### Event at a Glance

#### 2018 STREAMS

<table>
<thead>
<tr>
<th>Upstream Processing</th>
<th>Downstream Processing</th>
<th>Analytical &amp; Quality</th>
<th>Formulation &amp; Stability</th>
<th>Cell Therapy</th>
<th>Gene Therapy</th>
<th>Manufacturing</th>
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</thead>
<tbody>
<tr>
<td>Monday - Tuesday</td>
<td>Wednesday - Thursday AM</td>
<td>Thursday PM - Friday</td>
<td>Monday, August 13</td>
<td>Tuesday, August 14</td>
<td>August 16-17</td>
<td>August 13</td>
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<tr>
<td>Optimizing Cell Culture Technology</td>
<td>Bioproduction: Scale, Bioreactors &amp; Disposables</td>
<td>Optimizing Cell Line Development</td>
<td>Host Cell Proteins</td>
<td>Accelerating Analytical Development</td>
<td>Process Characterization and Control</td>
<td>Continuous Processing in Biopharm Manufacturing*</td>
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<td>Continuous Processing in Biopharm Manufacturing*</td>
<td>Advances in Purification &amp; Recovery</td>
<td>Detection, Characterization and Control of Impurities in Biologics</td>
<td>Rapid Methods to Assess Quality &amp; Stability of Biologics</td>
<td>High-Concentration Protein Formulations</td>
<td>Introduction to Biologics Formulation and Delivery**</td>
<td>Overcoming Formulation Challenges for Biopharmaceuticals Development</td>
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<td>Formulation &amp; Stability</td>
<td>Cell Therapy</td>
<td>Gene Therapy</td>
<td>Manufacturing</td>
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<tr>
<td>Overcoming Formulation Challenges for Biopharmaceuticals Development</td>
<td>Cell Therapy CMC and Analytics</td>
<td>Gene Therapy CMC and Analytics</td>
<td>Continuous Processing in Biopharm Manufacturing*</td>
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<td>Manufacturing</td>
<td>Manufacturing 4.0</td>
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<tr>
<td>Introduction to Bioprocessing</td>
<td>Introduction to Cell Culture</td>
<td>Intro to Downstream Processing</td>
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<td>Regulatory Requirements across the Product Development Lifecycle</td>
<td>Pharmaceutical Biotechnology Discovery: From Antibody Engineering to Gene Therapy</td>
<td>Introduction to Downstream Processing</td>
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<td>Introduction to working with CMOs and CROs</td>
<td>The Business of Bioprocessing</td>
<td>Introduction to Analytical Method Development and Validation for Therapeutic Proteins</td>
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<td>Introduction to Biological Assays</td>
<td>Moving from Batch to Continuous – a Practical Guide</td>
<td>Introduction to Biologics Formulation and Delivery</td>
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<tr>
<td>TBD</td>
<td>Detection, Characterization and Control of Impurities in Biologics</td>
<td>Designing Flexible Facilities for Bioprocess Development and Manufacturing</td>
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* Streams 2 & 7; ** Training Seminar