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Force sensing and transmission in human induced pluripotent stem-cell-derived pericytes

Iendaltseva, O.

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PUBLICATIONS

1. “Fibronectin Patches as Anchoring Points for Force Sensing and Transmission in Human Induced Pluripotent Stem Cell-Derived Pericytes”
O. Iendaltseva, V.V. Orlova, C.L. Mummery, E.H.J. Danen and T. Schmidt
Stem Cell Reports (2020)
2. “Insights into the Regulation of α -Smooth Muscle Actin Expression in Pericytes’
O. Iendaltseva, V.V. Orlova, C.L. Mummery, E.H.J. Danen and T. Schmidt
in preparation
3. “The mechanical phenotype of Ewing sarcoma cell lines predicts their metastatic niche”
E. Beletkaia, O. Iendaltseva, H. E. Balcioglu, P.C.W. Hogendoorn, E.H.J. Danen and T. Schmidt
in preparation
4. “Pericyte Force Generation in *In Vitro* Hypoxia and Ischemia Conditions”
O. Iendaltseva, V.V. Orlova, C.L. Mummery, E.H.J. Danen and T. Schmidt
in preparation

CURRICULUM VITAE

Olga Iendaltseva was born on November 18, 1990 in Kharkiv, Ukraine. She did her undergraduate studies at the V. N. Karazin Kharkiv National University specializing in micro- and nanoelectronics and biomedical devices. She performed her pre-diploma and diploma projects at the department of Physical and Biomedical Electronics and Complex Information Technologies under supervision of Prof. dr. N. P. Mustetsov. Within her Bachelor and Master projects she assembled and tested pulmophonography device for automated diagnostics of pneumonia with a low frequency sound. In June 2013, Olga graduated with honors from the V. N. Karazin Kharkiv National University.

In May 2013 she started her 3 months internship under supervision of Prof. dr T. Schmidt and Prof. dr. E. H. J. Danen in Leiden University, The Netherlands. She investigated the effect of diverse substrate stiffnesses on the behaviour of mouse embryonic fibroblasts. In August 2013, Olga continued working in the field of cell mechanobiology as a PhD student in the joint project of Physics of Life Processes and Toxicology groups of Leiden University under supervision of Prof. dr T. Schmidt and Prof. dr. E. H. J. Danen. During her PhD research she focused on studying mechanical behaviour of human induced pluripotent stem cell (hiPSC) – derived pericytes. In order to understand better their reported ability to regulate vascular morphogenesis and capillary diameter she designed different *in vitro* ways to model the mechanical microenvironment of pericytes *in vivo*. She presented results of her work at conferences in the Netherlands, the USA, Spain and the UK. Additionally, she assisted students with optical tweezers experiments in the course of “Experimental Physics” and guided bachelor projects.

In December 2018, Olga started as industrialization and process engineer in the High Power Drive Laser software controls project at the Development and Engineering department of ASML in Veldhoven. In

Curriculum vitae

January 2021, she became a lead industrialization and process engineer in the High Power Seed module project and in November 2021 started as Machine and Materials Damage Control architect within Machine Conditioning department at ASML.