1. **Intercellular targeting and role of Bcl-xL in Chinese hamster ovary cells**  
Abasha Lewis, Johns Hopkins University, USA

2. **Pro-domain mutation leads to increased BMP-2 expression and reduced activity**  
Aileen J. Zhou, University of Toronto, Canada

3. **Polysaccharide derived from rakkyo is effective factor against freezing stress of mammalian cells**  
Akiko Ogawa, Suzuka National College of Technology, Japan

4. **Phase contrast microscopy image segmentation and analysis**  
Alain Garnier, Université Laval, Canada

5. **Metabolic characterization of recombinant Chinese hamster ovary (CHO) cells in batch culture**  
Alan J Dickson, University of Manchester, United Kingdom

6. **Volume distributions in CHO cell populations during adaptation to chemically defined medium**  
Alessandro tona, National Institute of Standards and Technology, USA

7. **Application of miRNAs for mammalian cells engineering**  
Aliaksandr Druza, Biotechnology Core Laboratory NIDDK, NIH, USA

8. **Development and implementation of a highly automated cell line development platform**  
Andrew Snowden, Amgen Inc., USA

9. **Mixing issues in cell culture bioreactors using microcarriers**  
Alvin Nienow, University of Birmingham, United Kingdom

10. **Glycosylation of monoclonal antibodies for clinical trials and translational cancer research**  
Angelo Perani, Ludwig Institute for Cancer Research, Australia

11. **Evaluation of an impedance-based probe to detect early cell death events**  
Angelo Perani, Ludwig Institute for Cancer Research, Australia

12. **Modulating product quality through cell line and process modifications**  
Anne Kantardjieff, Alexion Pharmaceuticals, USA

13. **Application of RNAi in bioprocessing to improve product quality and biologic functionality**  
Anthony Rossomando, Alnylam Pharmaceuticals, USA

14. **BI-HEX®—optimizing product quality attributes through host cell tailoring and upstream process optimization**  
Anurag Khetan, Boehringer Ingelheim Pharma GmbH & Co. KG, Germany

15. **Microengraving: An emerging technology for clonal selection of highly productive cell lines**  
Barry C. Buckland, BiologicB LLC, USA
16. **Effect of a media reducing agent on monoclonal antibody assembly and glycosylation in NS0 cell culture**
   Ben Dionne, University of Manitoba, Canada

17. **Adaptations of monoclonal antibody-producing CHO cell lines: Perspectives from genomics, transcriptome, glycomics and metabolomics**
   Bernard Loo, Bioprocessing Technology Institute, Singapore

18. **Rational cell culture process development based on basic biochemical engineering principles**
   Bert Frohlich, Shire Human Genetic Therapies, Inc., USA

19. **Physiology of metabolic shifts in cultured mammalian cells - a mechanistic analysis and a scheme for metabolic control**
   Bhanu Chandra Mulukutla, University of Minnesota, USA

20. **Manganese modulates mAb galactosylation in Chinese hamster ovary cells cultured in chemically defined medium**
    Brent Grisim, Amgen Inc., USA

    Brian Horvath, Genentech Inc., USA

22. **Development of new transient recombinant protein expression systems based on the infection of CHO cells by optimized baculovirus vectors**
    Bruno Gaillet, Université Laval, Canada

23. **Regulating the ER stress response to improve protein production in recombinant CHO cells**
    Catherine Page, University of Manchester, United Kingdom

24. **Enhanced ADCC activity for an FC-containing protein produced in a GlcNAc T1 deficient CHO host**
    Cecilia Cooley, Pfizer, Inc., USA

25. **Development of a CHO-S transient expression system to rapidly generate preclinical material supply**
    Chanty Mariategue, Takeda California, Inc., USA

26. **Leveraging on the success of cd- supplement to optimize your production**
    Claudia Berdugo, BD Biosciences, USA

