

9th Spring Meeting



March 4–6, 2019 • Norfolk, Virginia USA

Viral Vectors & Extracellular Vesicles

Cellular Therapies

Baculovirus Expression Technology

Viral Vaccines

Viral Vectors & Extracellular Vesicles

Chaired By:

Otto-Wilhelm Merten, PhD

Miltenyi Biotec Inc.

Mercedes Segura, PhD

bluebird bio Inc.

Aaron Noyes, EngD

Codiak BioSciences

Cellular Therapies

Chaired By:

Martin A. Giedlin, PhD

Poseida Therapeutics, Inc.

Lisa Stehno-Bittel, PhD

Likarda, LLC

Baculovirus Expression Technology

Chaired By:

Dominic Esposito, PhD

Frederick National Laboratory for Cancer Research

Antônio M. Roldão, PhD

Instituto de Biologia Experimental e Tecnológica (iBET)

Viral Vaccines

Chaired By:

Bernd Eichenmueller, PhD

Boehringer Ingelheim Vetmedica, Inc.

Philippe-Alexandre Gilbert, PhD

Sanofi Pasteur

Diane Wyatt

Wyatt CytoConsulting

SUNDAY • MARCH 3, 2019

4:00 pm – 7:00 pm

Welcome Reception and Registration in the Granby Ballroom Foyer, Third Floor

MONDAY • MARCH 4, 2019

7:00 am – 8:00 am

Registration and Breakfast in the Granby Ballroom Foyer, Third Floor

8:00 am – 8:30 am

Meeting Overview in Momentum, Third Floor

Viral Vectors & Extracellular Vesicles Momentum, Third Floor

Cellular Therapies Fusion, Third Floor

Baculovirus Expression Technology Energy, Third Floor

Viral Vaccines Paul D. Fraim Center for Excellence, Fourth Floor

8:30 am – 9:15 am

Evaluating Light-Scattering Methods for AAV Characterization
Darren W. Begley
Ultragenyx Pharmaceutical

3D In Vitro Screening for Cancer Immunotherapies
Lindsey Ott, PhD
Likarda, LLC

High-Density Vero Cell Perfusion Culture in Single-Use Vessels
Michelet Dorceus
Eppendorf North America

9:15 am – 10:00 am

Producer Cell Line for Gene Therapy Development
Lois Horton
Sanofi Genzyme

Keeping Pace with Product Development: Synergies Between Quality, Nonclinical, and Clinical Programs
Debra A. Webster, PhD
Cardinal Health

Baculovirus Biopesticides: Progress Towards Reaching Commercially Viable Yields of Bioreactor-Produced Occlusion Bodies by Exploring Gene Knock-Ins and CRISPR/Cas9 Knock-Outs of Production Cell Lines
Henry de Malmanche
University of Queensland

High-Yield Viral Vaccine Production: Process Options and Monitoring
Udo Reichl
Max-Planck-Institute for Dynamics of Complex Technical Systems

