Zentrum
Physiologie

Medizinische Hochschule
Hannover

Einladung

zum Physiologischen Seminar

Prof. Dr. Irit Sagi

Department of Immunology and Regenerative Biology
The Weizmann Institute of Science
Israel
https://www.weizmann.ac.il/dept/irb/

Impact of Persistent Nascent ECM Damage Imprints on Incomplete Tissue Regeneration and Chronic Inflammatory Disease

Abstract: The survival of any living organism critically depends on its ability to repair and regenerate damaged tissues and organs throughout its lifetime, whether due to injury, disease, or aging. Yet, tissue recovery and healing processes may be hindered by incomplete tissue regeneration, leading to chronic diseases. Tissue regeneration has predominantly been studied through the lens of cellular processes and epigenetic regulation, a focus that has largely overshadowed the equally important roles of extracellular matrix (ECM) remodeling mechanisms and associated complex network of proteins. Our results highlight ECM's importance by showing that nascent ECM Damage Imprints (EDI) composed of molecular and structural patterns persist beyond tissue recovery and potentially disrupt normal tissue regeneration and contribute to chronic disease. We show that EDI result from uncontrolled ECM proteolysis by inflammatory cells at early disease stages, which later may propagate through distinct proteolytic cascades and cellular crosstalk that impact the cellular transition of resident and immune cells. Insights derived from our study provide ground-breaking fundamental mechanistic information on the impact of EDI on tissue regeneration and new horizons for regenerative medicine.

Datum:	**11. Dezember 2024**
Ort:	**Hörsaal N**
Gebäude:	I01-H0-1120
Zeit:	**16 Uhr c.t.**

Gäste sind herzlich willkommen!

Ansprechpartner:

Prof. Dr. Evgeni Ponimaskin, Institut für Neurophysiologie, Tel: 4858
https://www.mhh.de/neurophysiologie