PROTXX Collaborating with Canadian Researchers to Study Peripheral Neuropathies

Innovative studies targeting development of phybrata biomarkers to improve diagnoses and treatment monitoring.

MENLO PARK, CA, UNITED STATES, July 5, 2022 /EINPresswire.com/ -- Menlo Park, California based PROTXX is collaborating with Canadian researchers at Mount Royal University in Calgary, Alberta and the University of Manitoba in Winnipeg, Manitoba to improve the diagnosis and treatment monitoring of peripheral neuropathies that can arise from many different underlying medical conditions and can lead to serious functional limitations and significant long-term healthcare costs. Misdiagnoses of neuropathies are common due to similarities in patient-reported symptoms and pathologies. Lumbar spinal stenosis (LSS) and diabetic peripheral neuropathy (DPN) are examples of two widely prevalent medical conditions that often present similarly, so the ability to classify these impairments non-invasively and with high specificity at a low cost would be beneficial.

The PROTXX physiological vibration acceleration ("phybrata") sensor delivers an innovative solution to the above problem by enabling much easier to use, lower cost, in-clinic and remote detection of unique physiological impairment and sensory reweighting signatures and biomarkers that can be used to classify various pathologies. This classification has not previously been examined in differing neuropathies, and the aim of the present pilot study is to investigate the application of phybrata sensing to differentially classify LSS from DPN and controls. Initial results were presented at the 2022 Annual Meeting of the International Society for the Study of the Lumbar Spine (ISSLS) in Boston, entitled "Wearable Sensor Assessment of Neuropathic Physiological Impairments and Sensory Reweighting Caused by Lumbar Spinal Stenosis and Diabetic Peripheral Neuropathy: an Observational Pilot Study". Data from the pilot study

demonstrate that unique phybrata signatures detected from patients with DPN and LSS using the PROTXX sensor may enable classification of different patient pathologies without the need for more costly and time-consuming diagnostic tests. Phybrata signals may also be used as a quantitative tool to track patient responses to treatment and rehabilitation based on each patient's unique phybrata signature. Data collection has also begun at a second site at the University of Manitoba, and the study team plans to expand the study cohort to include patients with peripheral neuropathy resulting from peripheral arterial disease.

Jared Fletcher, the lead author on the study, commented "Collaborating with PROTXX has enabled our research team at MRU to demonstrate a significant new clinical application of wearable device technology. Disabilities caused by peripheral neuropathies affect millions of Canadians. The availability of an easy-to-use wearable device that can non-invasively classify impairments at a much lower cost than currently available clinical tools has the potential to transform treatment practices, improve patient outcomes, and significantly reduce healthcare costs."

MRU presentation at ISSLS 2022 Annual Meeting

John Ralston, PROTXX CEO added "Results to date from our Canadian collaborations have been instrumental in validating applications of phybrata neurophysiological sensor technology to a growing range of medical conditions caused by aging, injuries, and disease. In addition to improving the diagnosis and treatment of peripheral neuropathies caused by type 2 diabetes, spinal stenosis, and peripheral arterial disease, applications of the phybrata sensor now span neuromotor and neurosensory impairments resulting from concussions, age-related balance decline, multiple sclerosis, stroke, Parkinson's disease, essential tremor, vestibular schwannoma, and chronic pain caused by orthopedic and spinal cord damage."

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About PROTXX (https://protxx.com/)
PROTXX innovations in wearable medical devices transform the lives of tens of millions of people with complex neurophysiological medical conditions that can result from injuries, disease, and aging. With offices in Menlo Park, California and Calgary, Alberta, the company is led by an accomplished team of IoT device and data platform engineers, clinical neurology researchers and practitioners, and digital healthcare business professionals, and is supported by a well-established network of R&D, manufacturing, clinical pilot, and business development partners in
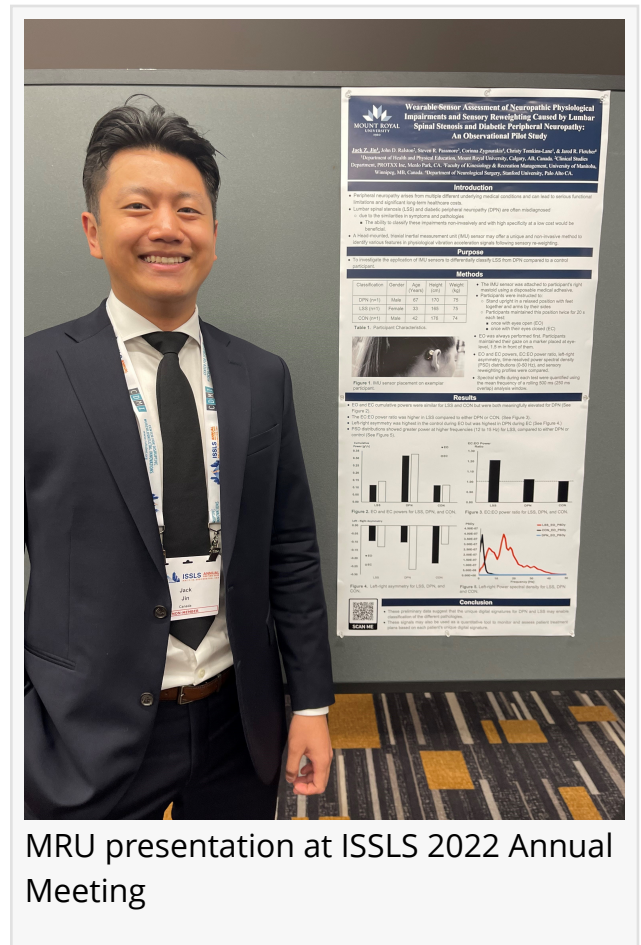
Canada, the U.S., the U.K., and Europe.

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