

# Understanding Femoral Head Osteonecrosis: From Pathophysiology to Biomaterial treatment strategies

Speaker

**Laura Saldaña**

Hospital Universitario La Paz (Madrid)

Osteonecrosis of the femoral head is the most common diagnosis in young patients undergoing total hip replacement. Patients with this condition have traditionally experienced inferior clinical outcomes following total hip arthroplasty compared to those with osteoarthritis, the most common degenerative bone disease.

This talk will focus on deepening the understanding of osteonecrosis of the femoral head through follow-up studies in patients and biological studies to elucidate its pathophysiology. Finally, we will discuss how biomaterials could aid in the treatment of this disease.

*Laura Saldaña is a Principal Investigator at the Hospital La Paz Institute for Health Research in Madrid. She earned her PhD in Chemistry from the Faculty of Medicine of the Autonomous University of Madrid, receiving the extraordinary PhD award. During her PhD, she was a visiting researcher at the Rizzoli Orthopaedic Institute in Bologna, where she gained an interest in exploring the interactions between cells and biomaterials using confocal microscopy.*

*She conducted postdoctoral research at the National Center for Metallurgical Research in Madrid, the Department of Medical Specialties at the University of Alcalá de Henares, and the Spanish Biomedical Research Networking Center in Bioengineering, Biomaterials, and Nanomedicine*

*Dr. Saldaña's research focuses on the biocompatibility of novel materials for bone repair and regeneration, the interactions between the immune and skeletal systems, and the pathophysiology of bone diseases. She has led numerous research projects, including private contracts with companies and universities. Her findings have been presented at international conferences, published in high-impact international scientific journals, and protected by patents. Laura is a member of the EORS and serves on the Educational Committee.*

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**30 April 2025**

**10:00**

**Room MA2**

**CMIC I Mancinelli**

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