Program

VACCINE TECHNOLOGY VIII

June 12 - 17, 2022

Sitges, Spain
Melia Sitges Hotel

Conference Co-Chairs

Francesc Godia
Universitat Autònoma de Barcelona, Spain

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Vaccine Technology© Conferences History

An ECI Conference Series

Vaccine Technology I (2006)
Barry C. Buckland, John G. Aunins, Emilio A. Emini, and Jerald C. Sadoff
Puerto Vallarta, Mexico

Vaccine Technology II (2008)
Barry C. Buckland, John G. Aunins, Paula Marques Alves, and Kathrin Jansen
Albufeira, Algarve, Portugal

Vaccine Technology III (2010)
Barry C. Buckland, John G. Aunins, Paula Marques Alves, and Kathrin Jansen
Nuevo Vallarta, Mexico

Vaccine Technology IV (2012)
Barry C. Buckland, John G. Aunins, Paula Marques Alves, and Kathrin Jansen
Albufeira, Algarve, Portugal

Vaccine Technology V (2014)
Laura Palomares, Manon Cox, John Aunins and Kathrin Jansen
Playa del Carmen, Mexico

Vaccine Technology VI (2016)
Laura Palomares, Tarit Mukhopadhyay, Manon Cox and Nathalie Garçon
Albufeira, Portugal

Vaccine Technology VII (2018)
Amine Kamen, Tarit Mukhopadhyay, Charles Lutsch, Nathalie Garçon
Mont Tremblant, Canada

Conference Sponsors

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Vaccines Journal

Locations and Notes

- *Technical sessions will be in the Tramuntana 2+3. Poster Sessions will be in the Tramuntana 1.*
- *The reception and dinner on Sunday will be in the Garden.*
- *Breakfasts, lunches, and dinners on Monday, Wednesday and Thursday will be in the Restaurant Noray.*
- *The ECI on site office will be in Mestral I.*
- *Please wear your mask except when giving a presentation or actively eating or drinking. Please maintain physical distancing as much as possible.*
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Sunday, June 12, 2022

15:00 – 17:30	Conference check-in
17:30 – 18:00	Opening remarks
18:00 – 19:00	**KEYNOTE** **A tale of two worlds from the ongoing pandemic – unprecedented successes and all too familiar failures** David Robinson, The Bill & Melinda Gates Foundation, USA
19:00 – 21:30	Reception and Dinner (Garden)

Monday, June 13, 2022

07:00 – 08:30	Breakfast Buffet
	Session 1: Technological and clinical advances in vaccinology Chairs: Florian Krammer, Icahn School of Medicine at Mount Sinai, USA Julià Blanco, IRSI Caixa, Spain
08:30 – 09:00	**Lead Speaker** **Advances in therapeutic HIV vaccine development** Christian Brander, IRSI Caixa, Spain
09:00 – 09:20	**SARS-CoV-2 and Ebola: CHO-based manufacturing provides high quality subunit-vaccine candidates and diagnostics** Paco Pino, ExcellGene SA, Switzerland
09:20 – 09:40	**Microarray patch delivery of un-adjuvanted influenza vaccine induces potent and broad-spectrum immune responses in a phase I clinical trial** Alexandra C. I. Depelsenaire, Vaxxas Pty Ltd, Australia
09:40 – 10:00	**Development of a thermostable, multivalent filovirus vaccine based on recombinant subunit proteins** Axel T. Lehrer, University of Hawaii, USA
10:00 – 10:30	Coffee Break *(Sponsored by Kuhner Shaker)*
	Session 2: Technological and clinical advances in vaccinology Chairs: Sandy Douglas, University of Oxford, United Kingdom Barry Buckland, BioLogicB LLC, USA
10:30 – 11:00	**The inactivated NDV-HXP-S COVID-19 vaccine induces a significantly higher ratio of neutralizing to non-neutralizing antibodies in humans as compared to mRNA vaccines** Juan Manuel Carreño, Icahn School of Medicine at Mount Sinai, USA
11:00 – 11:20	**Targeting endogenous retroviruses using a novel adenoviral vaccine technology** Anne-Marie Andersson, InProTher ApS, Denmark
11:20 – 11:40	**Rapid and high yield microbial protein production system for human and animal vaccines: C1 Filamentous fungus *Thermothelomyces heterothallica*** Noelia Valbuena, Dyadic International Inc., Spain
11:40 – 12:00	**Superior SARS-CoV-2 RBD antigen designs for highly specific, quantitative serotests** Miriam Klausberger, University of Natural Resources and Life Sciences, Austria
12:00 – 13:30	Lunch
13:30 – 14:30	**KEYNOTE ON COVID-19 VACCINE** **Learnings from the development of Covid-19 vaccines** Kathrin Jansen, Pfizer, USA

Monday, June 13, 2022 (continued)

14:30 – 16:00 **Workshop: Innovation in Global Health**
Workshop chairs: David Robinson, The Bill & Melinda Gates Foundation, USA
Tarit Mukhopadhyay, Merck Research Laboratories, USA

Vaccination is considered the most successful healthcare initiative in disease prevention, but achieving universal coverage is still beyond reach. According to the WHO, 19.4million did not receive routine life-saving vaccinations in 2018 – many of them children. To address this issue, research from both academia and industry partners are required to provide innovative solutions to problems in Global Health.