27. **An in vitro model of vascular regeneration to advance cardiovascular regenerative medicine**
    Corinne Hoesli, Université Laval, Canada

28. **Evaluation of the ambr® micro reactor system**
    Craig Zupke, Amgen Inc., USA

29. **Insights into cell physiology phenomenon for multiple CHO batch processes using multivariate analysis and genetic algorithms for in-line dielectric spectroscopy and off-line bioprocess data streams**
    Dan Logan, Aber Instruments, United Kingdom
30. **On-line monitoring of the live cell concentration in disposable bioreactors**  
Dan Logan, Aber Instruments, United Kingdom

31. **Cell culture platforms accelerate and streamline biotherapeutic development**  
David (Xiaojian) Zhao, JS Biosciences, China

32. **Systematic development of a defined medium for the expansion of functional human keratinocytes**  
Debbah, Imad, Université Laval, Canada

33. **The tubespin® bioreactor 600: Orbshake technology for mammalian cell cultivation in suspension**  
Dominique T. Monteil, École Polytechnique Fédérale de Lausanne, Switzerland

34. **Screening cell culture conditions to reduce protease clipping in a fusion protein**  
Donald Olson, Eli Lilly, USA

35. **Characterizing hESC metabolism by systems biological approach**  
Dong-Yup Lee, National University of Singapore, Singapore

36. **Microline: A disposable approach to early phase clinical manufacturing**  
Ekta Mahajan, Genentech Inc., USA

37. **Microline: A disposable approach to phase 0 clinical manufacturing**  
Ekta Mahajan, Genentech Inc., USA

38. **Protein expression in defined chromosomal loci of Sf9 insect cells: a valuable alternative to baculovirus infection**  
Fabiana Fernandes, IBET/ITQB-UNL, Portugal

39. **Evolution from the conventional stirred tank bioreactor vessel: cultivation of mammalian cell lines using a disposable gradient-free cell-trap bioreactor to achieve high cell growth potential without the use of external membrane device in perfusion mode**  
Frank Jing, Fogale Biotech, USA

40. **Development of a robust bioprocess for Ambrx’s mAb production**  
Frank Song, Ambrx, Inc., USA

41. **MALDI-TOF MS - a fast and simple tool for cell line identification and characterization of eukaryotic protein expression**  
Georg Schmid, F. Hoffmann-La Roche AG, Switzerland

42. **Revolution in biopharmaceutical manufacture – XD® cell culture**  
Gerben Zijlstra, DSM Biologics, The Netherlands

43. **Large-scale experiences with the hipdog (high-end pH-controlled delivery of glucose) technology in CHO fed-batch culture**  
Gregory Hiller, Pfizer, Inc., USA

44. **Revisiting to the mechanism of rapamycin: Autophagy induction in recombinant CHO cells for enhanced antibody production**  
Gyun Min Lee, KAIST, Korea

45. **Constructs and methodologies for high-level transgene expression**  
Hal Alper, The University of Texas at Austin, USA
46. **Continuous improvement of commercial drug substance upstream process throughout product lifecycle: Robustness improvement**  
   Hang Yuan, Biogen Idec, Inc., USA

47. **Rapid development and characterization of an HTST pasteurization process for commercially-used, soy hydrolysate-containing cell culture medium**  
   Harmit Vora, BioMarin Pharmaceutical, USA

48. **Novel strategy for a high yielding mAb-producing CHO strain (overexpression of cysteine sulfinic acid decarboxylase [CSAD] caused beta-alanine biosynthesis and improved mAb yield)**  
   Hisahiro Tabuchi, Chugai Pharmaceutical Co., LTD, Japan

49. **An analytical and cell culture platform for the development of a biosimilar**  
   Holly Prentice, Momenta Pharmaceuticals, USA

50. **Implementation of 3l disposable reactors for use as a direct scale-up for cgmp manufacturing**  
   Howard Clarke, CMC Biologics Inc., USA

