

PRESS RELEASE

Developing tailored medications with mRNA technology

Özlem Türeci receives the 2023 Jung Prize for Medicine for her research into the prevention and treatment of tumour diseases, infectious diseases and other serious illnesses

Hamburg, 4 May 2023. The potential of mRNA vaccines is shaping scientific discourse today in many ways. Having helped to alleviate the effects of the COVID-19 pandemic, this potential has now become widely known. However, the fundamental and translational research as well as the development of mRNA technology that enabled the fast response, development and thus rapid availability of a vaccine against COVID-19 began decades ago. As co-founder of BioNTech, Professor Özlem Türeci is a leader in this field. Her research in immunology and mRNA technology also highlights development potential beyond COVID-19 for the prevention and treatment of tumour diseases, infectious diseases and other serious illnesses. In recognition of her achievements, she receives the Jung Prize for Medicine, which is endowed with a total of 300,000 euros, from the Jung Foundation for Science and Research. Türeci can use the prize fund for her future research as she sees fit. The Jung Prize for Medicine has been awarded since 1976 and recognises the work of researchers who have made a significant contribution to the advancement of human medicine and whose work promises to continue to do so in the future. It is one of the most highly endowed medical awards in Europe.

“For as long as I can remember, I’ve been interested in medicine and the human immune system. Understanding how these mechanisms work and finding ways to use these insights for the benefit of people or humanity – this is what my work is all about.” And this is precisely how Özlem Türeci uses her expertise: Her research not only contributed to the development of the first approved vaccine against COVID-19, but also brought potential new

personalised treatments for cancer patients from research into clinical development. At present, treatment is mainly focused on conventional chemotherapy, radiotherapy and surgery. Özlem Türeci believes that the future of medicine lies in early diagnostics and personalised medicine. “It is our vision that we can truly understand the particular type of cancer of each individual patient and then develop a personalised treatment just for them.”

Doctor, researcher, founder: the career of Özlem Türeci

Her inspiration in life was her father. “My father was a surgeon who cared deeply about his patients, but he was also always interested in making use of the latest scientific knowledge. I wanted to do exactly the same.” During her studies at Saarland University in Homburg, her interest in oncology quickly crystallised. Özlem Türeci decided to focus her doctoral thesis on this subject before taking up a junior residency in oncology at Saarland University Hospital. She continued at the university even after completing her residency – leading a research group focused on molecular and immunological profiling of solid tumours. In 2000, she moved to Mainz, where she led a research group in the field of cancer research at Johannes Gutenberg University. In 2002, she completed her post-doctoral thesis. But even before she had finished her studies, she co-founded Ganymed Pharmaceuticals, a biopharmaceutical company which developed highly tumour-specific antibody drugs against novel targets for the precise treatment of solid tumours. In 2009, Özlem Türeci co-founded the biotechnology company BioNTech, where she first served as chair of the scientific advisory board and has held the position of Chief Medical Officer since 2018. The decision to become an entrepreneur came naturally to her. “At some point, I realised that, in order to turn your research into medicine, you needed to know about the actual development of drugs. And this is the vision behind BioNTech. Bringing what we do here on a scientific level to people, so we can make a lasting difference in their lives.”

2023 Jung Prize for Medicine for groundbreaking research into mRNA agents

Naturally, alongside work, it is important to have some balance in life – and Özlem Türeci finds this on her bookshelf. She particularly enjoys reading biographies: “My father always said that if you look at other people’s lives and experiences, you can live many lives yourself and learn from this.” Her own life has not changed much since the successful development and introduction of the COVID-19 vaccine and the publicity that has subsequently come her way. “The conditions in which I now conduct my research and development are different, of course. However, my life, and most importantly, our vision, have not changed – bringing the findings of our research and potential new treatments to people.” With this year’s Jung Prize for Medicine, the Jung Foundation for Science and Research is recognising not only a physician who has carried out groundbreaking research, but also a scientist who is the perfect embodiment of the Foundation’s philosophy of alleviating human suffering. “I feel very honoured to receive this award from the Jung Foundation. It promotes research and medical advancement that serves the common good. This is one of the noblest goals of medicine, and one that I’m also personally committed to.”

Each year, the Jung Foundation awards three prizes which amount to a total sum of 540,000 euros, positioning them among the most highly endowed medical prizes in Europe. Under the motto ‘Award-Winning Human Medicine’, the Jung Foundation makes a significant contribution to the development of new treatment options.

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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