

PROTXX Medical Ltd and University of Alberta Expand Phybrata Sensing to Gait Analysis and Activities of Daily Living

EDMONTON, ALBERTA, CANADA,
September 28, 2021 /

EINPresswire.com/ -- Wearable medical device pioneer PROTXX Medical Ltd, along with collaborators from the Neuromuscular Control and Biomechanics Laboratory (NCBL) and the Department of Medicine at the University of Alberta, have achieved a significant milestone in the application of wearable medical devices. Results recently published by the team in the journal [Gait & Posture](#) demonstrate that a single head-mounted phybrata sensor enables classification of complex gait parameters and activities of daily living (ADL) with sensitivity, specificity, and accuracy all above 90% when compared to current gold standard laboratory solutions using video motion capture systems.

The logo for PROTXX Medical Ltd, featuring the word "PROT" in a large, bold, black, sans-serif font, followed by "XX" in a blue, stylized font. Below this, the words "Medical Ltd" are written in a smaller, bold, black, sans-serif font.

**Neuromuscular Control and
Biomechanics Laboratory**

The logo for the University of Alberta Department of Medicine, featuring a green shield with a book, a mountain, and a sun, with the text "UNIVERSITY OF ALBERTA" and "Department of Medicine" in green, sans-serif font.

Phybrata sensing, a technology pioneered by PROTXX, is used to detect microscopic involuntary motions of the body caused by physiological impairments that disrupt balance and gait. Measuring these motions at the head enables detection of signals that independently identify and quantify impairments to multiple physiological systems based on the unique contributions that they make to biomechanical stabilization of the head and eyes as the reference platform used by the body to enable balance and movement. PROTXX has previously shown that [phybrata balance biomarkers](#) enable detection and classification of neurological, sensory, and musculoskeletal impairments with performance that matches current gold standard laboratory solutions such as computerized dynamic posturography, with sensitivity, specificity, and accuracy all above 90%. The University of Alberta collaboration has demonstrated that these unique balance testing capabilities of phybrata sensing also extend to gait analysis.

The University of Alberta team was led by Hossein Rouhani, Ph.D., Principal Investigator in the NCBL and Associate Professor in the Department of Mechanical Engineering. Professor Rouhani commented: “For complex neurological conditions such as multiple sclerosis, concussions, and age-related neuromotor decline, changes in balance and gait are sensitive measures that can be used to diagnose and track disability progression and response to treatment. However, current gold standard laboratory solutions used for balance and gait assessments require complex and expensive equipment that is only available in specialized clinics, often with long wait times. Providing these capabilities in a wearable sensor enables much easier-to-use, more accessible, and more frequent patient evaluations. Phybrata sensing with an accelerometer also enables extended battery life in an unobtrusive device worn behind the ear, which is ideal for longer duration and remote patient monitoring that can provide researchers and clinicians with a more comprehensive understanding of each individual’s performance in real-life environments.”

PROTXX CEO, John Ralston, stated: “The University of Alberta’s world-class expertise in neuromuscular biomechanics and clinical neurology, along with financial support from Canada’s Mitacs Elevate program, have been instrumental in developing and validating this important new medical device advance in preparation for commercialization.”

About PROTXX Medical Ltd. (<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 Calgary, Alberta, and Menlo Park, California, 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.

About University of Alberta Neuromuscular Control & Biomechanics Laboratory (NCBL) (<https://www.ncbl.ualberta.ca/>)

Research at the NCBL is centered on human mobility and performance, with the overall goal of enhancing the quality of life of individuals affected by movement impairments and age-related decline. With a strong focus on biomechanical engineering and interdisciplinary collaborations, NCBL teams aim to positively impact prevention and rehabilitation by gaining a better understanding of the neuromusculoskeletal mechanisms of human movement, developing novel systems and outcome measures for movement and performance assessment, and designing and evaluating advanced assistive technologies.

About Mitacs (<https://www.mitacs.ca/en>)

Mitacs is a key link between industry and post-secondary institutions, driving collaborations at home and abroad to develop projects which solve business challenges and develop Canada’s

innovation capacity. Mitacs is passionate about developing the next generation of researchers helping to fuel Canada's knowledge-based economy.

John Ralston
PROTXX Medical Ltd
john.ralston@protxx.com

This press release can be viewed online at: <https://www.einpresswire.com/article/552444461>

EIN Presswire's priority is source transparency. We do not allow opaque clients, and our editors try to be careful about weeding out false and misleading content. As a user, if you see something we have missed, please do bring it to our attention. Your help is welcome. EIN Presswire, Everyone's Internet News Presswire™, tries to define some of the boundaries that are reasonable in today's world. Please see our Editorial Guidelines for more information.

© 1995-2021 IPD Group, Inc. All Right Reserved.