51. **Mining cell culture manufacturing data for enhancing process performance**  
   Huong Le, University of Minnesota, USA

52. **Transcriptome dynamics of transgene expression and amplification in CHO cell line development**  
   Huong Le, University of Minnesota, USA

53. **Understanding transcriptional enhancement in mAb producing CHO cells**  
   Hussain Dahodwala, University at Albany, USA

54. **Improved cell banking operations using disposables**  
   Inn Yuk, Genentech Inc., USA

55. **Process characterization and validation for cell culture processes: challenges and opportunities**  
   Janosch Rieger, Boehringer Ingelheim Pharma GmbH & Co. KG, Germany

56. **Process optimization and scale-up challenges in the development of a large-scale phase iii manufacturing process**  
   Jason Goodrick, Genentech Inc., USA

57. **Utilizing a GFP tool to monitor efforts at improving GS-CHO cell line generation efficiency and productivity through highly stringent selection system**  
   Jeffrey L Larson, Eli Lilly & Company, USA

58. **Mechanistic studies on the impact of PGAM1 and other key genes in glycolysis on energy metabolism and protein glycosylation in IgG producing Chinese hamster ovary (CHO) cells**  
   Joaquina Mascarenhas, SAFC/Sigma Aldrich, USA

59. **Analysis of the performance of eight commercially available recombinantly produced human insulin’s in MRC-5, MDCK and sp0/2 cell lines**  
   John F Menton, Sheffield Bioscience, USA

60. **Comparison of the efficacy and toxicity of three commercially available recombinant trypsins against porcine trypsin in six different cell lines**  
   John F Menton, Sheffield Bioscience, USA
61. **Metabolic engineering of Chinese hamster ovary cells: Production and characterization of heparin**
   Jong Youn Baik, University at Albany, USA

62. **Effect of amino acid addition on cell growth of human hybrid F2N78 cells**
   Joon Serk Seo, Inha University, Korea

63. **Understanding increased c-terminal lysine in a recombinant monoclonal antibody production using Chinese hamster ovary cells with chemically defined media**
   Jun Luo, Genentech Inc., USA

64. **Comparison of performance-enhancing effects of supplementation with a complex feed system when applied to multiple CHO basal medias**
   Karen A Benedict, Sheffield Bioscience, USA

65. **Design of experiment (DOE) studies to evaluate process robustness in high density perfusion mammalian cell cultures**
   Karthik P. Jayapal, Bayer Healthcare, USA

66. **Scalability of the disposable Mobius® cellready stirred tank bioreactors**
   Kathleen Thiel, EMD Millipore, USA

67. **Evaluation of different quenching and extraction methods used for nucleotide / nucleotide sugar analysis**
   Katrin Braasch, University of Manitoba, Canada

68. **CHOgenome.org – an online resource for the CHO genome**
   Kelvin H. Lee, University of Delaware, USA

69. **Development pipeline debottlenecking for increased speed and throughput of therapeutic antibody opportunities**
   Kevin Bailey, Regeneron Pharmaceuticals, Inc., USA

70. **A flow cytometry-based method for predicting expression stability in monoclonal antibody producing cell lines**
   Kevin Smith, Janssen R&D, USA

71. **Development and application of an automated, multiwell plate based screening system for suspension cell culture**
   Klaus Joeris, Roche Diagnostics GmbH, Germany

72. **Establishment of a novel gene amplification platform by ATR down- regulation in CHO cell lines**
   Kyoungho Lee, Osaka University, Japan

73. **Importance of the end of run studies and real time monitoring for the evaluation of a microcarrier based cell culture perfusion process**
   Lada Laenen, Genzyme, A Sanofi Company, Belgium

74. **Emerging role of Kaiser Raman in cell culture applications**
   Larry West, Kaiser Optical Systems, USA

