



University of
Zurich ^{UZH}

Institute for
Regenerative Medicine
(IREM)



Colloquium

Clinical Colloquium Regenerative Medicine

**Monday, 5th November 2018 at 1–2pm,
Institute for Regenerative Medicine (IREM),
University of Zurich, Wagistrasse 12,
WAD-L-121/3, 8952 Schlieren**

Dr. Simone Bottan

Project Leader HYLOMORPH, Wyss Zurich, ETH Zurich/University of Zurich

Addressing the problem of fibrotic tissue encapsulation in surgical practice

It is estimated that more than 10 million medical implants are implanted in patients each year worldwide, notably for cardiovascular and plastic surgery. Due to sub-optimal biocompatibility of existing medical implants, every time one is placed in a patient by a surgeon, fibrosis occurs in the surrounding tissue. Fibrosis is among the primary causes for malfunction and failure of implantable medical devices.

To address this critical medical need, the HYLOMORPH team has developed a unique surgical membrane that optimizes the interface between implants and human tissue. In pre-clinical studies conducted by the team, micro-structured biosynthesized cellulose membranes led to an 80% reduction in fibrotic tissue formation at three months after surgery.

Based on these promising results, the team is now working in close collaboration with the German Heart Institute Berlin (Deutsches Herzzentrum Berlin, DHZB) to prepare for the first-in-man application of cellulose membranes on Cardiac Implantable Electronic Devices.

Organiser: Prof. Dr. Dr. Simon P. Hoerstrup / Prof. Dr. Roger M. Nitsch

Execution/Chair: Dr. Steffen M. Zeisberger / Dr. Christian Tackenberg
IREM, University of Zurich

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