3rd Annual

Immunogenicity

Utilising predictive techniques and linking aggregation findings to clinical immunogenicity incidence within a risk based approach for preclinical data translation to commercialisation

Hotel Avenida Palace,
Barcelona, Spain

20th & 21st January 2011

EFFECTIVELY NAVIGATE the **regulatory** requirements on **risk assessment** and translation of preclinical data to **clinical results**, WHILE REDUCING **immunogenicity** incidence for **successful drug development**

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In the Chair:

Day 1:

Daniel Kramer
Corporate Expert, Immunogenicity
Merck Serono
Member of European Immunogenicity Platform

Day 2:

Robin Thorpe
Head of Biotherapeutics Group
National Institute for Biological Standards and Control

Attending This Premier **marcus evans** Conference Will Enable You to:

- **Overcome** the key challenges of immunogenicity in development
- **Analyse** the predictive tools available currently and in the future for immunogenicity testing
- **Discuss** how to translate preclinical data to clinical results
- **Explore** sub-visible particles and aggregation and its impact on immunogenicity
- **Profile** the latest data seen for immunogenicity with biosimilars

Learn from Key Practical Case Studies:

- **Ablynx** reviews the need for risk mitigation strategies to reduce the risk of failure in the clinic
- **UCB Celltech** overcomes the key challenges of immunogenicity in development
- **Pfizer** compares competitive ligand binding assay and bioassay formats for the measurement of neutralising antibodies to protein therapeutics
- **Merck Serono** explores bioassays and screening for immunogenicity

marcus evans Expert Speaker Panel:

Stefan Kostense
Associate Director of Clinical Assays
Crucell, Netherlands
Member of European Immunogenicity Platform

Michael Tovey
INSERM Director of Research, Director of the Laboratory of Viral Oncology
Institute of Andre Lwoff

Roland Schmidt
Principal Pharmaceutical Scientist
Abbott

Robin Thorpe
Head of Biotherapeutics Group
National Institute for Biological Standards and Control

Marie-Paule Bouche
Section Head of Bioanalytics and Immunogenicity
Ablynx

Daniel Kramer
Corporate Expert, Immunogenicity
Merck Serono
Member of European Immunogenicity Platform

Jeronimo Carnes
Research and Development Director, Allergy Unit
LETI Laboratorios

Deborah Finco
Senior Principal Scientist, Immunotoxicology
Pfizer

Ole Lund
Professor
Technical University of Denmark

Hishani Kirby
Director, Immunogenicity
UCB Celltech
Member of European Immunogenicity Platform

Melody Sauerborn
Postdoctoral Research Fellow
Utrecht University

Susan Kirshner
Associate Chief, Laboratory of Immunology
Division of Therapeutic Proteins
CDER
FDA

Olivier Brass
Research Formulation Unit Leader
Sanofi Pasteur

Jamie Moore
Associate Director and Senior Scientist
Early Stage Pharmaceutical Development
Genentech, Inc.

Documentation Partner:

Phadia
Setting the Standard

Media Partners:

Current Immunology Reviews

BENTHAM SCIENCE

Conference Day 1

20th January 2011

08:30 Registration and Coffee

09:00 Opening address from the Chair

NAVIGATING THE REGULATORY LANDSCAPE IN RISK ASSESSMENTS FOR IMMUNOGENICITY AND ITS PRACTICAL IMPLEMENTATION

09:10 **Profiling the FDA perspective on risk assessment guidance for immunogenicity**
- Outlining how to implement a risk assessment plan in regards to immunogenicity
- Understanding how the Agency carries out its own risk assessments
- Explaining what the guidance entails regarding the risk based immunogenicity programme

Susan Kirshner
Associate Chief, Laboratory of Immunology
Division of Therapeutic Proteins
CDER
FDA

09:50 **Reviewing the need for risk mitigation strategies to reduce the risk of failure in the clinic**
- Outlining the benefits of implementing an integrated risk and commercial plan and the steps to do so
- Reviewing the importance of establishing a threshold while considering the species tested, the indication and patient group for specificity
- Profiling a successful case example of an immunogenicity risk assessment plan

Marie-Paule Bouche
Section Head of Bioanalytics and Immunogenicity
Ablynx

10:30 Morning Coffee

EXPLORING SUB-VISIBLE PARTICLES AND AGGREGATION AND ITS IMPACT ON IMMUNOGENICITY

11:00 **Protein aggregates and particles: Mechanisms, sources and detection**
- Outlining the mechanisms of protein aggregation
- Exploring sources of aggregation in formulation, manufacturing and patient application
- Evaluating aggregate and particle detection – Basic requirements and current trends

Roland Schmidt
Principal Pharmaceutical Scientist
Abbott

11:40 **Analysing protein aggregation and immunogenicity for the bigger picture**
- Examining protein aggregation and immunogenicity in the development of therapeutic proteins
- Profiling risk-based approaches for the development of protein therapeutics in light of aggregates and particulates
- Discussing the regulators perspective on sub-visible particulates and aggregates

Jamie Moore
Associate Director and Senior Scientist
Early Stage Pharmaceutical Development
Genentech, Inc.

