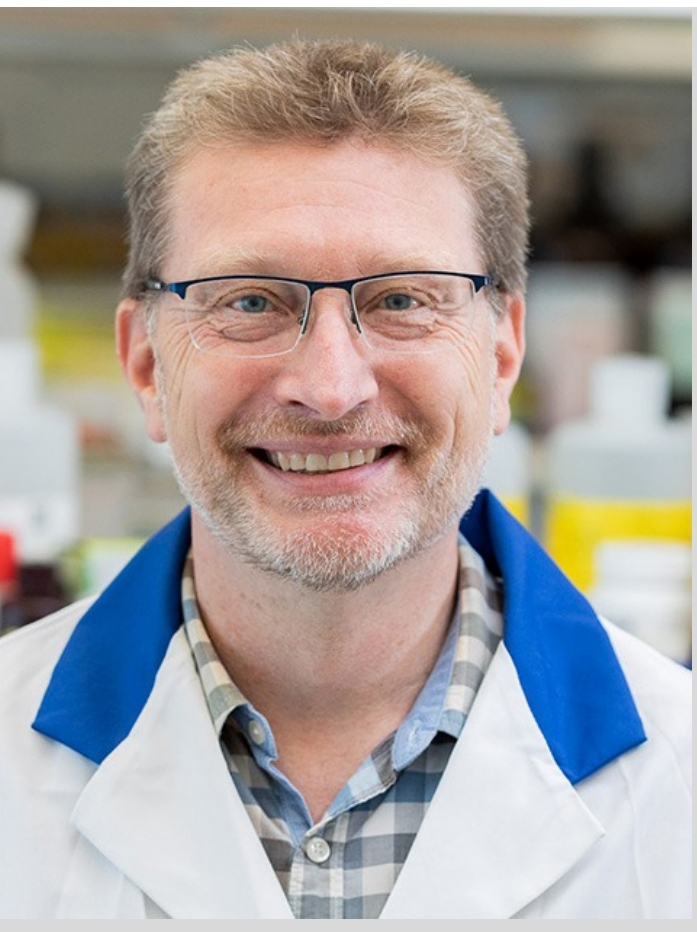
Cologne Seminar Series on Ageing

Boris Hinz
Keenan Research Centre for Biomedical Science, CAN



Thursday, 19th May 2022
at 4:00 pm

hybrid

Host: Thomas Krieg
(CECAD)

Scientific Background:
Boris Hinz is Keenan Research Chair in Fibrosis Research at St. Michael's Hospital and University of Toronto Distinguished Professor in Tissue Repair and Regeneration. He is appointed with the Faculties of Dentistry, Medicine, and Biomedical Engineering. Dr. Hinz holds a PhD degree (1998) in Cell Biology and Theoretical Biology from the University of Bonn, Germany. From 1999 to 2002, he was postdoctoral fellow with Dr. Giulio Gabbiani, Department of Experimental Pathology, University of Geneva, Switzerland. Dr. Hinz then moved to lead a research group at the Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland, joining Cell Biology, Biophysics, and Bioengineering. He was nominated Maître d'enseignement et de recherche (Assistant Professor level) in 2006 and moved to the University of Toronto in 2009 with Associate Professor appointment in the Faculty of Dentistry.

Myofibroblasts and the mechanics of healing

About Hinz's talk:

After a brief overview on our current projects, I will develop how mechanical factors orchestrate the development of myofibroblasts in a persisting wound environment - using the foreign body response to implanted silicone materials as an example. In a nutshell, modulating the stiffness of their surface reduces fibrotic encapsulation and enhance the lifetime of silicone implants. Soft surfaces suppress acute mechanical activation of myofibroblasts and reduce the activation of pro-fibrotic transforming growth factor (TGF-β1) – a process that is dependent on mechanical resistance of the environment. By understanding and manipulating myofibroblast mechanoperception, we will be able to devise better therapies to reduce scarring and support normal wound healing in organ and implant fibrosis.

CECAD COLOGNE

Max Planck Institute for Metabolism Research

MAX PLANCK INSTITUTE FOR BIOLOGY OF AGEING