



## ADVANCES IN ORTHOPAEDIC TISSUE ENGINEERING

ACHILLES SECOND SCHOOL (HYBRID EVENT)

06-07.04.2022



Horizon 2020  
European Union Funding  
for Research & Innovation



**PARTICIPATING COUNTRIES:  
PORTUGAL, IRELAND & GERMANY**

**HOST: PROF. Dimitrios Zeugolis**

**LOCATION: Conway Institute, University  
College Dublin**

**PARTICIPANTS: YOUNG INVESTIGATORS  
MASTER & PHD STUDENTS  
POSTDOCS**

**PARTICIPATION: FREE OF CHARGE**

# PROGRAM



THIS FLYER IS PART OF A PROJECT THAT HAS RECEIVED FUNDING FROM THE EUROPEAN UNION'S HORIZON 2020 RESEARCH AND INNOVATION PROGRAMME UNDER GRANT AGREEMENT N°810850



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### Day I, 06.04.2022

<b>13.00-13.30</b>	<b>Coffee and Lunch</b>	
<b>13.30-14.00</b>	Welcome	Helen Roche, Director Conway Institute of Biomolecular & Biomedical Research, UCD Manuela Gomes, Co-ordinator of Achilles Project Dimitrios Zeugolis, Partner of Achilles Project
<b>14.00-15.30</b>	Targeting spatial mechanomics of in vivo bone adaptation and regeneration  Intervertebral disc: Evaluation of new therapies in ex vivo and in vivo models  Mechanobiology of bone development and regeneration	Ralph Müller (in person)  Catherine Le Visage (in person)  Joel D. Boerckel (virtually)
<b>15.30-16.00</b>	<b>Coffee break</b>	
<b>16.00-18.00</b>	The cellular mechanisms underlying mechanically mediated joint morphogenesis  The role of extracellular vesicles in synovial fibroblasts senescence  Investigating early molecular events in load-induced joint degeneration  The role of ECM viscoelasticity on the regulation of chondrocyte fate	Niamh Nowlan (in person)  Mandy Peffers (in person)  Emma Blain (virtually)  Nidhi Bhutani (virtually)





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### **Day II, 07.04.2022**

<p><b>09.0-11.00</b></p>	<p>Tendon cell mechanotransduction: Where, how and why</p> <p>The mesenchymal stromal cell response to (patho)physiological tendon microenvironments</p> <p>Effects of muscle activity on the multiscale structure and tensile mechanics of embryonic tendons</p> <p>Acellular septal cartilage for in situ regeneration of cartilage defects</p> <p>Bioengineering strategies to recreate the biophysical cues of tendon niche</p>	<p>Jess Gerrit Snedeker (in person)</p> <p>Janina Burk (virtually)</p> <p>Spencer Szczesny (virtually)</p> <p>David Gvaramia (virtually)</p> <p>Rui Domingues (in person)</p>
<p><b>11.00-11.30</b></p>	<p><b>Coffee break</b></p>	
<p><b>11.30-13.30</b></p>	<p>Sound waves in orthopaedics</p> <p>Protein-based hydrogels in stem cell engineering</p> <p>Engineering bio-instructive surfaces for tendon regeneration</p> <p>Using platelet extracellular vesicles as biological cues to promote tendon regeneration</p>	<p>Mauro Alini (in person)</p> <p>Manuel Salmeron-Sanchez (in person)</p> <p>Jan De Boer (virtually)</p> <p>Manuel Gomez-Florit (in person)</p>
<p><b>13.30-14.30</b></p>	<p><b>Coffee and Lunch</b></p>	



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