

**Tuesday, 10 September 2019****9:00 – 17:00**

<b>9:00</b>	<b>Welcome and Theory 1</b> <ul style="list-style-type: none"> <li>• Introduction into eukaryotic DS manufacturing process</li> <li>• Virus Filters in biopharmaceutical manufacturing</li> <li>• Sources of virus load</li> <li>• Reason/necessity for virus removal from DS</li> <li>• Virus realm</li> <li>• Sources of viruses</li> <li>• Examples of virus contaminations (plasma, biotech)</li> <li>• Outline of how to control the risk</li> <li>• Relevance of virus safety in ATMPs and potential applications</li> </ul>	Sebastian Teitz Andrew Bailey
<b>10:50</b>	<b>Coffee Break</b>	
<b>11:20</b>	<b>Theory 2: Case Study</b> <ul style="list-style-type: none"> <li>• Up- &amp; Downscaling of a virus filtration step</li> </ul>	Franz Nothelfer
<b>12:50</b>	<b>Lunch Break</b>	
<b>13:50</b>	<b>Hands-on 1: Set-up and Handling of Filters</b> <ul style="list-style-type: none"> <li>• Set-up in lab-scale: hands-on</li> <li>• Display of production scale filters</li> <li>• Integrity tests: hands-on</li> </ul>	Sebastian Teitz
<b>15:20</b>	<b>Coffee Break</b>	
<b>15:50</b>	<b>Theory 3:</b> <ul style="list-style-type: none"> <li>• Mechanistic principles of (Parvo-) Virus retention</li> <li>• Designing a virus filtration process – assumption and points to consider</li> </ul>	Sebastian Teitz
<b>17:00</b>	<b>End of Day 1</b>	
<b>18:00</b>	<b>Networking Dinner</b>	

**Wednesday, 11 September 2019****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
<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>	