75. **Temporal optimization of VPA addition during transient expression in HEK293 cells increases final protein yield**
   Laust Bruun Johnsen, Novo Nordisk A/S, Denmark
76. **Screening of animal-component-free media for the culture of CHO cells in shaken tubes and stirred-tank bioreactors**  
   Leda R. Castilho, Federal University of Rio de Janeiro, Brazil

77. **A systems biotechnology platform to optimise the expression of mAb sequence variants in CHO cells**  
   Leon P. Pybus, The University of Sheffield, United Kingdom

78. **Application of design space principles for the characterization of late stage cell culture processes**  
   Lia Tescione, Biogen Idec, Inc., USA

79. **Improving GS-CHO cell line generation efficiency and productivity through highly stringent selection system**  
   Lianchun Fan, Eli Lilly & Company, USA

80. **Impact of aeration on Chinese hamster ovary cells physiology and structure during batch culture**  
   Lourdes Velez-Suberbie, University College London, United Kingdom

81. **Clonal variability and chromosomal heterogeneity in Chinese hamster ovary cell lines**  
   Mai Takahashi, The University of Tokushima, Japan

82. **Impact of bioreactor design on the performance of microcarrier cultures**  
   Manuel Carrondo, IBET/ITQB, Portugal

83. **Development, qualification, and application of a scale-down bioreactor model to support a microcarrier-based perfusion cell culture commercial manufacturing process**  
   Marcella Yu, Genzyme Corporation, USA

84. **Application of soft-sensors in pharmaceutical biotech production**  
   Marco Jenzsch, Roche Pharma Biotech, Germany

85. **Speed up process development and clinical manufacturing using disposable stirring tank reactors**  
   Marie Zhu, Agensys/Astelas Inc, USA

86. **Engineering autophagy in CHO cells to increase protein production in fed-batch processes**  
   Mario A. Jardon, University of British Columbia, Canada

87. **A kinetic-metabolic model for CHO cells**  
   Mario Jolicoeur, Ecole Polytechnique de Montréal, Canada

88. **A novel method of grouping amino acids for media optimization**  
   Mark C. Arjona, Irvine Scientific, USA

89. **A single medium formulation enables rapid CHO cell line process development**  
   Mark J. Stramaglia, Life Technologies Corporation, USA

90. **Development of a global Roche cell culture platform: leveraging knowledge from two legacy platform processes**  
   Martin Gawlitzek, Genentech Inc., USA

91. **Medium conditions influence the tertiary structure of the t-pa by reducing / oxidizing the cys182-cys313 disulfide bond**  
   Masami Yokota, Astellas Pharma Inc., Japan
92. **Suppression of antibody aggregation in CHO cell culture by trehalose addition**  
Masayoshi Onitsuka, The University of Tokushima, Japan

93. **A semi-continuous fed-batch approach to increase volumetric productivity**  
Matthew Gagnon, Pfizer, Inc., USA

94. **Technical transfer and validation of the cell culture process for the commercial production of a protein – a case study**  
Matthew Osborne, Eli Lilly & Co. Kinsale, Ireland

95. **Microrna biogenesis in CHO cells: the impact of dicer and drosha mediated mirna processing on CHO cell phenotype**  
Matthias Hackl, BOKU University, Austria

96. **Computational identification of microrna gene loci and precursor microrna sequences in CHO cell lines**  
Matthias Hackl, BOKU University, Austria

97. **Evaluation and characterization of the advanced microscale bioreactor (ambr) system for use in antibody cell line development**  
Melisa Carpio, Takeda San Francisco, USA

98. **Toward online control of glycosylation in mAbs**  
Melissa M. St. Amand, University of Delaware, USA

99. **The changing dielectric properties of CHO cells can be used to determine early apoptotic events in a bioprocess**  
Michael Butler, University of Manitoba, Canada

100. **Phytoplankton extracts as media supplements support growth and productivity of recombinant CHO cells**  
Michael Butler, University of Manitoba, Canada

