
Imaging mass spectrometry: Potentials in the pharmaceutical industry

Pierre Chaurand*¹

¹Université de Montréal (UdeM) – Canada

Abstract

Since its introduction in the late 90's, MALDI imaging MS technology has witnessed a phenomenal expansion. Initially introduced for the mapping of intact proteins from fresh frozen tissue sections, imaging MS is now routinely applied to a wide range of different compounds including peptides, proteins, lipids, metabolites and xenobiotics. Numerous compound specific sample preparation protocols and analytical strategies have been developed. These include tissue sectioning and handling, automated matrix deposition approaches and the emergence of *in situ* tissue chemistries. Originally performed on sections cut from fresh frozen tissue specimens, methodologies incorporating an *in situ* enzymatic digestion step prior to matrix application have been optimized to access the proteome locked in formalin-fixed paraffin embedded tissue biopsies. In this presentation, the clinical and pharmaceutical potentials of imaging mass spectrometry will be highlighted.

Keywords: Mass spectrometry, Imaging, Tissue, Biocompounds, Drugs

*Speaker