PERSONA CIÈNCIA EMPRESA
UNIVERSITAT RAMON LLULL

Design of SoHO bioinks for bioprinting applications in regenerative medicine

1 Master research project (6-9 month)

Contact: salvador.borros@iqs.url.edu robert.texido@iqs.url.edu

Summary:

Regenerative medicine is on the verge of a paradigm shift with the rapid progress of 3D bioprinting technology. By revolutionizing tissue engineering through automated fabrication, bioprinting holds immense potential for creating precise and personalized models of healthy and diseased human tissues. Recent advancements in bioprinting techniques have further broadened the horizons of this field, providing new opportunities for innovation. Within this context, substances of human origin (SoHO) emerge as a promising avenue for enhancing existing bioinks. Leveraging their unique biological properties, SoHO exhibit high chemo-tacticity and bioactivity, thereby presenting an opportunity to significantly improve the performance of bioinks. This project aims to explore the integration of SoHO into bioinks to enhance the capabilities of bioprinted tissues. The objectives of this research include investigating the compatibility of various SoHO with different bioink formulations, assessing their impact on cell behavior and tissue development, and optimizing the bioprinting process for efficient incorporation of SoHO.