. Novel treatment strategies could therefore help to selectively target disturbed metabolic pathways in affected immune cell populations, which would increase treatment specificity and reduce potentially unwanted side effects.

The Pette award represents a huge incentive for Luisa Klotz to pursue her research direction in the future.

Luisa Klotz started her career at the Department of Neurology at the University Hospital Bonn, where she acquired her MD degree in 2002 with distinction. She worked for nine years both at the department of Neurology as neurologist and as a neuroscientist at the department of molecular medicine and experimental immunology in Bonn, before she moved to Münster after obtaining her habilitation in 2011. Since then she leads her own research group at the Department of Neurology in Münster investigating distinct pathomechanisms and potential target structures in neuroinflammatory diseases. Since

2016 she holds an endowed professorship for Neurological Immune Therapy, funded by the “Stifterverband”. For her research activities, which are embedded within the DFG funded collaborative research center TR128 and 1009 and which will in the future be part of the recently funded “Body and Brain institute Münster”, she already won several awards, such as in 2012 the Sobek young scientist award for Multiple Sclerosis.

The Heinrich Pette Award of the German Society of Neurology honors german speaking clinician scientists in the field of neurology, whose research deals with the pathogenesis, diagnostics and treatment or the anatomy of diseases of the central nervous system. It is endowed with EUR 10.000.