101. **Use of live cell microscopy and image analysis to follow the temporal regulation of gene expression and potential applications to protein production in CHO cells**  
Michael Halter, National Institute of Standards and Technology, USA

102. **Technology lifecycle management – increasing process performance and robustness by implementing new technologies in existing processes**  
Michael Pohlscheidt, Genentech Inc., USA

103. **Molecular mechanism of antibody disulfide bond reduction in CHO cell culture processes**  
Michael W. Laird, Genentech Inc., USA

104. **A novel strategy to reduce both lactic acid and ammonia production in animal cell culture**  
Nate W. Freund, Keck Graduate Institute, USA

105. **Rapid large-scale production of novel influenza virus like particle vaccines using the Sf9-baculovirus expression system**  
Nate W. Freund, Novavax, Inc, USA

106. **Optimisation of the expansion and differentiation of embryonic stem cells on an automated microwell platform**  
Nathalie Moens, University College London, United Kingdom
107. The mammalian upr components ATF6 and IRE1 can be used together to enhance production of ‘difficult to express’ proteins
Nathan West, University of Sheffield, United Kingdom

108. The impact of bcl-2 overexpression upon lactate metabolism in Chinese hamster ovary (CHO) cells
Neil Templeton, Vanderbilt University, USA

Nicole Borth, BOKU University, Austria

110. Analysis of the secretome of Chinese hamster ovary (CHO) cells
Nicole Borth, BOKU University, Austria

111. Cap: A protein and vaccine production platform based on immortalized human amniocytes
Nicole Faust, Cevec Pharmaceuticals GmbH, Germany

112. Controlling high mannose glycan level and optimizing titer through a balanced modulation of cell culture process and medium changes
Nicole Le, Amgen Inc., USA

113. Control of polyplex mediated transfection of CHO cells
Olivia L. Mozley, The University of Sheffield, United Kingdom

114. The metabolic load of heterologous protein expression in CHO cells
Olivier Henry, Ecole Polytechnique de Montréal, Canada

115. Evaluation of cell metabolism as a high throughput indicator of the impact of medium components on autologous cellular immunotherapy
Pascal R Beauchesne, Dendreon Corporation, USA

116. Implementation and performance of a high-throughput cell culture system for process development
Peter Harms, Genentech Inc., USA

117. Systems biology analysis of IgG1 producing CHO cells considering cellular compartments
Ralf Takors, Institute of Biochemical Engineering, Germany

118. Exchange flow and cell lateral migration in rotating cylindrical filters for animal cell perfusion culture: A CFD study
Ricardo Medronho, Federal University of Rio de Janeiro, Brazil

119. The use of existing animal cell culture facilities to make insect cell culture expressed influenza vaccine
Robert Boulanger, Protein Sciences Corporation, USA

120. The use of free light chain as a product quality indicator
Robert Smith, EMD Millipore, USA

121. Analysis of the activation status of the PI3K/AKT and Ras/MAPK signalling pathways and their roles in the serum-free, suspension adaptation of CHO cells
Robert Whitfield, The University of Sheffield, United Kingdom

122. Advance multivariate modeling: a comprehensive tool for IgG process development and manufacturing activities
Ronald Eimers, MSD (Merck), The Netherlands
123. **Application of single-use bioreactors for the rapid production of pre-clinical and clinical biopharmaceuticals**  
   Rüdiger Heidemann, Bayer HealthCare Pharmaceuticals, USA

124. **Evaluation of long-term cryobag storage of mammalian cells for direct bioreactor inoculation**  
   Rüdiger Heidemann, Bayer HealthCare Pharmaceuticals, USA

125. **Cell line development tool box for expression: e.coli, CHO, insect cells**  
   Sam Ellis, Thomson Instrument Company, USA

126. **Effect of endoplasmic reticulum stress modulators on protein secretion in recombinant cell lines**  
   Sarika Mehra, Indian Institute of Technology, India

