

Accolades

Wysocki Selected for Distinguished Contribution in Mass Spectrometry Award

EMSL user Professor Vicki Wysocki won the American Society for Mass Spectrometry's Award for Distinguished Contribution. This annual award recognizes a focused, singular achievement in fundamental or applied mass spectrometry. Wysocki, jointly with Professor Simon Gaskell of the University of Manchester, was chosen for her contributions to creating the mobile proton model.

Wysocki and her team created a model that helps unify different observations from real-world collision-induced peptide fragmentation, which is vital in environmental and health studies. The model provides specific predictions regarding peptide fragmentation and enables spectra to be interpreted and simulated. The model serves as the foundation for other scientists in the area of peptide mass spectrometry to build more advanced models of fragmentation. Further, it underpins increasingly sophisticated database search algorithms. A collaborative part of this research utilized a large dataset of peptide fragmentation spectra provided by Richard Smith and Ljiljana Pasa-Tolic at EMSL.



Her award-winning research is part of a larger effort. Along with her colleagues, Wysocki is leading research focused on further understanding of the hydrogen-bonding interactions and fragmentation patterns of activated protonated peptides. The long-range goals of this work are to provide additional rules to more quickly and efficiently determine protein sequence. Other projects include investigation of mechanisms of action of microorganisms and identify microorganism biomarkers for diagnostic test development and development of instrumentation that will be used to characterize subunit assembly of large protein complexes. Wysocki is Professor with the Department of Chemistry and Biochemistry at the University of Arizona. She also leads research at the BIO5 Institute for Collaborative Research.

Wysocki received the award at the annual American Society for Mass Spectrometry conference, held in June 2009 in Philadelphia, Pennsylvania.

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