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Die Physikalisch-Medizinische Sozietät Erlangen und das Max-Planck-Institut für die Physik des Lichts

lädt Sie zu folgendem Vortrag ein:

„Cancer cell mechanotype: from screening to disease biophysics"

Professor Amy C. Rowat, PhD

Department of Integrative Biology & Physiology, University of California, Los Angeles, USA
E-Mail: rowat@ucla.edu

Cell mechanical phenotype, or 'mechanotype', determines how physical stresses are transduced into the cell, and can also signal a transformation in a cell's physiological state, such as in malignant transformation. If we could obtain higher throughput measurements of cell mechanotype, this would enable a deeper understanding of the molecular origins of cell mechanotype, as well as screening based on mechanotype. To address these needs, Amy Rowat recently invented a mechanotyping platform that she called Parallel Microfiltration (PMF). Prof. Rowat will discuss how she is applying her PMF method to develop a deeper understanding of cell mechanotype in cancer progression by screening panels of ovarian, breast, and pancreatic cancer cells, including those treated with small molecules such as chemotherapy agents or microRNAs. Since Amy Rowat´s results show that cells can be detected based on their status in epithelial-to-mesenchymal transition and chemoresistance, her lab is also applying PMF for screening small molecules to identify compounds that have anti-cancer effects.

Upon completion of her PhD in biophysics at the Technical University of Southern Denmark in 2000 in the lab of Ole Mouritsen, Amy Rowat continued her research at Harvard University, MA, USA as a postdoctoral research fellow. In 2011, Prof. Rowat joined the Department of Integrative Biology and Physiology at the University of California in Los Angeles, USA as an Assistant Professor. There she has established her laboratory that focuses on understanding the mechanical properties of soft biological materials.

Mittwoch, 13. Juli 2016, 17.15 Uhr
(45 Minuten Vortrag plus Diskussion)

Veranstaltungsort:
Seminarraum (1.OG) des Instituts für Klinische Mikrobiologie, Immunologie und Hygiene, Wasserturmstraße 3/5
(Zugang: rückwärtiger Hörsaaleingang gegenüber der Orangerie)

Für Rückfragen wenden Sie sich bitte an:
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