

# Low Endotoxin Recovery/Masking

**Hands-on Laboratory Training Course** 

#### **SPEAKERS:**



Dr. Ingo Ciolkowski Lonza Cologne GmbH



John Dubczak Charles River Laboratories



Stefan Gärtner Labor LS



Dr Holger Grallert Hyglos GmbH



Dr Andreas Karst Haemochrom Diagnostica



Dr Johannes Reich Microcoat Biotechnologie GmbH



Kevin Williams bioMérieux



Veronika Wills ACC



26/27 February 2019, Munich/Bernried, Germany

#### **HIGHLIGHTS:**

- Interpretation of interference during Endotoxin detection
- Understanding Low Endotoxin Recovery (LER)
- Setup of hold-time studies
- Techniques for demasking Endotoxin



## Low Endotoxin Recovery/Masking

### 26/27 February 2019, Munich/Bernried, Germany

#### **Objectives**

- How to identify Low Endotoxin Recovery (LER)
- How to Set-up hold-time studies
- Analysis of influencing factors (Sample matrices, endotoxin, temperature, detection methods, etc.)
- Understanding the driving forces of LER
- Interpretation of test results
- Dedicated sample treatment for demasking



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#### **Background**

In the last years the LAL test has become the preferred system to test for endotoxins – for the in-process control as well as in the final inspection – and it is anchored in the pharmacopoeias. However, in the recent past, the problem of low endotoxin recovery employs the pharmaceutical microbiology. Masking – or not? Evidence gaps? And how can I close them? And how to evaluate?

These are the questions the pharmaceutical microbiologists as well as those responsible for the release have to deal with.

And last but not least, how can we handle the test in daily business in a practical manner?

#### **Target Audience**

- Laboratory management and staff of pharmaceutical microbiology
- Microbiologists and laboratory assistants from contract laboratories
- Scientific staff from the area Endotoxin testing

#### **Social Event**

On the first course day, you are cordially invited to a social event. This is an excellent opportunity to share your experiences with colleagues from other companies in a relaxed atmosphere.

#### **Moderators**

Dr Johannes Reich, Microcoat Axel H. Schroeder, Concept Heidelberg

#### **Programme**

#### **Endotoxin Detection Methods I**

- Definition of Endotoxins
- Nature of Endotoxin
- General detection methods

#### **Endotoxin Detection Methods II**

- Basic reaction of Limulus-based detection methods
- Sample handling
- Construction and interpretation of standard curve

## **LER: Reflecting on Biopharmaceutical Operational Reality**

- Mechanisms of LER can be influenced by LPS stability
- Varying size and fragility of LPS aggregates can be directly correlated to presence of chelating agents and detergents
- Elucidating conformational changes, in real time, on LPS using HSAFM

#### **Test Interference**

- Positive Product Control (PPC)
- Test inhibition
- Test enhancement

#### **Test Interference II (Enhancement)**

- Experiences with Interferences
- Test enhancement



# **Endotoxin Recovery Studies for the Detection of Endotoxin Masking Effects**

- Endotoxin Masking
- Planning and implementation of hold-time studies
- Interpretation of hold-time studies

#### **Demasking of Endotoxin**

- Mechanistic principles of demasking
- Development of demasking protocols
- Implementation of demasking protocols

#### **Sample Preparation for Demasking**

- Practical demasking procedure
- Preparation of reagents for demasking
- Application of demasking protocols

#### **Biologics are Different**

- Microbiological Control
- The new science of immunological control

#### **Round Table Discussion Practical Laboratory Work**

#### Simulation of contamination in various sample matrices

- Preparation of samples affected by
  - Test interference
  - Sample interference

#### Analysis of interference in affected samples

- Application of different detection systems
  - Limulus Amebocyte Lysate assay
  - Recombinant Factor C assay

#### Sample treatment for demasking

- Screening for demasking protocol
- Optimization of demasking protocol
- Evaluation of demasking protocol

#### **Interpretation and Comparison of Results**

- Differentiation between test and sample interference
- Effects of different detection systems
- Demasking of endotoxin

#### **Closing Remarks (ECA Academy)**

#### **Speakers**



Dr. Ingo Ciolkowski, Lonza Cologne GmbH After studying and his degree, Ingo worked as research scientist at the University Gießen. From 2007 - 2011 he was employed at QIAGEN. Since

2011 he is Scientific Support Specialist at Lonza and handles all Endotoxin related questions as well as manages the application lab for LAL assay trouble shooting.



