



Researchers are discovering the first approach to healing Alzheimer's

17.01.2017

Getting old in good health is the main concern of our increasingly aging society and one of the greatest challenges for biomedical research. "With increasing age, the risk of neurodegenerative diseases like Alzheimer's disease increases. Neurodegenerative diseases are currently not curable," explains Prof. Dr. Ludwig Aigner of the Paracelsus Medical Private University in Salzburg, Austria, who is responsible for the treatment of neurodegenerative diseases.

Similar to an old car, which is not dysfunctional due to one single defect, but because of numerous wear and aging symptoms, the aging process of the brain and the associated loss of learning and memory performance cannot be explained by a single age-dependent change, according to the expert.

A research group led by Aigner has recognized this holistic phenomenon and has set itself the goal of tackling as many of these age-dependent brain changes as possible. "This could rejuvenate the brain and possibly prevent, or even cure, diseases such as Alzheimer's disease.," the brain researcher said.

Drug "Rejuvenates" the brain

As a first exciting approach, the research team discovered that a drug called montelukast, which has already been approved for a long time for the treatment of asthma, does exactly that. They discovered that it blocks certain inflammation-promoting age factors, the so-called leukotrienes, in the brain and thus completely restores the brain function of aged rats. Montelukast increases the production of nerve cells and reduces harmful inflammatory reactions in the brain. In co-operation with a Canadian company – IntelGenx Corp, Prof. Aigner is currently optimizing the drug for use in Alzheimer's dementia.

The project is funded by the FWF.

About the person:

Prof. Aigner, born in Wallersdorf (Bavaria), has been studying brain regeneration for more than 20 years. He studied biology in Regensburg, earned his Ph.D. in Switzerland, subsequently worked for three years at the McGill University in Montreal as a researcher under Albert Aguayo, the “father of the regeneration of the brain”, and then returned to Regensburg to establish and head the research laboratory at the institute of neurology. Since 2008, Aigner has been at the Paracelsus Medical University of Salzburg, where he heads the Institute for Molecular Regenerative Medicine and is the spokesperson of the Center for spinal cord injury and tissue regeneration.

In the "Krone der Wissenschaft" series, we present projects by top researchers and researchers in Austria. They are selected by Prof. Dr. Georg Wick, Head of the Laboratory for Autoimmune Diseases at the Medical University of Innsbruck.