

Application of Mass Microscopy to drug discovery

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In the field of drug discovery, analyses of drugs or metabolites using mass spectrometry prevail widely, and further the analysis methods for proteome and metabolome have been also adopted. On the other hand, it has been revealed that the metabolism of biomolecules which are drugs or drug targets and the expression of physiological functions are seen in particular localized regions. High resolution method of imaging mass spectrometry, or Mass Microscopy, is an approach of Molecular Imaging that combines the comprehensive analysis function of mass spectrometry with a method for localized detection. This method requires no labeling such as fluorescence, and enables a system analysis of biocomponents that sufficiently accompanies comprehensiveness and information of localization. In this symposium, I will discuss the current status of drug discovery support by Mass Microscopy in the pharmaceutical companies in western countries and Japan, together with its problems and the future prospects.