IMMUNOGENICITY: FORMULATION CONSIDERATIONS, PREDICTIVE TECHNIQUES AND ASSAYS

12:20 **Overcoming the key challenges of immunogenicity in development**
- Understanding the mechanisms of immunogenicity related to biotherapeutics
- Understanding the clinical relevance of an immune response – case study
- Developing a risk base approach to immunogenicity testing

Hishani Kirby
Director, Immunogenicity
UCB Celltech
Member of European Immunogenicity Platform

13:00 Luncheon

14:00 **Removing the barriers from formulation and vaccine development**
- Reviewing the differences between allergenicity and immunogenicity
- Outlining the need for specific immunogenicity and efficacy in allergy treatment
- Evaluating methods to increase immunogenicity in allergenic vaccines
- Exploring the measurement of immunogenicity

Jeronimo Carnes
Research and Development Director, Allergy Unit
LETI Laboratorios

14:40 **New Trends in Early Vaccine stability, immunogenicity assessment and stabilisation strategies**
- Case studies: stability and stabilisation of protein, adjuvanted glycoprotein, and lived attenuated virus
- Rational approaches for an early vaccine stability and immunogenicity assessment
- Stabilisation strategy for early and late product stage

Olivier Brass
Research Formulation Unit Leader
Sanofi Pasteur

15:20 Afternoon Tea

15:40 **Outlining the predictive science for immunogenicity**
- Analysing the usefulness of immunogenicity prediction when the drug substance is not in its final formulation using computational tools
- Understanding the validation of current predictive models
- Evaluating the use of predictive techniques in preclinical studies and its reliability in lead selection

Ole Lund
Professor
Technical University of Denmark

16:20 **Assessing the immunogenic potential of recombinant human therapeutics by use of animal models**
- Outlining the mechanisms and immunological aspects of antibody formation against aggregated recombinant human interferon alpha and beta in transgenic animals
- Profiling the results of these experiments and evaluating the value of animal models

Melody Sauerborn
Postdoctoral Research Fellow
Utrecht University

17:00 Closing Comments from the Chair

17:05 End of Day One

Conference Day 2

21st January 2011

08:30 Registration and Coffee

09:00 Opening Address from the Chair

IMMUNOGENICITY: FORMULATION CONSIDERATIONS, PREDICTIVE TECHNIQUES AND ASSAYS

09:10 **Overview of bioassays and screening for immunogenicity**
- Reviewing the different types of assays, when to use them and how to validate them
- Understanding the need for specific, highly sensitive assays for immunogenicity quantification
- Analysing the potential for the development of an all-in-one assay and the need for better measurement assays especially when measuring immunogenicity causes in patients accurately

Daniel Kramer
Corporate Expert, Immunogenicity
Merck Serono
Member of European Immunogenicity Platform

09:50 **Comparison of competitive ligand binding assay and bioassay formats for the measurement of neutralising antibodies to protein therapeutics: 4 case studies from different companies**
Presenting 4 case studies comparing 2 different assay formats in the evaluation of neutralising antibodies for:
- A monoclonal antibody that is a CD40 agonist
- A blocking IL4 homolog
- A humanised blocking Fab fragment that binds VEGF-A
- A monoclonal antibody to TNF-alpha

Deborah Finco
Senior Principal Scientist, Immunotoxicology
Pfizer

10:30 Morning Coffee

11:00 **Exploring the importance of developing better cell based assays**
- Profiling the novel technology and platforms that can provide accurate results within minutes to replace the existing techniques
- Discussing the need for automation of assays as requirements for immunogenicity increase

Michael Tovey
INSERM Director of Research,
Director of the Laboratory of Viral Oncology
Institute Andre Lwoff

11:40 **Stratified PK/PD analysis confirming the lack of impact of HAHA on the clinical rabies virus neutralising activity of a human monoclonal antibody combination**
- How to determine the impact of ADA responses based on clinical data
- How to integrate PK/PD data with immunogenicity data
- What can you learn from PK and PD profiles in ADA positive and negative subjects?
- Can in vivo PK/PD data substitute in vitro neutralising antibody assay data?
- Translation of clinical results into an adequate ADA characterisation strategy

Stefan Kostense
Associate Director of Clinical Assays
Crucell, Netherlands
Member of European Immunogenicity Platform

ASSESSING THE NEED FOR STANDARDS IN IMMUNOGENICITY AND THE ROLE OF BIOSIMILARS

12:20 Panel Discussion:
Discussing the need for standards for measuring immunogenicity in therapeutic proteins
- Reviewing the standards for drugs yet no set standards have been established for measuring immunogenicity in therapeutic proteins
- Exploring the possible standards for measuring antibodies against drugs and considering isotype changes
- Evaluating how we can establish these standards and the progress made so far

Michael Tovey
INSERM Director of Research,
Director of the Laboratory of Viral Oncology
Institute Andre Lwoff

Robin Thorpe
Head of Biotherapeutics Group
National Institute for Biological Standards and Control

13:00 Luncheon

14:10 Case Study:
Profiling the latest data seen for immunogenicity for biosimilars
- Outlining immunogenicity strategy for biosimilars in place
- Evaluating the serious issues of highly immunogenic biosimilars produced with very high number of aggregates from developing countries
- Discussing the latest reports on cases seen and the effects on patients

Robin Thorpe
Head of Biotherapeutics Group
National Institute for Biological Standards and Control

OUTLINING OPPORTUNITIES FOR PROGRESSION IN IMMUNOGENICITY

14:50 Panel Discussion:
Outlining the pending IMI call for better collaboration between industry and academia in immunogenicity
- Understanding the currently status of the IMI call
- Discussing the potential avenues into which immunogenicity can be progressed

Hishani Kirby
Director, Immunogenicity
UCB Celltech
Member of European Immunogenicity Platform

Daniel Kramer
Corporate Expert, Immunogenicity
Merck Serono
Member of European Immunogenicity Platform

15:30 Closing Comments from the Chair

15:40 Afternoon Tea and End of Conference