Training School
"Gene regulation of the bone extracellular matrix"

The Training School "Gene regulation of the bone extracellular matrix" will be held in Porto (Portugal) from the 22nd to 24th of March 2022. The course will have the duration of three days, with lectures in the morning and lab sessions for students in the afternoon. It will focus on the genetic regulation of the bone extracellular matrix proteins, combining concepts of bioengineering and molecular biology. Topics such as cell differentiation, extracellular matrix remodeling, bone cells microenvironment, and GWAS studies will be addressed. This is an opportunity to potentiate new collaborations in an informal event. Participants are encouraged to bring questions that can contribute to the advance of knowledge through interactive approaches. The event is limited to 12 students.

The venue will be held at ICBAS – Instituto de Ciências Biomédicas Abel Salazar, University of Porto, Porto, Portugal, next to the gardens of Palácio de Cristal, a magic environment from the Romantic period in the late XIX century, just on the top of the city with an amazing view of the Douro river.

Preliminary program:

Day 1 - 22nd March 2023

8h45 - 9h00: Welcome session

9h00 - 12h30: Seminars: in vitro and in vivo models of the osteoarticular system: From gene profiling to function

9h00 – 10h00 Eleni Douni: Extracellular matrix networks in bone remodeling through analysis of mouse models

10h00 – 10h30 Speaker to be announced

10h30 – 11.00 Coffee break

11.00 – 11h30 Meriem Lamghari: Neuro-skeletal cross talk in health and disease

11h30 – 12h00 Catarina Pereira: In vitro 3D modeling of osteosarcoma at the cellular and ECM level: technical highlights and challenges

12h00 - 14h00: Lunch

14h00 - 18h00: Lab sessions: Combining ECM components, biomaterials, and cells

18h00 - 21h00: Social event

Day 2 - 23rd March 2023

9h00 - 12h30 Seminar: The role of ECM in bone remodeling and the impact on cell behavior

9h00 – 10h00 Kent Soe: Genomics of osteoclasts differentiation and resorption

10h00 – 10h30 Sara Moura: Challenges of gene delivery in osteoclasts

10h30 – 11h00 Coffee break

11h00 – 11h30 Raquel Gonçalves: Rejuvenation of the Intervertebral Disc: the impact of extracellular matrix age

11h30 – 12h00 Maria Ines Almeida: Noncoding RNAs as regulators of the bone extracellular matrix components: Lessons from proteomics and transcriptomics

12h00 - 14h00: Lunch

14h00 - 18h00: Lab session: Modulation of ECM components

Dia 3 - 24th March 2023

9h00 - 12h30: Seminars: Regulation of gene expression in osteoarticular injury and diseases

9h00 – 10h00 David Karasik: Muscle-bone pleiotropy in fish: a model for muscle-bone crosstalk

10h00 – 10h30 Vania Oliveira: Primary bone tumors and metatasis: clinical approaches

10h30 – 11h00 Coffee break

11h00 – 11h30 Susana Santos: Inflammation in bone injury response: a cellular and molecular roadmap

11h30 – 12h00 Angelo Calado: Extracellular matrix in arthritis

12h00 - 14h00: Lunch

14h00 - 17h00: Lab session: Decellularization and repopulation of the ECM

17h00 - 17h30: Closing session

We are looking forward to welcoming you in Porto.

The Organizing Committee,

Angelo Calado, Maria Inês Almeida, Sara R. Moura, Susana G. Santos