

**Tuesday, 17 March 2020****9:00 – 17:00****9:00 Welcome and Theory 1**

- Introduction into eukaryotic DS manufacturing process
- Virus Filters in biopharmaceutical manufacturing
- Sources of virus load
- Reason/necessity for virus removal from DS
- Virus realm
- Sources of viruses
- Examples of virus contaminations (plasma, biotech)
- Outline of how to control the risk
- Relevance of virus safety in ATMPs and potential applications

Sebastian Teitz  
Andrew Bailey**10:50 Coffee Break**

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**11:20 Theory 2: Case Study**

- Up- & Downscaling of a virus filtration step

Franz Nothelfer

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**12:50 Lunch Break**

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**13:50 Hands-on 1: Set-up and Handling of Filters**

- Set-up in lab-scale: hands-on
- Display of production scale filters
- Integrity tests: hands-on

Sebastian Teitz

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**15:20 Coffee Break**

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**15:50 Theory 3:**

- Mechanistic principles of (Parvo-) Virus retention
- Designing a virus filtration process – assumption and points to consider

Sebastian Teitz

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**17:00 End of Day 1**

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**18:00 Networking Dinner**

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**Wednesday, 18 March 2020**
**9:00 – 15:30**

<b>9:00</b>	<b>Wrap-up Day 1</b>	All
<b>13:50</b>	<b>Hands-on 2:</b> <ul style="list-style-type: none"> <li>• Set-up of filtrations with different protein solutions</li> <li>• Documentation</li> </ul>	All
<b>10:30</b>	<b>Coffee Break</b>	
<b>11:00</b>	<b>Theory 4:</b> <ul style="list-style-type: none"> <li>• Introduction/background part for viral clearance - methods, guidelines</li> <li>• How to organize a virus clearance study</li> <li>• Challenges in VC studies</li> <li>• Historical data</li> <li>• Case studies for VC studies</li> <li>• Continuous manufacturing aspects in combination with virus filtration</li> </ul>	Michael Lasse, <i>TBC</i>
<b>12:30</b>	<b>Lunch Break</b>	
<b>13:30</b>	<b>Revisit Filtration Results</b>	Sebastian Teitz
<b>13:30</b>	<b>Interactive session:</b> <b>Bring your own case/topic/question/problem/challenge for discussion!</b> Participants have the opportunity to address real-life challenges during the implementation of a virus filtration process – from bench-top development through to commercial scale-up.	All
<b>15:00</b>	<b>Wrap-up, Q&amp;A</b>	All
<b>15:30</b>	<b>End of Course</b>	