10:00 am – 10:30 am

Morning Break in the Exhibit Area

ISBioTech 9th Spring Meeting (continued): MONDAY • MARCH 4, 2019

	Viral Vectors & Extracellular Vesicles <i>Momentum, Third Floor</i>	Cellular Therapies <i>Fusion, Third Floor</i>	Baculovirus Expression Technology <i>Energy, Third Floor</i>	Viral Vaccines <i>Paul D. Fraim Center for Excellence, Fourth Floor</i>
10:30 am – 11:00 am	Technology Workshop <i>Engineering Better Viral Vectors Using Machine Learning and Synthetic Biology</i> ATUM		Technology Workshop <i>ExpiSF™ Expression System: A Chemically Defined Baculovirus-Based Expression System for Enhanced Protein and Virus Production in Sf9 Cells</i> Thermo Fisher Scientific	
11:00 am – 11:30 am	Technology Workshop <i>Requirements for Platform Purification of AAV</i> BIA Separations		Technology Workshop <i>Sf-RVN – EX-CELL® CD Insect Medium Platform — A New Rhabdovirus Negative Sf-9 Production Platform for AAV, VLP, and Recombinant Proteins</i> MilliporeSigma	Technology Workshop <i>Novasep Expansion: Implementation of a Commercial Manufacturing Plant for Large-Scale Production of Viral Vectors</i> Novasep
11:30 am – 12:00 noon	Technology Workshop <i>Optimized Quantification Methods to Determine the Portion of Full AAV Capsids and Avoid Empty and Disrupted Particles</i> Vironova AB	Technology Workshop <i>Optimizing Cell Culture Medium for Cell Growth and Virus Productivity</i> MilliporeSigma	Technology Workshop <i>VLPs, Viruses, and EVs: Advanced Biophysical Techniques for Characterizing, Optimizing, and Formulating Therapeutic Bionanoparticles</i> Wyatt Technology Corporation	Technology Workshop <i>From Vaccines to Cell Therapy Biomanufacturing: Applications of Laser Force Cytology for Rapid Viral Infectivity Measurements and Label-Free Biomarker Development</i> LumaCyte
12:00 noon – 1:30 pm	Lunch in the Exhibit Area (Poster Session from 1:00 – 1:30 pm)			
1:30 pm – 2:15 pm	<i>The Therapeutic Potency of Stromal Cell Derived Extracellular Vesicles</i> Eva Rohde, MD Spinal Cord Injury and Tissue Regeneration Center Salzburg (SCI-TReCS), Paracelsus Medical University (PMU)	<i>Manufacturing Issues During Late-Phase Development of CAR T-cell Products</i> Jakob Reiser, PhD FDA CBER		<i>Highly Intensified, Low-Cost Vaccine Manufacturing Platform</i> Alfred Luitjens Batavia Biosciences
2:15 pm – 3:00 pm	<i>Regulatory Updates for Virus-Based Human Gene Therapy Products</i> Anna Kwilas, PhD FDA CBER	<i>iPSC Technology: New Avenues for Blood Farming and Cell-Based Therapies</i> Mania Ackermann, PhD Hannover Medical School	<i>Baculovirus Expression System for High Level Production of Novel Full-Length Glycoprotein Nanoparticle Vaccines</i> Gale E. Smith, PhD Novavax, Inc.	<i>Turkey Herpesvirus as a Vector for Poultry Vaccines</i> Leticia Frizzo da Silva, DVM, PhD Ceva Animal Health, LLC
3:00 pm – 3:30 pm	Afternoon Break in the Exhibit Area			
3:30 pm – 4:15 pm	<i>AAV and Baculovirus Vectors for the Treatment of Hyperammonemia Caused by Liver Failure</i> Laura A. Palomares, ScD Universidad Nacional Autónoma de México (UNAM)		<i>Updated Evaluation of the Sf9 Cell Line</i> Arifa S. Khan, PhD FDA CBER	<i>Foot-and-Mouth Disease Vaccine Platform for Safe Production in the USA: FMDV-LL3B3D</i> Cyril G. Gay, DVM, PhD Agricultural Research Service (ARS), US Department of Agriculture (USDA)
4:15 pm – 5:00 pm	<i>Overview of Recombinant Adeno-Associated Virus (rAAV) Production and Challenges in Development and Manufacturing Scale</i> Eun Tack “Kevin” Hwang Pfizer, Inc.	<i>Manufacturing Solutions Driving Rapid Clinical Translation of hMSCs</i> Katrina Adlerz, PhD RoosterBio Inc.	<i>Development of Drosophila S2-Based Vaccine Production Processes</i> Wian A. de Jongh, PhD ExpreS2ion Biotechnologies	<i>Historical Perspectives on the Use of Diverse Cell Substrates for Viral Vaccine Manufacturing</i> Robin Levis, PhD FDA CBER
5:00 pm – 7:00 pm	Reception in the Exhibit Area			

