



University
of Basel

Department of
Biomedical Engineering



Seminar Series:

Latest Breakthroughs in Biomedical Engineering Research

Location: DBE Science Lounge, Hegenheimermattweg 167C, 4123 Allschwil

Date & Time: Thursday 31.10.2024 | 15:30 – 16:30

Host: Prof. Arnaud Scherberich

4R medicine for diseased joints: Replace, Repair, Regenerate, Reprogram

Jerome Guicheux

*INSERM, Nantes Université, Oniris, CHU Nantes, Regenerative Medicine and Skeleton Research
Centre (RMeS), UMR 1229, F-44000 Nantes, France.*

Abstract

Four “R” medicine refers to Replacement, Repair, Regeneration and Reprogramming applied to damaged tissues. With the recent advances in biomaterial sciences (biomimicry, hydrogels, 3D bioprinting...), and stem cell biology (reprogramming and differentiation), 4R medicine has paved the way for transformative therapeutic strategies. This presentation will provide an overview of the latest developments in 4R medicine applied to diseased joints, with a special emphasis on the contributions of RMeS.

Biosketch

Professor Jérôme Guicheux is a senior research director at Inserm, specializing in the pathophysiology of osteoarthritis, disc degenerative disease, and regenerative medicine for skeletal tissues. He leads the Inserm UMR1229-RMeS Research Centre at the Nantes Université in France and coordinates the Inserm French network for osteoarticular diseases. He has authored over 235 indexed publications (Google Scholar H-index: 74; 15,500 citations), has delivered >150 invited lectures and is ranked among the top 2% of the world's most influential scientists, according to Stanford University's 2022 and 2023 rankings.