ECA Academy
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GMP Certification Programme
Certified Biotech Manager

Speakers

Markus Haberger
Roche Diagnostics

Dr Andreas Nechansky
VelaLabs

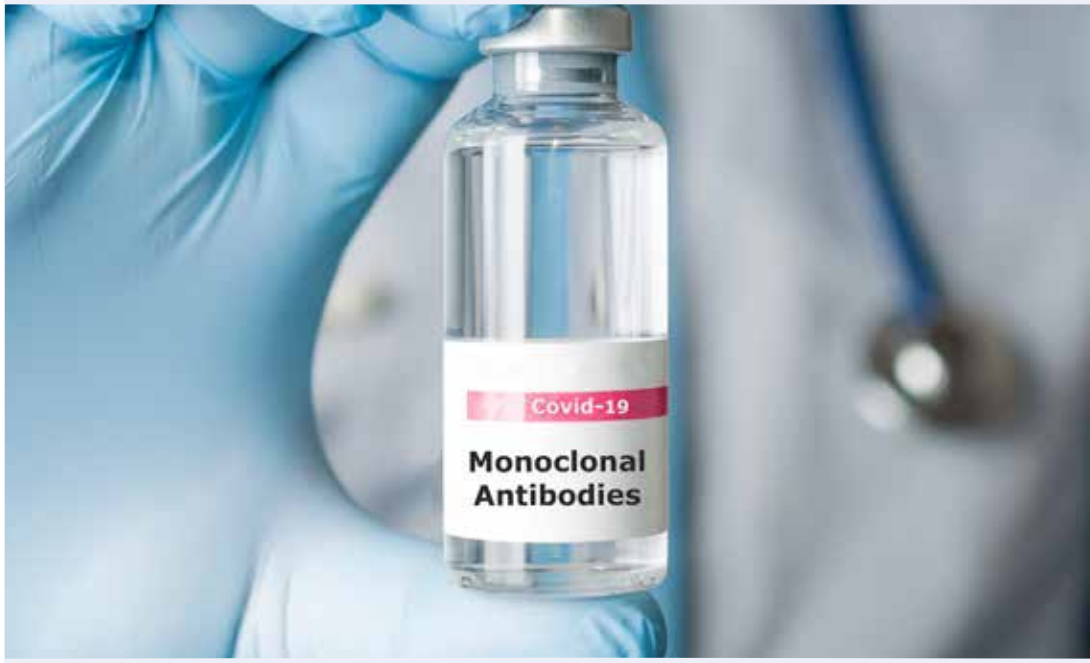
Markus Roucka
Tentamus

Manfred Schuster
AGES

Monoclonal Antibodies

From Concept to Approval

Live Online Training on 22/23 October 2024



Highlights

- Bacterial vs Mammalian Cell Production
- Antigen Affinity Purification
- Analytical Concepts and Methods for Testing, LCMS and More
- Clinical Development Plan
- ADC & Bi-/Tri-specific Conjugates
- Regulatory Background Information

Objective

At the end of this course, participants will have a comprehensive understanding of monoclonal antibodies (mAbs). From the early development process, through upstream and downstream manufacturing, to different analytical approaches, clinical trials and stability studies. The course is designed to ensure that participants not only understand the theoretical underpinnings of mAb development, but also the practical and regulatory challenges that must be overcome to bring a therapeutic antibody from the laboratory to the clinic and ultimately to the market.

Background

Monoclonal antibodies (mAbs) are increasingly becoming a cornerstone of therapeutic strategies in a wide range of diseases, including oncology, rheumatology and infectious diseases. Their ability to target specific antigens with high precision makes them critical tools in the fight against complex diseases. The global market for monoclonal antibodies is expanding not only because of their efficacy but also because of technological advances in genetic engineering and bioprocessing.

The development of monoclonal antibodies involves a sophisticated and multidisciplinary approach that integrates the fields of molecular biology, genetic engineering, immunology and pharmacology. The complexity of the development process is compounded by the stringent requirements imposed by regulatory authorities to ensure the safety, efficacy and quality of these biopharmaceuticals before they reach the market.

Guidelines from regulatory agencies such as the US Food and Drug Administration (FDA), the European Medicines Agency (EMA) and the International Council for Harmonization of Technical Requirements for Pharmaceuticals for Human Use (ICH) provide structured pathways and requirements for the development and approval of monoclonal antibodies. These guidelines include detailed criteria for the manufacturing process, preclinical and clinical testing and submission of regulatory dossiers.

Given the rigorous and detailed nature of these guidelines, professionals involved in mAb development must have a deep understanding of both the scientific and regulatory landscape. It is essential that these professionals are familiar with critical guidelines such as ICH Q6B, which details test procedures and acceptance criteria for biotechnology and biological products, or ICH Q8(R2), which provides guidance on pharmaceutical development.

Target Audience

The programme is aimed at those working in research, clinical trials and anyone interested in developing monoclonal antibodies. By targeting this wide range of professionals, the training aims to create a knowledgeable and skilled workforce capable of advancing the field of monoclonal antibodies from the research phase through to clinical use and successful market entry.

