Leopoldina
Nationale Akademie
der Wissenschaften

Curriculum Vitae Prof. Dr. Özlem Türeci

Image: Stefan Albrecht | BioNTech SE 2021

Name: Özlem Türeci
Born: 6 March 1967

Research interests: Immunology, immunotherapy, molecular medicine

Özlem Türeci is a physician and basic researcher in the field of immunology. She researches target structures with a view to developing new treatments for cancer, infectious diseases and diseases of the immune and nervous systems. Together with Uğur Şahin, with whom she co-founded the biotechnology company BioNTech, she developed the mRNA vaccine Comirnaty against COVID-19, and in doing so became one of the leading figures in the fight against the pandemic.

Academic and professional career

since 2021	Professor for Personalised Immunotherapy, Helmholtz Institute for Translational Oncology (HI-TRON), Mainz, Germany, and Johannes Gutenberg University Mainz, Germany
since 2018	Chief Medical Officer (CMO), BioNTech SE, Mainz, Germany
2009 - 2018	Chairperson, Scientific Advisory Board, BioNTech SE, Mainz, Germany
2008	Co-Founder, BioNTech SE, Mainz, Germany
2008 - 2016	Chief Executive Officer (CEO), Ganymed Pharmaceuticals AG (now a subsidiary of Astellas Pharma Inc.), Mainz, Germany
2002 - 2021	Independent Lecturer in Cancer Immunotherapy, University Medical Center, Johannes Gutenberg University Mainz, Germany
2002	Habilitation in Molecular Medicine, Johannes Gutenberg University Mainz, Germany
2001 - 2008	Chief Scientific Officer (CSO), Ganymed Pharmaceuticals, Mainz, Germany
2001	Co-Founder, Ganymed Pharmaceuticals AG, Mainz, Germany
1992	PhD, Faculty of Medicine, Saarland University, Homburg (Saar), Germany

1986 - 1992	Degree in Human Medicine, Saarland University, Homburg (Saar), Germany

Roles within scientific associations and boards

since 2019	Member, Executive Board, Association for Cancer Immunotherapy e. V. (CIMT), Mainz, Germany
	Member, American Society of Clinical Oncology (ASCO), USA
since 2011	Chairperson and Co-Initiator, Cluster for Individualized Immune Intervention (Ci3) in the Rhein-Main Region (Rhineland-Palatinate, Hessen, Baden-Württemberg), German Federal Ministry of Education and Research (BMBF)
2010	Founding Member, Translational Oncology (TRON), University Medical Center, Johannes Gutenberg University Mainz, Germany
since 2013	Member, American Association for Cancer Research (AACR), USA
since 2013	Member, Deutsche Gesellschaft für Hämatologie und Onkologie (DGHO)
since 2004	Member, German Society for Immunology (DGfI)

Project coordination and joint projects

2004 - 2005	Applicant, Translational Oncology (TRON) project at the University Medical Center of the Johannes Gutenberg University Mainz, Germany, German Research Foundation (DFG)
2003 - 2008	Head, subproject A14, Collaborative Research Centre SFB432, German Research Foundation (DFG)
2003 - 2008	Head, subproject Z06, Collaborative Research Centre SFB432, German Research Foundation (DFG)
1999 - 2001	Head, subproject A10, Collaborative Research Centre SFB339, German Research Foundation (DFG)

Awards and honorary memberships

2023	Member, Orden Pour le mérite für Wissenschaften und Künste, Beauftrage der Bundesregierung für Kultur und Medien
2023	Jung Prize for Medicine
2022	Honorary Ring, University Medical Center of the Johannes Gutenberg University Mainz, Germany
2022	Werner von Siemens Ring, Werner von Siemens Ring Foundation, Germany

2022	Paul Ehrlich and Ludwig Darmstaedter Prize, Paul Ehrlich Foundation, Frankfurt am Main, Germany
2021	Jeantet-Collen Prize for Translational Medicine, Louis-Jeantet Foundation, Geneva, Switzerland (together with Uğur Şahin and Katalin Karikó)
2021	Deutscher Zukunftspreis – the German Federal President's Award for Technology and Innovation (together with Uğur Şahin, Christoph Huber and Katalin Karikó)
2021	German Immunology Award, German Society for Immunology (DGfI)
2021	Inducted into the Hall of Fame for German Research, manager magazin, Hamburg, Germany
2021	Meyenburg Prize, Meyenburg Foundation, Heidelberg, Germany
2021	European Manager of the Year, European Business Press (EBP), Ljubljana, Slovenia
2021	Honorary Doctorate, Faculty of Medicine, University of Cologne, Germany
2021	Princess of Asturias Award for Technical & Scientific Research, Princess of Asturias Foundation, Oviedo, Spain
2021	Academy Prize of Rhineland-Palatinate, German Academy of Sciences and Literature, Mainz, Germany
2021	Great Cross of Merit (with star) of the Order of Merit of the Federal Republic of Germany
2021	Axel Springer Award, Axel Springer SE, Berlin, Germany
since 2021	Member of the German Academy of Sciences and Literature
since 2021	Member, German National Academy of Sciences Leopoldina
since 2021	Member, European Molecular Biology Organization (EMBO), Heidelberg, Germany
2020	Person of the Year, Financial Times, London, UK
2020	German Sustainability Award (DNP), German Sustainability Award Foundation
2005	Georges-Köhler Prize, German Society for Immunology (DGfI)
1997	Calogero-Pagliarello Research Award, Calogero-Pagliarello Foundation, Homburg, Germany
1995	Vincenz-Czerny Prize, German Society of Hematology and Medical Oncology (DGHO)

Research interests

Özlem Türeci is a physician and academic researcher. She researches target structures with a view to developing new treatments for cancer, infectious diseases and diseases of the

immune and nervous systems. She focuses on the identification and characterisation of tumour-specific molecules and the development of personalised treatment approaches. Together with her husband Uğur Şahin, with whom she also co-founded the biotechnology company BioNTech, she developed the mRNA vaccine Comirnarty against COVID-19, and in doing so became one of the leading figures in the fight against the pandemic.

Over the last 20 years, Özlem Türeci and Uğur Şahin have solved several of the challenges associated with mRNA vaccines. They have developed methods for delivering mRNA to dendritic cells using a suitable lipid carrier; improved the stability of the mRNA; and increased the level of protein transfer by 1000 times.

In addition to developing diagnostics and monoclonal antibodies – including zolbetuximab, an antibody that targets gastric and oesophageal cancer – Özlem Türeci has also focussed her research efforts on mRNA-based immunotherapy. This area of her work looks at developing targeted cancer medications as well as immunotherapeutic vaccines against diseases such as tuberculosis and HIV. Since co-founding both Ganymed Pharmaceuticals and BioNTech, she has worked on numerous projects in the fields of oncology and vaccines and is co-inventor of more than 500 patents. During the development of BioNTech's COVID-19 vaccine BNT162b2 (brand name Comirnaty), she was responsible for organising the clinical trials. She and Uğur Şahin have since received numerous prizes from around the world in recognition of their achievement.