TUESDAY • MARCH 5, 2019

	Breakfast in the Exhibit Area			
7:30 am – 8:30 am	Breakfast in the Exhibit Area			
8:30 am – 9:15 am	<i>In Vitro Approaches to Demonstrating Potency of Gene Therapy Products</i> Anthony Leyme, PhD Biogen	<i>Immunological Concepts of CAR T-Cell Therapies</i> Jan Joseph “Jos” Melenhorst, PhD University of Pennsylvania	<i>Highly Efficient Production of VLP-Based Vaccines by a Bioreactor-Free Novel BEVS Technology</i> Romy M. Dalton, PhD Algenex, Inc.	<i>Development of Suspension-Adapted Vero Cell Culture Technology for Viral Vaccine Production</i> Chun Fang Shen, PhD National Research Council Canada (NRC)
9:15 am – 10:00 am	<i>Chemically Induced Extracellular Vesicles for Versatile Therapies via Facile and Scalable Production and Purification</i> Young Jik Kwon, PhD University of California, Irvine (UCI)	<i>Cellular Cryoinjury and Potency – the Mesenchymal Stromal Cell Paradigm</i> Jacques Galipeau, MD University of Wisconsin-Madison	<i>Suitability and Perspectives of Different Insect Cell Factories for the Production of Antimicrobial Peptides</i> Jan Zitzmann Technische Hochschule Mittelhessen, Fachbereich LSE	<i>Multivariate Data Analysis for Reduction of Variation in a Viral Vaccine Production Process</i> Kevin P. Kent, PhD Boehringer Ingelheim Vetmedica, Inc.
10:00 am – 10:30 am	Morning Break in the Exhibit Area			

	Viral Vectors & Extracellular Vesicles Momentum, Third Floor	Cellular Therapies Fusion, Third Floor	Baculovirus Expression Technology Energy, Third Floor	Viral Vaccines Paul D. Fraim Center for Excellence, Fourth Floor
10:30 am – 11:15 am	<i>Current State of Exosome-Based Diagnostics</i> Johan Skog, PhD Exosome Diagnostics, Inc.	<i>Mitigating Supply Chain Challenges in Cell Therapies, and the Importance of Quality Apheresis — A Critical Starting Material</i> Mark Flower Be The Match BioTherapies, National Marrow Donor Program (NMDP)	<i>MultiBac: From Multiprotein Complex Structures to Synthetic Viral Nanosystems (SVNs)</i> Imre Berger, PhD University of Bristol	<i>Raw Materials Management: A Cornerstone for Risk Mitigation in Virus Safety Assurance of Biopharmaceuticals</i> Hazel Aranha, PhD Sartorius Stedim North America Inc.
11:15 am – 12:00 noon	<i>Triggering High-Yield Extracellular Vesicle Production for Regenerative Medicine</i> Amanda K.A. Silva Université Paris Diderot	<i>Using Interactions Between Solutes to Improve Preservation of Lymphocytes</i> Chia-Hsing Pi University of Minnesota	<i>The Baculovirus-Based Over-Expression of Membrane Proteins for Structural Biology</i> Andrew Quigley Diamond Light Source Ltd	
12:00 noon – 1:30 pm	Lentivirus Reference Standard Working Group Meeting in Energy, Third Floor			
	Free Afternoon with Recommended Group Activities:			
1:30 pm – 6:00 pm	River Cruise on the Victory Rover • Admission to Nauticus and the Battleship Wisconsin • Guided Historical Walking Tour • Glass Blowing Workshop at the Chrysler Glass Studio • Guided “Meet the Museum” Tour <i>Sponsored by Lonza</i>			
6:00 pm – 9:00 pm	Mardi Gras Banquet at the Granby Theater			