127. **Culture supplement for mammal-free medium**  
   Satoshi Terada, University of Fukui, Japan

128. **Development of Raman spectroscopy based process monitoring and control technology**  
   Scott Estes, Biogen Idec, Inc., USA

129. **Improvement of cell-freezing technologies and disposable bioreactors allow to perform fully closed USP process**  
   Sebastien Ribault, Merck Biodevelopment, France

130. **Metabolic modeling of a cell culture process**  
   Shailendra Singh, MedImmune LLC, USA

131. **Comparability studies of cell culture for monoclonal antibody production in minibioreactors and bench scale bioreactors**  
   Shaunak D. Uplekar, University of Maryland Baltimore County, USA

132. **Overcoming barriers to creating high concentration pH-neutral feed supplements for CHO fed batch cultures**  
   Shawn Barrett, Life Technologies Corporation, USA

133. **Challenges and opportunities in the production of a baculovirus/insect cell-derived recombinant protein antigen for cancer immunotherapy**  
   Shue-Yuan Wang, Dendreon Corporation, USA

134. **Insight on scaling-up serial propagation of mammalian cell on microcarriers through mechanistic modeling**  
   Siguang Sui, University of Minnesota, USA

135. **Effects of high passage cultivation on CHO cells: A global analysis**  
   Stefan Northoff, TeutoCell AG, Germany

136. **RNA interference of cofilin improves recombinant protein productivity in Chinese hamster ovary cells**  
   Stephanie Hammond, University of Delaware, USA

137. **Scale-down studies of the effect of hydrodynamic forces on CHO cells; Implications for industrial production conditions**  
   Steven Meier, Genentech Inc., USA
138. **Overcoming antibody expression challenges by light chain engineering**  
Sujeewa D Wijesuriya, XOMA (US) LLC, USA

139. **Development of in-process control strategies via integrated process characterization**  
Susan Abu-Absi, Bristol-Myers Squibb, USA

140. **Differential effect of reduced culture temperature on the expression and biophysical properties of monoclonal antibody variants**  
Susan T. Sharfstein, University at Albany, USA

141. **Quick resolution of the effect of storage conditions of a commercial medium on averting a potential failure of a phase iii monoclonal antibody production process**  
T. Craig Seamans, Merck & Co., Inc, USA

142. **Upstream culture development and external technology transfer: case study for a phase iii monoclonal antibody production process**  
T. Craig Seamans, Merck Research Laboratories, USA

143. **Detail analysis of chromosome rearrangements in CHO cells using bac-based physical map**  
Takeshi Omasa, The University of Tokushima, Japan

144. **Vial thaw investigation during tech transfer of a GS-CHO Ab process**  
Thomas Black, Eli Lilly S.A., Ireland

145. **Aspects of solid-liquid separation in pharmaceutical biotech production – characterisation, optimization and scale down of this process**  
Thorsten Kaiser, Roche Pharma Biotech, Germany

146. **Orbital shaken bioreactors in the field of cell cultivation**  
Tibor Anderlei, Adolf Kuhner AG, Switzerland

147. **Rapidly delivering the next generation of protein therapeutics, vaccines and reagents using design of experiment (DOE), quality by design initiatives and high-throughput technologies**  
Tiffany D Rau, Pall Corporation, USA

148. **Integrated continuous bioprocessing; union of process technologies enabling future processing flexibility**  
Timothy Johnson, Genzyme Corporation, USA

149. **Gene expression profiles in ATF4-overexpressing CHO cell line**  
Tomomi Tsutsui, The University of Tokushima, Japan

150. **CHO-engimirs: Growth enhancement by the miR-17-92 cluster in CHO cells**  
Vaibhav Jadhav, BOKU University, Austria

151. **Comparative metabolic flux analyses of cultivations with novel avian designer cell lines used for vaccine production**  
Verena Lohr, Max-Planck-Institute for Dynamics of Complex Technical Systems, Germany

