

Meet WuXi AppTec at JSSX 2025



Luncheon Seminar 5

核酸ならびにペプチド医薬のインビトロ薬物代謝とタンパク結合の最前線 *In Vitro* Drug Metabolism and Protein Binding of Oligonucleotide and Peptide: Advances and Capabilities

October 22 (Wed.) 11:20 ~ 12:20 C会場 (Room C)

Speaker: Jie Wang Chair: 伊藤 文雄 Fumio Itoh

Abstract

In vitro metabolic stability and protein binding studies are crucial for optimizing oligonucleotide and peptide drugs, as they significantly impact drug delivery, distribution, retention, and safety. However, inconsistencies in siRNA drug binding results have been reported due to varying plasma protein binding (PPB) assay methods. This presentation will introduce various systems used for studying the metabolic stability of oligonucleotides and their applicability. It will also cover different techniques for protein binding studies, highlighting their characteristics, challenges, and discrepancies. We will discuss the reasons behind inconsistent PPB findings for siRNAs and aim to improve the reliability of PPB assessments in oligonucleotide drug development, potentially influencing future research methodologies. Additionally, the presentation will address challenges in peptide development, PPB determination, and the role of PPB in predicting peptide half-lives.

Dr. Jie Wang received her PhD in Pharmaceutical Analysis from Shenyang Pharmaceutical University in 2014. She is now the Associate Director and principal scientist in the DMPK department at WuXi AppTec, focusing on *in vitro* ADME with expertise in protein binding and drug metabolic stability assays.

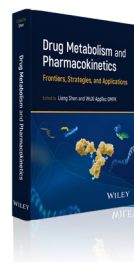


Dr. Jie Wang

Posters

- BP-20 Rapid screening and characterization of payload-related catabolites derived from ADCs in *in vitro* model by high-resolution mass spectrometry
- BP-21 *In vitro* platform for assessing ADC stability and payload release
- P-5 Establish a high-throughput exposed polar surface area (EPSA) screening platform
- P-48 Establishment of an *in vitro* screening system for human pregnane X receptor (PXR) agonists
- P-108 A novel and accurate method for assessing the stability of maleimide-containing linker-payloads in the β -glucuronidase stability assay
- P-118 Optimization and assessment of intrathecal (IT) administration to improve drug delivery to the CNS in rats

New Book



Drug Metabolism and Pharmacokinetics: Frontiers, Strategies, and Applications

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