QPS, LLC
Delaware Technology Park
3 Innovation Way, Suite 240
Newark, DE 19711

QUALITY • PERFORMANCE • SERVICE

WEB www.qps-usa.com
TEL (302) 369-5601
FAX (302) 369-5602

CONFERENCE

AAPS National Biotech Conference
San Francisco, CA

TITLE (QPS 2010-001)

QUANTITATIVE WHOLE-BODY AUTORADIOGRAPHY AND IMAGING APPROACHES TO STUDY TISSUE DISTRIBUTION OF BIOTHERAPEUTICS IN ANIMAL MODELS

AUTHORS

Eric Solon

ABSTRACT

The early determination of tissue distribution and pharmacokinetics of new biological entities 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 and development processes and can be applied to determine the fate of biotherapeutics. The data obtained from micro-, whole body autoradiography/luminography, and cryo-imaging can be coupled with in vivo imaging, LC/MS/MS, MALDI-MS, and/or NanoSIMS data to offer high resolution answers to numerous questions regarding ADME properties of biologics, such as: organ-tissue-cellular localization, receptor-specific localization, subcellular localization, drug interactions, gene expression, formulation comparisons, nanoparticle tracking, stem cell migration, virus localization, tissue metabolite ID/pharmacokinetics/pharmacodynamics, and target organ/tumor penetration. These techniques have been used with radiopharmaceuticals, proteins, peptides, oligonuclides, antibodies, and siRNA. The state-of-the-art and some examples of their analyses using these tools will be presented.