152. **Development of a method to model the cell metabolism in varying environmental conditions based on extracellular component measurements**  
Veronique Chotteau, KTH, Sweden

153. **Very high CHO cell density by ATF or TFF external filter perfusion in wave bioreactor™**  
Veronique Chotteau, KTH, Sweden
154. Microfluidic platform for rapid clonal selection of highly productive cell lines
   Véronique Lecault, University of British Columbia, Canada

155. Manufacturing flexibility: Concepts and approaches
   WeiWei Hu, Biogen Idec, Inc., USA

156. Characterization and selection of suspension cell lines for future viral vaccine production platforms
   Wilfried A.M. Bakker, RIVM, The Netherlands

157. 13c-metabolic flux analysis reveals metabolic rewiring of CHO cell metabolism in the transition from growth phase to stationary phase
   Woo Suk Ahn, University of Delaware, USA

158. Efficient polymer-mediated transient gene expression in serum-free Sf9 cells in tubespın® bioreactors
   Xiao Shen, École Polytechnique Fédérale de Lausanne, Switzerland

159. Establishment of mammalian cell line suitable for producing recombinant protein using mutation induced by high energy beam radiation
   Yasuhito Chida, University of Fukui, Japan

160. Differential induction of autophagy in caspase-3/7 downregulating and Bcl-2 overexpressing rCHO cells upon nabu treatment
   Yeon Jung Kim, KAIST, Korea

161. Tricistronic vector for enhancing generation of high monoclonal antibody producing CHO cell lines
   Yuansheng Yang, Bioprocessing Technology Institute, Singapore

162. Multi-dimensional process modeling for characterization of a CHO fed-batch process
   Yun Jiang, Swedish Orphan Biovitrum, Sweden

163. Qualification of scale down bioreactors for validation of process changes in commercial production
   Yuval Shimoni, Bayer HealthCare, USA

164. Development of a scale-down model of the inactivated polio vaccine production process
   Yvonne E. Thomassen, RIVM, The Netherlands

165. A kinetic study of endogenous unfolded protein response and its applications in CHO production culture
   Zhimei Du, Amgen Inc., USA

166. A rationally integrated approach for fed-batch cell culture process optimization
   Zhou Jiang, Life Technologies Corporation, USA

167. Improving productivity of CHO cells cultures by enhancing energy metabolism during cell growth
   Ziomara P. Gerdtzen, University of Chile, Chile

168. Dissecting the mechanisms of phenotypical instability in antibody production CHO cell lines
   Jie Zhu, MedImmune, USA

169. Impact of media on the phenotypic stability of antibody-producing cell lines
   Benjamin Wang, MedImmune, USA
170. **Mixing uniformity characterization of 15,000l mammalian cell culture bioreactor**  
Mei Shao, MedImmune, USA

171. **Cell line generation, manufacturing, release and characterization of recombinant antibody mixtures**  
Søren K. Rasmussen, Symphogen A/S, Denmark

172. **Resolving process variability with an increased understanding of cell metabolism**  
Rashmi Kshirsagar, Biogen-IDEC, USA

173. **Engineering CHO cells and vectors for improved transgene integration and antibody production**  
Igor Fisch, Selexis SA, Switzerland

174. **Exploring the transcriptome space of recombinant BHK cells through next generation sequencing**  
Kathryn Johnson, University of Minnesota, USA

175. **Glycomics to investigate the impact of process changes on product quality in cell culture-based influenza vaccine production**  
Udo Reichl, Max Planck Institute for Dynamic of Complex Technical Systems, Germany

176. **Effect of hydrodynamic conditions on expression of stress proteins, cell cycle and recombinant protein productivity**  
Claduia Berdugo, BD Biosciences, USA

177. **Use of homologous recombination based genome editing for CHO cell line engineering**  
Joshua Kapp, Horizon Discovery, United Kingdom