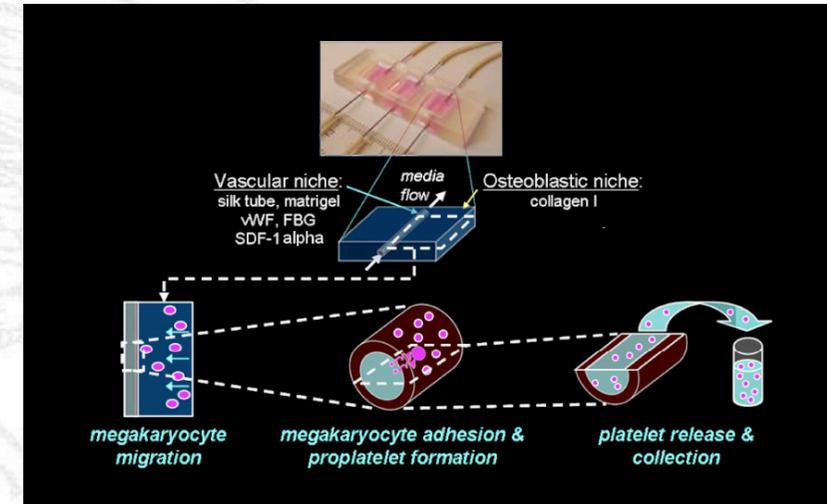


Silk biomaterial for bone marrow modeling and platelet production

Silk fibroin has useful characteristics including self-assembly, robust mechanical properties, biocompatibility and biodegradability. Moreover, silk can be enhanced through a variety of chemical modifications that affect cell attachment, growth and differentiation. Platelets are anuclear cells that are released into the bloodstream in the bone marrow by megakaryocytes via the extension of long filaments called proplatelets.

On this premises we developed a silk-based in vitro tissue model of bone marrow niches to allow the effects of substrate surface properties and endothelial co-culture on megakaryopoiesis to be studied in a holistic manner, thereby enabling further elucidation of the mechanisms involved in the process of platelet production. The goal of this talk will be to show that, by functionalizing silk, we can mimic different features of the bone marrow environment and control cell function.



SEMINAR

Prof. Alessandra Balduini

Department of Molecular Medicine, University of Pavia
Department of Biomedical Engineering, Tufts University, Boston

January 21st, 3:00pm
DICAr MS1 Meeting Room
Via Ferrata, 3 – Pavia