

PRESS RELEASE

Outstanding research work in the medical field Stefan Rose-John receives the 2023 Jung Gold Medal for Medicine for his life's work in translational medicine

Hamburg, 4 May 2023. "The human body is an incredibly complex machine, and I was privileged to be involved in researching the biochemistry of the human immune system." What intelligence agencies do at a large scale, biochemists research on a small scale – the decoding of communication. The latter focuses on examining the exchange of information between the body's cells. And it is precisely in this area that Professor Stefan Rose-John has been working for a long period of time, most recently at the Biochemical Institute in the Faculty of Medicine at the University of Kiel – with a vast amount of curiosity and passion. Through the work he has carried out over the course of his career, he has provided a great service to medicine and paved the way for new medications and treatments. He not only succeeded in discovering a new signalling pathway of the interleukin-6 (IL-6) cytokine, but also in finding ways to inhibit this pro-inflammatory pathway without compromising the protective and regenerative properties of IL-6. The Jung Foundation for Science and Research is now recognising this work by awarding him the Jung Gold Medal for Medicine. Each year, the Jung Foundation gives this award to leading researchers who have made a significant contribution to the advancement of medical research and practice or who are still actively doing so. The award is a recognition of their lifetime achievements to date.

The cells in our body are in constant contact with one another and transmit messages to one another ceaselessly. Messenger substances, known as cytokines, are responsible for this. However, not all messages are positive, and some can even make us ill. For example, the interleukin-6 (IL-6) cytokine is frequently associated with diseases: from Crohn's disease and



rheumatoid arthritis to diabetes, neurological diseases, forms of heart failure and the development of various types of tumor. Inhibitors against IL-6 are often used for treatment. The problem: current treatments inhibit all functions of IL-6, including the positive ones, such as protection against infections.

With his discovery of the different signalling pathways of IL-6, Stefan Rose-John made a major breakthrough: "We found ways to keep the good and bad properties of interleukin-6 physically separate. This has enabled us to inhibit the pro-inflammatory pathway of this cytokine without compromising its protective and regenerative properties." The result of this research was the designer protein sgp130Fc. It inhibits inflammation and has far fewer unwanted side effects than the non-selective inhibitors previously used. Professor Rose-John and researchers from the 'Precision Medicine in Chronic Inflammation' (PMI) cluster of excellence have further developed this protein into the drug candidate 'Olamkicept'. A placebo-controlled clinical trial (phase II) has already demonstrated the efficacy and tolerability of Olamkicept in patients with ulcerative colitis from a number of Asian countries. Large-scale studies will now follow in phase III to test efficacy and safety before the drug can be approved by the authorities.

A successful life's work from an early passion: the career of Stefan Rose-John

"As a child, I was always curious about how things worked." This enduring passion has given the science world an outstanding researcher. Stefan Rose-John's thirst for knowledge led him to enrol in Biology with a minor in Chemistry and Physics after graduating from high school in his hometown of Heidelberg. In 1982, he received his doctorate before moving to Michigan, USA, for a two-year post-doctoral position. However, his hometown remained in his heart, and he returned to Heidelberg to take up the role of team leader at the German Cancer Research Center. In 1988, he then moved to RWTH Aachen University to work as a research assistant,



where he qualified as a professor of biochemistry in 1992. From there, he moved on to Mainz, where he took up a professorship in pathophysiology at Johannes Gutenberg University. In 2000, he moved to Kiel. As professor of biochemistry and director of the Biochemical Institute, he spent 22 years at University of Kiel before retiring at the end of last year. "I'm a very curious and ambitious person. These two qualities have certainly helped me in my research," Stefan Rose-John sums up. "However, passion for the subject matter and a strong will have also been important traits over the years. My personal motto is 'You can do it', and I've needed this sense of confidence and self-assurance to succeed during my life and career."

2023 Jung Gold Medal for breakthrough in translational medicine, with new treatments expected to follow

Stefan Rose-John lives for his career and his research. He has turned his fascination of questioning things and processes into a career. Not only has he managed to achieve groundbreaking results, but he has also succeeded in translating them into promising potential treatments. This makes him a perfect award winner for the Jung Foundation for Science and Research, whose guiding principle is to create a bridge between research and hospital beds. The Foundation has therefore chosen to recognise his commitment with the Jung Gold Medal for Medicine. "It's a huge honour to be recognised with such a prestigious award. The list of former recipients is impressive," says Stefan Rose-John. Although his research may be his life, he greatly enjoys being outdoors in his spare time. "I always say that I don't need a hobby because my work is so interesting. However, I do love going for a walk at the lakes or at the sea in Schleswig-Holstein. And going sailing regularly with my friends gives me great pleasure outside of work," says Rose-John. With the award, the Heidelberg native receives a scholarship of 30,000 euros, which he can award to a young researcher of his choice.

The Jung Foundation has been committed to the advancement of human medicine for over 40 years. With the Jung Gold Medal for Medicine and two



further awards, the Foundation provides more than half a million euros each year for the benefit of science.

About the Jung Foundation for Science and Research

The Jung Foundation for Science and Research, based in Hamburg, Germany, honours basic and advanced research projects of particular clinical relevance with three annual awards. To date, the foundation has invested more than 15 million euros in supporting researchers whose projects build a bridge from research to the bedside. Under the motto "Award-winning Human Medicine", the foundation thus makes a significant contribution to the development of new therapy methods. With a total of 540,000 euros, the Jung Prize for Medicine, the Jung Gold Medal for Medicine and the Jung Career Advancement Award for Medical Research are among the most highly endowed medical prizes in Europe. Talented young doctors can apply directly for the Advancement Award; candidates for the other awards are nominated.

Further information is available at www.jung-stiftung.de

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