



JCET

Jagiellonian Centre  
for Experimental Therapeutics

JAGIELLONIAN  
UNIVERSITY  
IN KRAKOW



**Position for the 1 position of a PhD student**  
in the Doctoral School of Exact and Natural Sciences Biomedical Sciences (EN)  
(MCB/JCET/Solaris)  
**offer no 2022-209**

**Within the OPUS 21 funded project entitled “Breast cancer metastasis-induced endothelial-mesenchymal transition alongside ageing; implications for therapy”, the Doctoral School of Exact and Natural Sciences MCB/JCET/Solaris invites applications for the position of a PhD student with the 4-year project-based funding that will start on April 2022 at the earliest.**

For more information, please visit:

[https://science.phd.uj.edu.pl/pl\\_PL/rekrutacja/konkursy\\_otwarte/-/journal\\_content/56\\_INSTANCE\\_RDIx0DYCtObf/142594442/149970471](https://science.phd.uj.edu.pl/pl_PL/rekrutacja/konkursy_otwarte/-/journal_content/56_INSTANCE_RDIx0DYCtObf/142594442/149970471)

### **Project description:**

Endothelial dysfunction develops alongside ageing and is manifested by impaired NO-dependent relaxation of the vessels associated with compromised expression/activity of eNOS. Lower eNOS levels in endothelial cells might be a hallmark of the already on-going mesenchymal transformation of endothelial cells (EndMT) which onset, progression, and consequences alongside ageing remain largely unknown although EndMT has been found to contribute to a plethora of diseases, including cancer.

Platelets, apart from their well-known role in thrombosis, protect endothelium both in health and alongside an inflammatory disease via the mechanisms recently termed as inflammation-associated haemostasis. The endothelium-protective function of platelets is especially important in the lungs whereby its loss compromises pulmonary endothelium barrier integrity, at least partly via the agents released from platelet granules after activation. However, platelet phenotype and the content of their granules may be changed alongside ageing and platelets have been altered in cancer-bearing subjects what may result in the weakening/loss of platelet protective function.

The hypothesis of the project is that age- and cancer-altered platelets actively participate in age- and cancer-related EndMT that is associated with weaker endothelial barrier function. The aim of the project is to verify the abovementioned innovative hypothesis.

### **Required documents**

To make the application process fast and easy, [please follow the rules](#).

Please send your application documents to the e-mail address of the Project Manager dr Marta Smeđa. e-mail: [marta.wojewoda@uj.edu.pl](mailto:marta.wojewoda@uj.edu.pl) and Online Application System (OAS) at: <https://irk.uj.edu.pl/en-gb/>

Please note that the OAS will be open on the 7<sup>th</sup> of March 2022