

**WHOLE-BODY, MICRO-AUTORADIOGRAPHY, AND METABOLITE  
PROFILING: AN INTEGRATED APPROACH FOR STUDYING TISSUE  
DISTRIBUTION, METABOLISM, AND TRANSPORT OF COMPOUNDS  
ACROSS TISSUE COMPARTMENTS**

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The early determination of tissue distribution and pharmacokinetics of new chemical entities and their metabolites plays a major role in the drug discovery and development processes. The implementation and coupling of new and old detection systems in drug research has considerably advanced the discovery process and phosphor imaging, autoradiography and LC/MS/MS are no exception. The newer techniques of quantitative phosphor imaging of whole-body sections (QWBA) and LC/MS/MS coupled with the older techniques of micro-autoradiography have been coupled to reveal a lot about the compartmentalization of parent drug and their metabolites. The use of chemically altered and/or genetically modified animals can further increase the strength of this approach. This presentation will discuss the study designs and a few examples of how these techniques can be used together to provide a more complete data set on the disposition of drugs and their metabolites, which can ultimately be integrated with efficacy data to provide a more complete picture of pharmacodynamics and pharmacokinetics.