Programme

World of mAbs: Introduction and Overview – From Idea to Product

- What are monoclonal antibodies (mAbs)?
- Conception to market – developing effective mAbs
- Areas of application: therapeutic applications, diagnostics, research

Analytical Concept for Fc and Fab

- Antibody structures: Fc and Fab analysis
- Ligand Binding Assay (LBA) and other techniques
- Bioassay validation

Production Processes of mAbs: From Upstream to Downstream

- Techniques and technologies
- Optimizing expression: techniques for enhancing yield and quality
- Challenges and solutions in scale-up for commercial production

Production Processes of mAbs: Bacterial vs Mammalian Cell Production

- Choosing the right system: bacterial vs. mammalian cell lines
- Pros and cons: production strategies for monoclonal antibodies
- Evaluating hosts for optimal antibody yield

Purification Methods: Antigen Affinity Purification (Downstream)

- Principles of antigen-affinity purification: selectivity and specificity
- Technological advances in affinity media and ligand design
- Integration into downstream processing: purity, yield and scalability
- Optimization of purification processes for mAbs

Liquid Chromatography Mass Spectrometry (LCMS)

- LC-MS in mAbs characterization: sensitivity, specificity and throughput
- Comparative analysis: when to use LBA vs. LC-MS
- Glycosylation and its effect

Clinical Program – Clinical Development Plan

- Blueprint for success: mapping the clinical trial journey
- Critical strategies for effective clinical development
- Navigating clinical development stages – Phase I - III

Formulation and Stability Studies

- Formulation strategies for mAbs: enhancing stability and Bioavailability
- Conducting stability studies: protocols, parameters and predictive model
- Implementation and importance of stability studies

ADC (Antibody Drug Conjugates) - Design and Application

- The anatomy of ADCs: linkers, drugs and antibodies
- Clinical applications of ADCs: successes and lessons learned
- Future directions: innovations in linker chemistry and targeted delivery

Bi- and tri-specific Conjugates - Potential and Challenges

- Designing bi- and tri-specific antibodies: concepts and constructs
- Therapeutic potential: targeting complex diseases with multifunctional antibodies
- Overcoming development challenges: manufacturing, stability and efficacy

Moderator

Clemens Mundo, Concept Heidelberg

Speakers

Markus Haberger
Roche Diagnostics GmbH
Group Leader, Development Characterization Analytics

Since 2004, Markus has been with Roche in the Development Analytics Extended Characterization department. He started as a Technician and advanced to Principal Scientist in 2023. His expertise is in mass spectrometry, focusing on the identification and quantification of post-translational modifications. He specializes in intact mass analysis and has explored size exclusion, ion exchange, and affinity mass spectrometry to study the complex structures and functions of therapeutic proteins.

Dr. Andreas Nechansky
VelaLabs GmbH
Managing Director, QP

Dr Nechansky has over 20 years of professional experience in many different positions and companies such as Igeneon GmbH, VelaLabs, Eden Biologics, ABF Pharmaceutical Services. Since 2023 he is now Managing Director at VelaLabs GmbH. He has many years of experience in the field of antibody characterisation.

Markus Roucka
Tentamus
Head of Business Development

Markus started his career in the biotechnical R&D laboratories of Biomin GmbH, now DSM. Later he studied medical and pharmaceutical biotechnology at the University of Applied Science IMC Krems. He joined VelaLabs GmbH in 2008. Since than he had many stages starting from Head Laboratory to COO. In 2019 he took over the Managing Director position at VelaLabs until mid of 2023. His current position is now Head of Business Development at Tentamus Group focusing on the DACH region since July 2023.

Manfred Schuster
AGES
Head of Department Quality, Preclinics, Statistics

Manfred Schuster studied at the Vienna University of Technology and the University of Vienna. He then held various positions at Igeneon, Apeiron and Origrimm. He has been with AGES since 2020, currently as Head of Department Quality, Preclinics, Statistics. He has also been teaching at the University of Vienna since 2013.

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Reservation Form (Please complete in full)

Monoclonal Antibodies – From Concept to Approval, Live Online Training on 22/23 October 2024

Title, first name, surname

Department | Company

Important: Please indicate your company's VAT ID Number | Purchase Order Number, if applicable

City | ZIP Code | Country

Phone / Fax

E-Mail (Please fill in)

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If you cannot attend the conference you have two options:
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In case you do not appear at the event without having informed us, you will have to pay the full registration fee, even if you have not made the payment yet. Only after we have received your payment, you are entitled to participate in the conference (receipt of payment will not be confirmed)! (As of January 2012).
German law shall apply. Court of jurisdiction is Heidelberg.

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Date of the Live Online Training

Tuesday, 22 October 2024, 09.00 h – 15.30 h
Wednesday, 23 October 2024, 09.00 h – 15.00 h
All times mentioned are CEST

Technical Requirements

We use WebEx for our live online training courses and webinars. At https://www.gmp-compliance.org/training/online-training-technical-information you will find all the information you need to participate in our trainings and you can check if your system meets the necessary requirements to participate. If the installation of browser extensions is not possible due to your rights in the IT system, please contact your IT department. WebEx is a standard nowadays and the necessary installation is fast and easy.

Fees (per delegate, plus VAT)

ECA Members € 1,690
APIC Members € 1,790
Non-ECA Members € 1,890
EU GMP Inspectorates € 945
The conference fee is payable in advance after receipt of invoice.

Registration

Via the attached reservation form, by e-mail or by fax message. Or you register online at www.gmp-compliance.org.

Presentations/Certificate

The presentations will be made available to you prior to the Live Online Training as PDF files. After the event, you will automatically receive your certificate of participation.

Conference language

The official conference language will be English.

Organisation and Contact

ECA has entrusted Concept Heidelberg with the organisation of this event.

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