

Wearable MXene Bioelectronics for Achilles Tendinopathy Diagnostic and Rehabilitation Therapies

Manini Rana

Biomedical Engineering, University of Texas

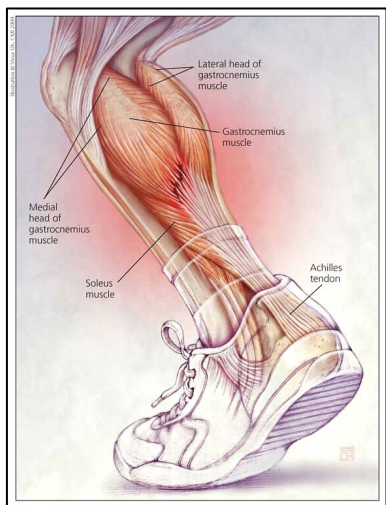
SUNFEST REU Program

PI: Prof. Flavia Vitale

Wearable MXene Bioelectronics for Achilles Tendinopathy Diagnostic and Rehabilitation Therapies



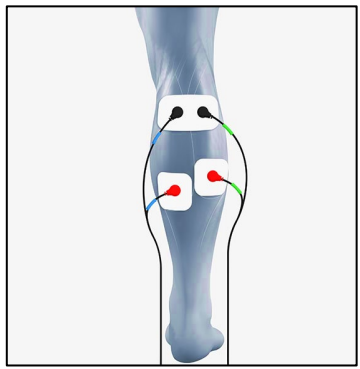
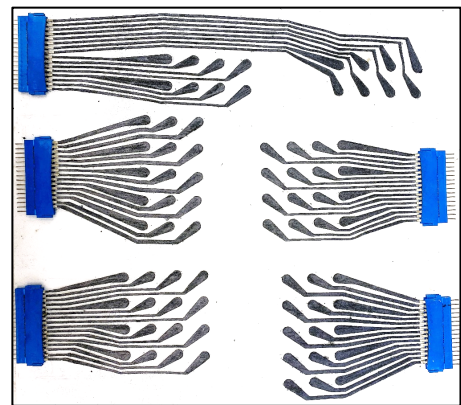
Manini Rana – The University of Texas at Austin, Biomedical Engineering | Flavia Vitale – The University of Pennsylvania, Neurology



Adapted from: Equilibrium Sports and Spinal Clinic

Achilles tendinopathy leads to constant pain and impaired movement.

We can help **solve** this by using flexible electrodes to measure calf muscle activation and loading on the Achilles tendon during healing.



Adapted from: Complex Electrode Systems



Adapted from: Szaro et al., European Journal of Radiology., (2021)

HDsEMG Calf Muscle Activity Across Calf Raises at Varying Ankle Positions

