

June 3, 2019 – NEWS RELEASE

Concussion Medical Clinic and PROTXX announce precision balance platform pilot results

Menlo Park, CA and Rocklin, CA – Wearable device and data analytics pioneer PROTXX Inc. and Rocklin, CA based Concussion Medical Clinic (CMC) today announced exciting results from their pilot deployment of the **PROTXX Clinic** precision balance platform. CMC physicians Dr. Ashutosh Raina and Dr. Biljinder Chima have been utilizing the PROTXX solution since December 2018 to support more quantitative diagnoses of concussion injuries and monitoring of patient recovery during treatment and rehab.

The PROTXX sensor is designed to be worn unobtrusively behind the ear as a small adhesive patch by users of any age and in any clinical, athletic, industrial, or military environment, and is coupled with a mobile app and a powerful data analytics engine to serve two important functions. As a head impact dosimeter, it warns when neural tissue deformations due to cumulative head impact exposure approach levels that could lead to permanent damage. As a precision balance monitor, it quantifies the severity and duration of balance impairments that result from changes in neurovestibular and musculoskeletal physiology resulting from head impacts and a wide range of other causes.

Dr. Ashutosh Raina, Rocklin based pediatric neurologist and CMC co-founder, commented: “The PROTXX precision balance sensor provides both ease of use and a level of quantitative injury assessment unmatched by any other solution on the market. For the first time, we have been able to identify both concussions and excessive sub-concussive head impact exposure across very wide patient demographics. We also observe the appearance of very different signatures in the PROTXX precision balance sensor data that allow clinical providers to distinguish between impairments that are predominantly vestibular or neurological in nature - with very different treatment and rehab courses - and to spot undiagnosed musculoskeletal injuries that often accompany excessive head impact exposure. 60% or more of concussion patients in our pilot testing have been found to suffer from a predominantly vestibular injury, which can be successfully addressed via vestibular therapy, and do not require far more expensive and often inconclusive neurological testing or brain imaging procedures.”

PROTXX CEO and Founder, John Ralston, explained: “Precision balance measurements are used today to assess impairments and disorders for large global patient populations numbering in the billions. The corresponding range of fatigue, injury, disease, medical-treatment, and age-related balance impairments is very large, and includes concussions, subconcussive events, industrial accidents, combat blast, joint replacement surgery, diabetes, stroke, heart disease, respiratory disease, sleep apnea, Parkinson’s disease, Alzheimer’s disease, and multiple sclerosis. However, current solutions all require expensive clinical equipment and complex, time consuming testing procedures. PROTXX innovations in wearable sensors, rapid test protocols, and machine-learning analytics provide clinical and allied healthcare providers with a much simpler and more cost-effective solution for precision balance measurements, and extend the utility of these measurements much deeper into preventive medicine and human performance optimization.”

The CMC-PROTXX pilot results were presented recently at the Stanford Sports Concussion Summit in Palo Alto, CA, on April 27, and at the IEEE Biomedical and Health Informatics Conference in Chicago, May 19-22, and have generated broad interest from healthcare providers, insurers, and sports organizations.