



investigadores predoctorales en Investigaciones Biomédicas de Aragón

Welcome to the iplBA seminar series 2022

Short informal talks given by **young researches of Aragón** with the aim to promote 2 main goals:

1. **Networking** between young researchers of Aragón.
2. Improve our **communication skills**.

“In vitro Hepatic Tissue Morphogenesis - Tackling the Critical Challenges Towards Effective Generation of Bioengineered Livers.”

Tuesday, May 17th 2022
From 9:30 to 10:30

Summary:

Liver disease affects more than 650 million people worldwide and accounts for 4% of all deaths. To date, the only definitive treatment available is liver transplantation. However, a distressing shortage of donor livers exists. Hence, the development of novel technologies like bioengineered livers is now critical. However, two significant challenges have been hampering the successful development of this technology: 1) the lack of robust hepatic tissue morphogenesis, and 2) the development and integration with the biliary tree in vitro, leading to bioengineered livers with deficient function and that will not produce or excrete bile. In this project, we propose the implementation of more advanced recellularization methods based on the combination of pressures to more efficiently and homogeneously recellularize the whole liver scaffolds. Then, we will focus on the discovery and control of the involved cellular and morphogenetic mechanisms vital to efficiently reconstitute and connect to hepatocytes the biliary tree, and generate functional zonated hepatic tissue. Finally, we will validate how these in vitro generated livers' function correlates with their performance in vivo after transplantation in immunodeficient pigs.

Speaker: Álvaro Blanes Rodríguez (alvaroblanes22@gmail.com)

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Principal Investigator: Pedro Baptista

Doctoral Programme: Biomedical Engineering

Organizes: iplBA and Institute for Health Research Aragón



Link to join the seminar:

<https://us02web.zoom.us/meeting/register/tZYrceCgrjouHdGypXUxGMDcrcgK-UeIV-1Q>

CIBA, main meeting room, and online via zoom

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