

The Drug Metabolism and Pharmacokinetics (DMPK) Interest Group (IG) Workshop at 72nd ASMS Annual Conference on June 2 - 6, 2024 in Anaheim, CA

The Drug Metabolism and Pharmacokinetics (DMPK) Interest Group (IG) Workshop was held on Monday, June 3rd from 5:45 to 7:00 pm. The coordinator, Holly Maw, and the co-coordinator, Josh Yu, led the workshop. Approximately 120 scientists attended the workshop demonstrating interest in the DMPK field. Holly shared the DMPK IG goals to attendees and introduced the session. Holly and Josh introduced speakers and moderated the discussion. An expert panel shared their perspectives to spur discussion on the workshop topic: mass spectrometry in understanding DMPK principles for small and large molecules. The active attendee participation in the discussion provided a good endorsement for continuing the DMPK-IG in the future.

1. Review of the DMPK IG Goals

The DMPK Interest Group's goals of providing a discussion forum to MS practitioners in drug metabolism, pharmacokinetics, qualitative and quantitative, non-regulated bioanalysis include sharing:

- Recent advances in techniques and methodologies for metabolite identification and pharmacokinetic bioanalysis
- Interpretation of and application of related guidance documents (i.e., MIST, ICH M3, DDI, human ADME mass balance)
- Sharing of best practices across industry and academia
- Provide inputs on ASMS conference program of interest to DMPK scientists
- Reach out and coordinate with related groups to complement scope and broaden outreach to scientific community

2. 2024 and future DMPK IG Coordinators

2024: Hlaing (Holly) Maw (Coordinator) hlaing.maw@boehringer-ingenelheim.com
Josh Yu (Co-coordinator) josh.yu12@gilead.com

2025: Josh Yu & HsinPin Ho (Coordinator): hsinpin.ho@bms.com
Yongle Pang (Co-coordinator) yongle.x.pang@gsk.com

2026: Yongle Pang (Coordinator) yongle.x.pang@gsk.com
Renmeng Liu (Co-coordinator) renmeng.liu4@gilead.com

3. DMPK IG workshop agenda for 2024

Two speakers shared their experiences and recommendations on the theme “Mass spectrometry in understanding DMPK principles for small and large molecules”:

- Overcoming the DMPK/Clinical Pharmacology Challenges of Avacopan by Dr. Shichang Miao, Amgen, CA, USA
- Bioanalysis of new therapeutic modalities using immunocapture-LC/MS by Dr. Emily Werth, Boehringer Ingelheim, Ridgefield, CT, USA

Example questions for workshop speakers:

- Formulation development of different modalities
- Toxicological dose selection
- Amount of radioactivity used in the human ADME study

4. Update on the DMPK Interest Group’s Impact on the 2024 ASMS Program

We thank ASMS for being receptive to our request and proposals for DMPK oriented oral sessions for the 2024 meeting. This responsiveness was reflected in several DMPK related oral sessions and the positive feedback from the Interest Group attendees.

5. Suggestions on ASMS 2025 Oral Session Topics from DMPK-IG Attendees

- Metabolism of new modalities
- Precision medicine and LC/MS
- Gene therapy
- Proteomic analysis of covalent drugs
- Unusual reactions in mass spec for bioanalysis (cyanide release, oxidation)

Current Officers for the ASMS DMPK Interest Group:

- Holly Maw, Boehringer Ingelheim (Coordinator for 2024)
Principal Scientist
DMPK, Boehringer Ingelheim, Ridgefield, CT
e-mail: hlaing.maw@boehringer-ingelheim.com
- Josh Yu, will not be able to attend 2025 ASMS, so the coordinator(s) will be HsinPin Ho (hsinpin.ho@bms.com) or Yongle Pang (Co-coordinator) yongle.x.pang@gsk.com, or both.