Dr. Gregory Payne and Team Nominated for the UMD Invention of the Year Award

The Division of Research has announced the nominees for the Invention of the Year Award. For 2017, there were over 170 inventions disclosed and 52 patented, 46 technologies licensed, and the receipt of the largest investment in UMD history totaling $219.5 million from the A. James and Alice B. Clark Foundation.

March 8, 2018 — Each year, UMD honors exceptional inventions that have the potential to influence science, society, and the free market. A total of nine Invention of the Year award nominees have been named across three categories: Physical Sciences, Life Sciences, and Information Sciences. One invention from each category will be selected to win the Invention of the Year Award, to be celebrated at the 2018 Innovate Maryland event, UMD’s annual celebration of research and innovation, on April 11, 2018.

Dr. Gregory Payne, Professor, IBBR, and his research team, have been nominated in the Physical Sciences category for their project: Transformational Electronic Tool for Chemical Analysis: Oxidative Stress Detection. In addition to Dr. Payne, the invention team includes:

- Mijeong Kang, Post-Doctoral Associate, IBBR
- Eunkyoung Kim, Research Associate, IBBR
- Deanna Kelly, Professor of Psychiatry, Affiliate Professor of Pharmacy Practice and Science, School of Medicine, University of Maryland, Baltimore

Invention details: Oxidative stress is long-term damage to cells which can lead to chronic conditions such as schizophrenia, cardiovascular disease, and cancer. A fast and safe method of measuring oxidative stress combined with other health markers could potentially lead to early detection of such diseases, but, unfortunately, no such test currently exists. However, researchers at UMD have invented a disruptive technology that uses iridium reducing salt and spectrographs to measure oxidative stress cheaply, quickly, and reliably.

Congratulations to Dr. Payne and the entire Invention Team! For more details and specifics about potential applications for this technology,

Inquiries: communications@ibbr.umd.edu