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How obesity and sex control the immune response to cancer

*Prof. Carole Bourquin, MD, PhD
Institute of Pharmacology
University of Bern*

**15.04.2025, 4:15 pm
Lecture hall EG16, DCBP, Freiestrasse 3**

Abstract:

Obesity is a well-known risk factor for cancer, yet recent findings suggest it may also improve responses to cancer immunotherapy. Understanding the biological mechanisms behind this paradox could improve cancer treatment strategies. One key factor is estrogen, which is found at higher levels in obese patients. Our study suggests that estrogen levels could serve as a predictive marker for response to immunotherapy in male patients. These findings open new avenues for personalized immunotherapy, integrating sex and metabolic factors into treatment decisions.

About the speaker: **Prof. Dr. Dr. Carole Bourquin**

Prof. Dr. Dr. Carole Bourquin was recently appointed Full Professor and Director of the Institute of Pharmacology at the University of Bern. Prof. Bourquin studied medicine in Geneva before earning her PhD in Immunology at the Max Planck Institute in Munich. She later established her own research group at the Ludwig Maximilian University of Munich, focusing on cancer immunotherapy. In 2011, she returned to Switzerland as a Full Professor of Pharmacology at the University of Fribourg. From 2016 to 2025, she held a professorship at the University of Geneva while also practicing as a clinical pharmacologist at the University Hospital of Geneva. In 2024, she assumed leadership of the Institute of Pharmacology at the University of Bern. She is also Senior Consultant in Clinical Pharmacology at the Inselspital.

Prof. Bourquin's research bridges fundamental science and clinical application, with a focus on antitumor immunity and pharmacological strategies to enhance immunotherapy. Her expertise in immunopharmacology and drug development has contributed significantly to advancements in the field, particularly in the use of nanocarriers to deliver immunoactive drugs—an innovative and rapidly evolving field.

More information: <https://pharmabern.unibe.ch>

