



AAPS Therapeutic Product Immunogenicity Update

February 2020

Vibha Jawa

Chair TPI Community

TPI Community Leadership Team

Chair: Vibha Jawa (Merck and Co)

Vice Chair: Johanna Mora (BMS)

Past Chair: George R. Gunn, III (GSK)

Secretary: Fiona Glassman (CSL Behring)

Learning Opportunity Managers:

Steve DeWall (GSK) and Sandra Garces (xx)

Member Engagement Managers:

Adrienne Clements-Egan (Janssen), Ben Hock (BioMarin)

Clinical Relevance of Immunogenicity

Objective:

To provide a forum for industry and regulatory colleagues to engage, align and communicate more effectively our understanding of the clinical impact of anti-therapeutic immunogenicity on Safety and Efficacy

- [Therapeutic Product Immunogenicity Community](#) sub-team
- Monthly teleconference—Typically 3rd Wednesday of each month
- Chair: George R. Gunn, III
- Vice Chair: Ben Hock
- Coordinator: Michele Gunsior
- Team currently consists of bioanalytical, clinical and regulatory experts.
- Two manuscripts are currently in draft and are described on the next slide
- Contacts: george.x.gunn@gsk.com; ben.hock@bmrn.com; gunsior@vielabio.com

Manuscripts Under Progress

1) Algorithms to implement therapeutic drug monitoring in a clinical setting

The goal of this manuscript is to present the foundational bioanalytical and scientific principles underlying TDM programs that can help clinicians designing tailored algorithms. This manuscript is focused on TNFi. The scientific basis of those concepts can, however, be considered in different therapeutic contexts.

Leads: Sandra Garces, Michael Partridge, Michele Gunsior, Darshana Jani

2) Pivotal and Post-Market ADA Impact Assessment

Are helpful components from Shankar et al. 2014 overlooked? ADA method characteristics and clinical relevance. Risk assessment and evidence-required to assess clinical impact.

Leads: Ben Hock, Viswanath Devanarayan, Yow-Ming Wang, George Gunn, Michael Partridge

Theme title : Compendium of Immunogenicity Risk Assessments: an Industry Guidance Built on Experience and Published Work

Name: Gizette Sperinde Email: gizette@gene.com

Topic/title: Immunogenicity risk assessment for an Immune-modulatory fusion protein biotherapeutic expressed in CHO

Name: Bonnie Rup Email: bonnierup@gmail.com

Topic/title: Immunogenicity risk assessment for an Engineered human cytokine analogue expressed in Pichia pastoris

Name: Mark Milton Email: mark.milton@novartis.com

Topic/title: Immunogenicity risk assessment for an AAV-vector gene therapy used for the treatment of an endogenous protein deficiency

Name: Stephen DeWall Email: stephen.l.dewall@gsk.com

Topic/title: Immunogenicity risk assessment for an Allogeneic CAR-T-cell therapeutic

Name: Ben Hock Email: ben.hock@bmrn.com

Topic/title: Immunogenicity risk assessment for an enzyme replacement therapy biotherapeutic

Name: Diana Montgomery Email: diana.montgomery@merck.com

Topic/title: Immunogenicity risk assessment for monoclonal antibody biotherapeutic

Name: Manoj Rajadhyaksha Email: manoj.rajadhyaksha@regeneron.com

Topic/title: Immunogenicity risk assessment for a multi-domain biotherapeutic

Name: Johanna Mora Email: johanna.mora@bms.com

Topic/title: Immunogenicity risk assessment for a PEGylated biotherapeutic

Immunogenicity Risk Assessment and Mitigation Subteam

Objective:

Provide a forum to connect scientists working on preclinical immunogenicity risk assessment and mitigation efforts

Provide a venue to expand knowledge and understanding of the various risk assessment tools and evaluate their utility,

Discuss challengers facing the field, and to formulate and communicate industry opinions on regulatory challenges related to immunogenicity risk assessment

- [AAPS SubTeam](#)
- Monthly teleconference (2nd Tuesday of the month)

- Chair: Jochem Gokemeijer
- Former Chair: Vibha Jawa
- Vice Chair: Laurent Malherbe
- Team Members: Yi Wen / Robin Walsh

- Contact : Jochem.Gokemeijer@BMS.com ; vibha.jawa@merck.com ;
malherbe_laurent@lilly.com ; wen_yi1@lilly.com ; walsh_robin_e@lilly.com

Accomplishments

- Member recruitment: Reach out through Linked in and connections through other meetings
- Expand Outreach: Cross functional posting with communities; Build awareness through updates from AAPS in European Immunogenicity Platform Meeting,
- Plan programming sessions with cross functional communities
- AAPS Webinar March 2016
Considerations for Development of Biologics in Combination Regimens: Risk Assessment for Immunogenicity and Bioanalytical Considerations
Vibha Jawa, Merck and Co. (Moderator)/ Yan Zhang, BMS (Lead AAPS Emerging Modalities Taskforce)
Jad Maamary (Merck and Co) ; Alex Kozhich (BMS); 3/6/2019; 12:30-2:00
- Ask the Experts: October 2016
“Specifications for Organic Impurities” session with @Vibha Jawa and @Sapna;
Drug Product Handling Community and Therapeutic Protein Immunogenicity Community
- Programming at Pharm Sci 360
 - Nucleic Acid-Based Therapeutics: Discovery, Development, & Delivery; Day 1 Biomolecular End to End Session;
Organisers: Charvi Nanavati (Ionis) ; Uma Kavita (BMS); Marina Falaleeva (Sangamo)
Moderated by Vibha Jawa (Merck and Co)
 - Emerging Research Tools for High Quality Candidate Selection;
 - Day 2 Biomolecular; Chaired by Swati Gupta (Allergan) and Arunan Kaliyaperumal (Eli Lilly)
 - Rapid Fire Proposals

Ongoing and Next Year's Goals

- Continue to Increase Membership and Member Engagement
- Survey on Risk Assessment Tools: Completed
 - 16 Pharma participant provided details on assay procedures and performance
 - Focused on pre clinical *in vitro* methods and recommened uses
 - *Manuscript : In Progress*
 - *Develop an Ask the Expert proposal around Risk Assessment tools*
- Ongoing Efforts
 - Focus groups around:
 - Novel Modalities ; Cell/Nucleic Acid/Gene therapies
 - CMC CQA and Immunogenicity
 - Immune Oncology therapeutic immunogenicity
 - Peptide impurities and immunogenicity

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- Nicki Blackwell
- Katie Baumer
- Meredith Voelkel
- Emma Trentanove