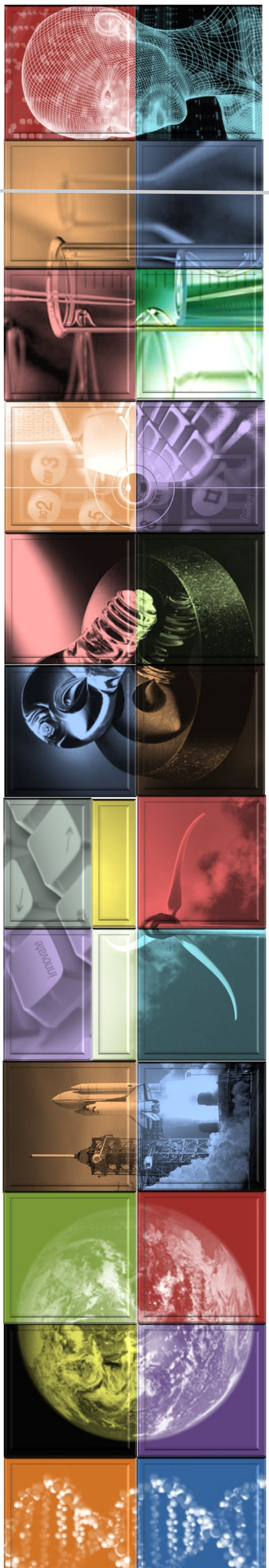

Gary R. Kinsel

Brush-Polymer Modified MALDI Targets: Advanced Platforms for Proteomics and Medical Diagnostic Applications

The Technology

Modern mass spectrometry (MS) has emerged to play an increasingly important role in the fields of biochemical and biomedical research. New MS-based tools and approaches are constantly under development for greater insight into disease pathogenesis, proliferation and treatment. Matrix-Assisted Laser Desorption Ionization (MALDI) MS is one of the emergent, critical tools frequently used in these studies for the characterization of peptides, proteins and other biological compounds.

The use of MALDI MS involves the identification, characterization, and profiling of proteins and related compounds in disease processes. Application of MALDI MS to these types of challenges almost always requires a time consuming analysis of complex biological fluid which can also in significant sample loss.

Dr. Kinsel and his research team have developed a new approach to reducing the complexity of biological mixtures prior to MALDI MS which can be integrated directly into the sample preparation process. This approach, referred to as On-Probe Affinity Capture (OPAC) MALDI MS not only shortens the time required for analysis and minimizes the opportunities for sample loss, but also has the capacity to be performed in a highly automated, efficient fashion.

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Professor Kinsel earned his Bachelor of Science degree at Western Illinois University in 1983 and his PhD in Chemistry at the University of Colorado Boulder in 1989. After an Alexander von Humboldt post-doctoral appointment at the Technical University Garching and a research post-doctoral appointment at Texas A&M University, Prof. Kinsel took an Assistant Professor position at the University of Texas Arlington in 1994. After promotions to Associate and Full Professor, Prof. Kinsel moved to Southern Illinois University Carbondale in 2005.

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