1st General Meeting & Conference of the COST Action

TENET - TEndon Regeneration NETwork (CA22170)

Hybrid Meeting
Onsite meeting venue: Paracelsus Medizinische Universität (PMU)
Strubergasse 22, Salzburg, Austria

Program

11th of March 2024

8:15 - **Registration**

9:00 - **Opening Session**: Action Chair (Manuela Gomes) and Co-Chair (Manuel Gomez-Florit) & Meeting Host (Andreas Traweger)

9:30 - **WG1: Cellular and molecular biology of tendon development, disease and regeneration mechanisms** (chaired by Andreas Traweger & Britt Wildemann)

- Chauvaunne Thorpe: "*Establishing age-related alterations in cellular heterogeneity within the interfascicular matrix of energy storing tendons*"
- Christine Lehner: "*TRP-channels in tendon cells: hot candidates to target?*"
- Franka Klatte-Schulz: "*The human Achilles Tendon as model to study acute to chronic tendon disorders*"
- Daniel Kronenberg: "*Degenerative tendon mineralization is enhanced by increased matrix turnover and mechanostimuli*"

10:15 - Coffee Break

11:00 - **WG2: Mechanosignaling and biophysical characteristics of tendon tissues** (chaired by Jess Snedeker and Evi Wezenbeek

- Evi Wezenbeek: "*Patellar tendinopathy rehab: a physio perspective*"
- Lauren Pringels: "*Elevated fluid and glycosaminoglycan content in the Achilles tendon contribute to higher intratendinous pressure: implications for Achilles tendinopathy*"
- Herbert Tempfer: "*Nanoindentation on tendon tissue: First insights and current challenges*"

12:00 - Lunch and Poster Session

13:30 - **Innovation Session** (chaired by Andreas Traweger)

- Michael Gruber: "*Life Science and Manufacturing Technology in Salzburg – from innovative Ideas to Market access*"
- Jakob Pyszkowski: "*Cuore - A new 3D in vitro platform to study muscle disease & regeneration*"

This article/publication is based upon work from COST Action TENET, CA22170, supported by COST (European Cooperation in Science and Technology). COST (European Cooperation in Science and Technology) is a funding agency for research and innovation networks. Our Actions help connect research initiatives across Europe and enable scientists to grow their ideas by sharing them with their peers. This boosts their research, career and innovation.

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14:00 - **WG3: Biomaterials, cells and molecular therapeutics for advanced tendon therapies** (chaired by Elizabeth Balmayor & Manuel Gomez-Florit)

- Giovanna Della Porta: "*Nanomedicine for tendon regenerative medicine: strategies and perspectives*"
- Andrea Rossoni: "*Identification Of The Optimal Macromolecular Crowding Agent For Tendon Engineering*"
- Alberto Sensini: "*Multi-Material and Region-Specific Electrospun Bundles Drive Stem Cells in the Enthesis Regeneration*"
- Carlos Peniche: "*miRNA-laden magnetic-responsive bioink for tendon and enthesis tissue-engineering*"
- Gundula Schulze-Tanzil: "*Cell responses and tissue formation in tendon and ACL ligament models*"

15:00 - **WG4: Models of tendon health and disease** (chaired by Denitsa Docheva & Victoria Stepan Sarafian-Ozanian)

- Eric Gracey: "*scRNAseq reveals fibroblast dysregulation in human Achilles tendinopathy*"
- Marta Clerici: "*Promotion of Extracellular Vesicle Production from Human Tendon Stem/Progenitor Cells via Dynamic Cell Culture*"
- Mandy Peffers: "*Allogenic Platelet-rich Plasma and Platelet-rich Plasma-derived Extracellular Vesicles Change the Proteome of Tenocytes in an In Vitro Equine Model of Tendon Inflammation: A Pilot Study*"
- Nerva P. Cesur: "*Generation of a Tendon-specific Knock-Out Mouse Model To Deeply Probe the Role of SPARC in Tendon Health and Disease*"

16:00 - Coffee Break

16:30 - **WG5: Clinical translation of advanced therapies for tendon diseases** (chaired by Martijn van Griensven & Manuela E. Gomes)

- Keti Petkova Tokmakova: "*Treatment of Achilles Tendinopathy by platelet-rich plasma (PRP) injections*" (virtual)
- Emilija Dubljanin Raspopovic: "*Current perspectives and clinical practice of physical medicine specialist on assessment and rehabilitation of patients with tendinopathies - a pilot study*"
- Christian David Weber: "*Advanced surgical management of full-thickness tendon injuries - current status and challenges*"
- Guillaume Planckaert: "*Automated whole slide histological scoring for the validation of human tendinopathy samples*"

17:15 - **Informative Session**: Basic Rules and Instructions for Reimbursements by Grant Holder Manager

17:45 - Closing Session

18:00 - Interactions between TENET members

20:00 - **Dinner at "Augustiner Bräustübl Mülln"** (Lindhofstarße 7, 5020 Salzburg; https://www.augustinerbier.at/home.html)

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TENET

Poster session list

WG1: Cellular and molecular biology of tendon development, disease and regeneration mechanisms

- Sara Bagur Cardona: "*Macrophage-Derived Extracellular Vesicles as Potential Mediators of Tendon Inflammation and Repair*"
- Eric Gracey: "*scRNAseq reveals fibroblast dysregulation in human Achilles tendinopathy*"

WG2: Mechanosignaling and biophysical characteristics of tendon tissues

- Magdalena Fuchs: "*Tensile testing of individual collagen fibrils from oim/oim mouse tendon tissue"*

WG3: Biomaterials, cells and molecular therapeutics for advanced tendon therapies

- Silvia Panseri: "*Hydrogel Responsive to Multiple Stimuli to Enhance Tendon Regeneration*"
- Liliana Verestiuc: "*3D Printed/Bioprinted Scaffolds Based on Functionalized Biopolymers for Soft Tissue Engineering and Regeneration*"
- Alfonso Zambon: "*Mesoporous bioactive glasses with tailorable antioxidant and therapeutic properties*"
- Marta Clerici: "*Promotion of Extracellular Vesicle Production from Human Tendon Stem/Progenitor Cells via Dynamic Cell Culture*"
- Bojana Obradovic: "*Biomimetic bioreactors for establishment of physiologically relevant environments for engineering of skeletal tissues*"
- Kristiyan Stiliyanov Atanasov: "*Hyaluronic acid-based hydrogel for the delivery of platelet-derived EVs for tendon regeneration*"

WG4: Models of tendon health and disease

- Ekaterina A. Oleinik: "*Effect of cyclic loading on cell survival and proliferation in tissue-engineered tendon constructs*"
- Silvia Chiera: "*A model scaffold for anterior cruciate ligament tissue engineering*"
- Vittoria Guerra Altheman: "*Association of 2D and 3D collagen culture with BMP-12 supplemented medium induce tenogenic differentiation of different sources of equine MSC*

WG5: Clinical translation of advanced therapies for tendon diseases

- Luminita Labusca: "*The role of ultrasound guided therapy in the management of tendon pathology.*"

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