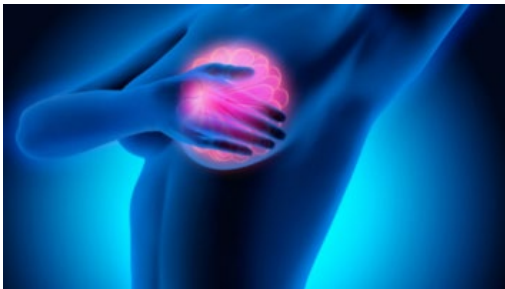# HELP IMPROVE BREAST CANCER OUTCOMES WITH MORE DIAGNOSTIC PRECISION

At the GHWCC Conference last month, Dr. Matthew Ellis, Professor and Director of the Lester and Sue Smith Breast Center at Baylor College of Medicine, renowned in the field of breast cancer, zoomed in from a conference in Europe to share information about the breakthrough work he is pursuing to improve breast cancer outcomes using proteogenomics.

Cancer is common, frequently fatal, and poorly understood. Treatments are often toxic, untargeted, and ineffective. A deeper understanding of the biology of each type of cancer will lead to treatments that are simpler, targeted, and more effectively saves lives. Dr. Ellis and his team are applying a revolutionary technology to transform the field of cancer diagnostics. The vision is to work towards a day when the first treatment the patient receives is maximally effective and minimally toxic. Since the project began 2018, we have completed proteogenomic analyses on over 200 individuals: see ecancer news. Our focus for 2022 is to develop to methods that allow the delivery of critical information on the likelihood of response to standard treatment to oncologists and their patients." Dr. Ellis stated. "The objective is to identify problematic cancers quickly so that more successful treatments can be introduced sooner.

The process begins with the accrual of samples to identify patients with difficult-to-treat cancers. Deep scale proteogenomic data are generated and then artificial intelligence and

machine learning are deployed to identify more effective treatments. Samina Farid, Lead Advocate for Precision Proteome, affirmed, "From my own experience with breast cancer, I have learned that even experienced and skilled doctors do not know with certainty which treatment will give their patients the best chance of survival with a good quality of life. That is why I am excited about Baylor's Precision Proteome Initiative. This initiative gives me hope for better outcomes and less treatment toxicity for all cancer patients."

If you would like more information or would like to help fund the work, please visit: precision-proteome-initiative