OPEN PhD POSITION in Innovative Training Networks

We are looking for a dedicated and highly motivated Early Stage Researcher (ESR), who will join our team to build multidisciplinary expertise for fostering future medical solutions applied to tendon repair and diagnosis.

P4 FIT description (4 years MCSA-ITN-EJD project starting January 2021)

Perspectives For Future Innovation in Tendon repair (P4 FIT) fosters to build a new generation of ESRs with adequate skills to explore non-conventional therapeutic and diagnostic solutions by exploiting the technological advances in nanomedicine. The translation of innovative nanodevices carried out on integrated pre-clinical and vet/human clinical settings are expected to produce solid evidence-based datasets able to reduce fragmentation still limiting the impact of biomedical discoveries and to offer a unique opportunity for identifying new predictive biomarkers through the use of AI and deep learning data analysis. Working across disciplines and sectors, **P4 FIT** will foster the 15 ESRs to be creative, critical, autonomous intellectual risk takers at the frontiers of research with the R&I mind-set necessary for thriving careers. **P4 FIT** will allow to fill the EU gap in tendon healthcare, building up a generation of researchers able to develop nano-based biomedical devices by integrating biology advances to technology innovation, and to computational revolution. The **P4 FIT** cross-disciplinary approach includes 6 beneficiaries and 21 partner organizations (10 academic and 11 non-academic) from across Europe.

ESR2 – MUW (double degree with Università Cattolica del Sacro Cuore) Phagocytes reprogramming for tendon regeneration

Objectives: To develop translational new molecular strategies for reprogramming phagocytes into a pro-regenerative mode to accelerate tendon healing.

Expected Results: (1) Characterization of pathways, immune-checkpoint inhibitors, anti-inflammatory cytokines (IL-10, IL-35), TLR inhibitors or anti-inflammatory biomolecules (*e.g.*, anti-TNF or IL-17 antibodies) to modulate the shift of human phagocytes from the inflammatory/destructive towards to the "pro-healing" phenotype. (2) Modulation of phagocyte phenotype using secretome-derived from human amniotic stem cells. (3) Modulation of the pro-healing phagocyte phenotype by using available NVs. (4) Design of nanovectors loaded with new identified modulators in points (1) and (2).

Keywords: inflammation, tissue repair, immune-modulation, phagocyte differentiation

Applicant Profile: Master level in medicine, biology, biomaterials science or related field, ideally with background in immunology, cellular and molecular biology, bioinformatics or engineering. Excellent communication skills (both written and oral) in English.

PhD main locations: The recruited ESR is given the opportunity to conduct 3-years of PhD studies at Institute of Immunology, Medical University of Vienna (MUW, Austria), but also to visit other network partners for secondments (Università Cattolica del Sacro Cuore (UCSC, Italy), Fat-Stem Laboratories BV (Belgium) and University of Helsinki (Finland).

Double PhD Tutors: Prof. J. Stöckl (Doctoral Programme in Immunology, MUW); Prof. O. Parolini (Doctoral Programme in Experimental and Traslational Medicine – Medicina Sperimentale e Traslazionale, UCSC).

Main contact:

Professor Johannes Stöckl (johannes.stoeckl@meduniwien.ac.at)

More details about P4 FIT project, requirements for the candidates and recruitment procedure: www.p4fit.eu/jobs