

# ICCVS

## *In search of cancer vaccines*

The Centre is implementing a project entitled "International Centre for Cancer Vaccine Science". Its activities are focused on personalised cancer immunotherapy. This approach is based on appropriate stimulation of a patient's immune system to respond against cancer.



International Centre for Cancer Vaccine Science



Prof. Natalia Marek-Trzonkowska



Cancer, antigen presentation, immunotherapy, immunopeptidome, flow cytometry, mass spectrometry, interferons, genome sequencing, RNA editing and splicing, structural biology, mass spectrometry, computational science, virology, therapeutic antibodies



Immunology, molecular biology and proteomics in search for new anti-cancer therapies



Quotes

*Cancer cells are generated in the human body every single day. The immune system is generally able to quickly recognise a mutated cell and to eliminate it. However, sometimes the cancer cells escape from immune surveillance, and start to proliferate. The growing cancer applies a range of strategies to avoid recognition and activation of immune cells. In our studies we try to restore effective immune surveillance –*

**Prof. Natalia Marek-Trzonkowska.**

*A personalised anti-cancer vaccines matched for the patient HLA are focused precisely on the cancer and thus don't affect other tissues and organs. For that reason properly designed immunotherapy may be free of severe adverse reactions which are observed when standard cancer treatment is applied –*

**Prof. Natalia Marek-Trzonkowska.**





**Prof. Natalia Marek-Trzonkowska** – from 01.06.2021 prof. Natalia Marek-Trzonkowska is Acting Director of ICCVS. She leads the Cancer Immunology Group. Her research concerns clinical applications of cells of the immune system. Currently, she has been working on T cell based therapy for non-small cell lung cancer. She did her postdoctoral training at the University of Chicago, where she worked on pancreatic islet transplantation and conducted research on new methods for induction of immune tolerance. Awarded by numerous national and international boards, e.g. two Scientific Awards for research on the clinical application of regulatory T cells awarded by the European Federation of Immunological Societies (EFIS; Vienna and Glasgow), Polish-American Medical Society Award (PAMS; Chicago) and the Young Investigator Award granted by the International Society for Pediatric and Adolescent Diabetes (Istanbul), two scientific prizes awarded by the International Pancreas and Islet Transplant Association (IPITA; Praga) and Scholarship of the Minister of Science and Higher Education for Outstanding Young Scientists.

The founders of the ICCVS were initially Prof. Theodore Hupp and Prof. Robin Fahraeus. From June 1st, 2021, Prof. Hupp stepped down as the ICCVS director and group leader, while Prof. Fahraeus resigned from his position of group leader within the ICCVS from August 1st, 2021. Currently, Prof. Trzonkowska continues the work on the project.





### Interesting facts

Cancer immunotherapy, developed at the ICCVS, is one of the greatest revolutions in medicine, compared with the introduction of antibiotics or protective vaccinations against infectious diseases. The Nobel Prize was awarded for advancements in immunotherapy in 2018.



Strategic partner:  
University of Edinburgh



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