Website address:
https://www.gesundheitsindustrie-bw.de/en/article/press-release/tschechischer-erfinderpreis-fuer-martina-benesova-schaefer

Czech Inventor Award for Martina Benešová-Schäfer

With the "Česká Hlava" awards, the Czech government has been honoring the country's most brilliant minds every year since 2002 and recognizing exceptional achievements in research, development and innovation. Martina Benešová-Schäfer of the German Cancer Research Center was among the six laureates honored in 2022 at Charles University in Prague. She received the Czech Inventor Award for the development of agents for the diagnosis and therapy of prostate cancer.

Benešová-Schäfer, a radiopharmaceutical chemist, is developing agents that can be used both to diagnose a disease and for therapy, so-called "theranostics". The award recognizes in particular her contribution to the invention and preclinical development of lutetium-177 PSMA-617. This is a ligand coupled with radioactive lutetium-177 that can dock precisely to the prostate-specific membrane antigen, or PSMA.

The majority of all prostate cancer cells carry the glycoprotein PSMA on their cell membrane, but it is rarely found in the rest of the body. The cancer cells take up the agent inside the cell, so that it accumulates in the tumors and delivers its lethal dose of radiation from within, making the effect of the therapy particularly precise and targeted.

With the development of Lutetium-177 PSMA-617, Benešová-Schäfer and her fellow inventors have achieved an extraordinary translational success. In a pivotal study (VISION III) conducted at several U.S. hospitals, the agent, in combination with standard therapy, was able to reduce overall mortality by 38 percent and disease progression by 60 percent of subjects during the study's observation period.

In March last year, Lutetium-177 PSMA-617 (trade name: Pluvicto) had already received FDA approval for the U.S. In December, the European Commission also granted approval for Europe for the treatment of patients with metastatic prostate cancer that carries PSMA on its cell surface. Until now, the drug has only been approved for patients who have previously received chemotherapy and anti-hormonal therapy and no longer respond to traditional hormone therapy.

Martina Benešová-Schäfer studied nuclear chemistry at Charles University in Prague as well as at the Technical University of Prague and received her PhD in radiopharmaceutical chemistry from the University of Heidelberg in 2016. After research positions at the Paul Scherrer Institute in Villingen, Switzerland, and at ETH Zurich, she has headed the junior research group "Molecular Biology of Systemic Radiotherapy" at DKFZ since 2019.

The prize money of 250,000 Czech crowns (equivalent to about 10,300 euros) associated with the award was provided by the technology company ABB.

Press release

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Further information

- German Cancer Research Center (DKFZ), Heidelberg