WEDNESDAY • MARCH 6, 2019

	Breakfast in the Exhibit Area			
7:30 am – 8:30 am	Breakfast in the Exhibit Area			
8:30 am – 9:15 am	<i>Bioprocessing of Cells and Exosomes for Regenerative Medicine</i> Ivan Wall, PhD Aston University	<i>Validating GMP-Compliant In Vitro Relative Potency Assays for Cell and Gene Therapy Products</i> Karen Doucette ACF Bioservices	<i>Walking with Insects: How Viruses Manipulate Insect Behaviour</i> Monique M. van Oers, PhD Wageningen University	<i>Upstream Viral Risk Mitigation Approach: Next-Generation Manufacturing</i> Aaron C. Mack Biogen
9:15 am – 10:00 am	<i>Emerging Methods for Exosome Purification and Process Monitoring</i> Peter Gagnon BIA Separations	<i>T-cell Therapies: Building the Next Operating System</i> Conk Sumen, PhD Thermo Fisher Scientific	<i>The Influenza Virus Neuraminidase as a Vaccine Target</i> Florian Krammer, PhD Icahn School of Medicine at Mount Sinai	<i>Baculovirus Platform for Rapid Manufacturing of Seasonal Flu Vaccine at Large-Scale</i> Jamal Meghrou, PhD Protein Sciences Corporation, A Sanofi Company
10:00 am – 10:30 am	Morning Break in the Exhibit Area			
10:30 am – 11:15 am	<i>Strategies and Advances in AAV Vector Characterization: Product-Related Impurities</i> Christine Le Bec, PhD Généthon	<i>Non-Viral Transfection and Genome Editing: Bench to Clinic to Commercial</i> Gregory F. Alberts, PhD Lonza Walkersville, Inc.	<i>Metabolic Modulation of Insect Cells by Baculovirus Infection: Insights for Bioprocess Optimization</i> Inés A. Isidro, PhD Instituto de Biología Experimental e Tecnológica (iBET)	<i>Process Development and Analytical Characterization of the Adenovirus and Plasmid Components for the Vaccine-Based Immunotherapy Regimen</i> Lawrence C. Thompson, PhD Pfizer, Inc.
11:15 am – 12:00 noon	<i>Quantitative Analysis of Lentiviral Vector Potency for Gene Therapy in Hemoglobinopathies</i> Yue “Joyce” Zhao, PhD bluebird bio Inc.	<i>Regulatory and Development Strategies for Gene and Cell Therapies</i> Michael Day, PhD Voisin Consulting Life Sciences	<i>News on Sf-Rhabdovirus Biology and Host Range</i> Christoph Geisler, PhD GlycoBac LLC	<i>Oncolytic Measles Virus Manufacturing: Linking Upstream and Downstream Strategies</i> Peter Czermak Technische Hochschule Mittelhessen, Fachbereich LSE
12:00 noon – 1:30 pm	Lunch in the Exhibit Area (Poster Session from 1:00 – 1:30 pm)			
1:30 pm – 2:15 pm	<i>Development of the First World Health Organization (WHO) International Standard for Gene Therapy</i> Yuan Zhao, PhD National Institute for Biological Standards & Control (NIBSC)	<i>Comparing Characterization Assays Across Different Cell Therapies</i> Francis Karanu, PhD Likarda, LLC	<i>Development of Multi-Subtype VLPs (msVLPs) as Broadly Protective Influenza Vaccines</i> Peter Pushko, PhD Medigen, Inc.	<i>Screening Egg and Tissue Culture Platforms for Influenza Virus Yield and Characteristics</i> Marylou G. Gibson, PhD Virapur, LLC
2:15 pm – 3:00 pm	<i>Optimization of the Harvest and Clarification Steps for Purification and cGMP Manufacture of Sf9/Baculovirus-Derived rAAV Vectors</i> Daniel S. Hurwit Voyager Therapeutics	<i>Automation in Cell Therapy — What Problem(s) are We Trying to Solve?</i> Brian Hampson Hitachi Chemical Advanced Therapeutics Solutions, LLC	<i>Creation and Characterization of a New Generation of Glycoengineered Baculovirus Vectors</i> Ajaykumar Maghodia, PhD University of Wyoming	<i>A Low-Footprint, Intensified, Single-Use Platform for the Production of Viral Vaccines</i> Matthew Kremer Matson Louise LLC
3:00 pm – 3:30 pm	Afternoon Break in the Exhibit Area			
3:30 pm – 4:15 pm	Poster Finalist Presentations, Discussion, and Award in the Paul D. Fraim Center for Excellence, Fourth Floor			
4:15 pm	Meeting Adjourns			