#### John Dubczak, General Manager at Charles River, USA

John was a long-term employee of Baxter Healthcare Corp., where he developed Baxter's proprietary LAL formulation and manufacturing process. With seven years of LVP manufacturing experience, he brings an in-depth understanding of issues surrounding all aspects of LAL testing in the pharmaceutical industry.



#### Stefan Gärtner, Labor LS, Germany

After his qualification as biological laboratory technician at LS Stefan worked as technical specialist at LS. 2015 he finished his studies at Pro-

vadis School of International Management and Technology wit a BSc in Biopharmaceutical Sciences. Since May, he is head of a speciality department at Labor LS.



#### Dr Holger Grallert, Hyglos GmbH, Germany

Dr. Holger Grallert is Vice President Research and Development at Hyglos GmbH, Bernried, Germany. His unit is focused on the improvement of existing and development of new analytical methods in the field of Bacterial Endotoxins.

Dr Andreas Karst, Haemochrom Diagnostica,

Andreas Karst studied Chemistry at the University of Münster. His dissertation was at the Institute for Inorganic Chemistry of the University of Münster. He is employed by Haemochrom Diagnostica GmbH since 1997.

Dr Johannes Reich, Microcoat Biotechnologie **GmbH**, Germany Johannes holds a degree in Business administra-

tion and a PhD from the University Regensburg. In 2016, Johannes joined Microcoat Biotechnology GmbH and has recently been appointed General Manager.

#### Kevin Williams, bioMérieux, USA

Kevin is a recognized expert in the endotoxin detection field with over 30 years of experience in Pharma (Eli Lilly, Hospira and Lonza). He authored and edited the 2nd and 3rd editions of "Endotoxins" book from Informa Healthcare as well as authoring many journal articles in PDA, BioPharm, Pharmaceutical

Veronika Wills, Associates of Cape Cod, Inc., **Assistant Manager of Technical Services** 

Technology, and American Pharmaceutical Review.

Veronika Wills joined the team in 2007. She manages the Technical Services group at Associates of Cape Cod, Inc.

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Terms of payment: Payable without deductions within 10 days after apply. Court of jurisdiction is Heidelberg.

If you cannot attend the conference you have two options:

1. We are happy to welcome a substitute colleague at any time.

2. If you have to cancel entirely we must charge the following processing fees. Cancellation

- until 2 weeks prior to the conference 10 %,

- until weeks prior to the conference 50 %

- within I week prior to the conference 100 %. General terms and conditions

GERMANY

Date

Tuesday, 26 February 2019, 09.30 - 17.30 h (Registration and coffee 09.00 – 09.30 h) Wednesday 27 February 2019, 08.30 - 17.00 h

#### **Overnight Stay**

Hotel Marina Am Yachthafen 1-15 82347 Bernried am Starnberger See, Germany Phone +49(0)8158 -9320 Email info@hotelmarina.de

#### Accommodation

CONCEPT HEIDELBERG has reserved a limited number of rooms in the conference hotel. You will receive a room reservation form/POG when you have registered for the event. Reservation should be made directly with the hotel no. Early reservation is recommended.

#### **Venue of the Laboratory Course**

Microcoat Biotechnologie GmbH Am Neuland 3, 82347 Bernried am Starnberger See

Transfer service from Marina Hotel to Microcoat in the morning and back in the evening will be organised

#### Shuttle Service from/to Munich Airport

On 25 February at appr. 19.00 from Munich Airport to Bernried Marina Hotel.

On 27 February at approx. 17.15 h from Microcoat to Munich Airport.

#### Fees (per delegate plus VAT)

ECA Members € 1,790 APIC Members € 1,890 Non-ECA Members € 1,990 EU GMP Inspectorates € 995

The conference fee is payable in advance after receipt of invoice and includes conference documentation, dinner on the first day, lunch on both days and all refreshments. VAT is reclaimable.

Participants of the Monocyte Activation Test Laboratory Training on 28 February/01 March in Bernried get a € 200 discount.

#### Registration

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

#### **Conference Language**

The official conference language will be English.

#### **Organisation and Contact**

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

#### CONCEPT HEIDELBERG

P.O. Box 10 17 64, 69007 Heidelberg, Germany Phone +49 (0) 62 21/84 44-0, Fax +49 (0) 62 21/84 44 34 info@concept-heidelberg.de, www.concept-heidelberg.de

For questions regarding content please contact: Mr Axel H Schroeder (Operations Manager) at +49-62 21 / 84 44 10, schroeder@concept-heidelberg.de

#### For questions regarding reservation, hotel, organisation etc. please contact:

Ms Marion Weidemaier (Organisation Manager) at +49-62 21 / 84 44 46, weidemaier@concept-heidelberg.de.