This workshop will focus on the needs for the Global Health community and will be sub-divided into two sessions. The first session will provide examples of innovative solutions for persons in low and middle income countries, that seek to aid the development, distribution and uptake of vaccines in these very low cost markets. The second session will give contextual information of funding priorities and what funds are available to researchers interested in contributing to this valuable area.

Session 1 – Innovations in Global Health

14:30 – 14:35 **Introduction** by Chairs

14:35 – 14:45 **The need for innovation in LMICs and country perspectives**
Birgitte Giersing, WHO, Switzerland
- Problem statement
- Country perspectives based on VIPS country consultations and WHO landscaping/work on country research agendas

14:45 – 14:55 **VIPS prioritisation of delivery technologies: MAPs, HS and CTC vaccines and barcodes**
Marion Menozzi-Arnaud, Gavi, The Vaccine Alliance, Switzerland
- Topline process
- How these innovations can address the country needs

14:55 – 15:00 **'The innovation conundrum'**
Birgitte Giersing, WHO, Switzerland
- What we have learnt from past innovations

15:00 – 15:10 **VIPS key activities to advance those innovations**
Marion Menozzi-Arnaud, Gavi, The Vaccine Alliance, Switzerland
- VIPS topline key activities for those 3 innovations and across innovations

15:10 – 15:15 **Conclusion** (trying to link to the follow-on session on funding)
Birgitte Giersing, WHO, Switzerland
- We need to work together as a community to accelerate those innovations: funders, industry and global health stakeholders

15:15 – 15:30 **Panel Discussion**

Session 2 – Funding for Global Health

15:30 – 15:35 **Introduction** by Chairs

Monday, June 13, 2022 (continued)

15:35 – 15:40	Jenny Yip, Adjuvant Capital, USA
15:40 – 15:45	Nicolas Havelange, CEPI, United Kingdom
15:45 – 15:50	Barry Buckland, NIIMBL, USA
15:50 – 15:55	Harmony Chartier, Bill & Melinda Gates Foundation, USA
15:55 – 16:00	**Panel Discussion** (followed by informal one-on-one discussions for those in the room)
16:00 – 17:00	Coffee Break / Networking
18:30 – 20:00	Dinner
20:00 – 22:00	**Poster session 1 (Odd numbers)** Poster Chairs: Laura Cervera, UAB, Spain Antonio Roldao, IBET, Portugal

Tuesday, June 14, 2022

07:00 – 08:30 Breakfast Buffet

Session 3: Next generation platforms
Chairs: Amine Kamen, McGill University, Canada
Fu Tong-Ming, IGM Biosciences, Inc., USA

08:30 – 09:00 **Lead Speaker**
Discovery & Development of Therapeutic Interfering Particles (TIPs): single-administration SARS-CoV-2 and HIV antivirals with high barriers to the evolution of resistance
Leor Weinberg, University of California, San Francisco, USA

09:00 – 09:20 **Towards a platform process for the manufacture of glycoconjugate vaccines for pneumococcal disease**
Micheal Sulu, University College London, United Kingdom

09:20 – 09:40 **Enabling technologies for manufacturing thermostable and cost-effective vaccines**
Justin Stanbro, Merck & Co., Inc., USA

09:40 – 10:00 **Genomics of Vero cells: Understanding this cell line and its virus-host interactions for improved vaccine production**
Marie-Angelique Sene, McGill University, Canada

10:00 – 10:30 Coffee Break *(Sponsored by LumaCyte)*

10 30 – 12:00 **Workshop**
Crafting a Career in Bioscience
Workshop Chairs: Linda Lua, University of Queensland, Australia
Manon Cox, Next Wave Bio, USA

An all women panel shares career adventures in an ever-changing landscape. This is an interactive workshop that brings together students, early-career and senior researchers and industry executives who are working in the vaccine field to discuss different career paths and challenges.

- How do you craft your career story and excel in this field?
- What are the keys to success?
- How do you balance your work and personal life?

Hear from inclusive leaders and role models on their approaches towards positive development on a personal and organizational level. Learn how teamwork, inclusive leadership, initiative, networking and other transferable skills play a key role in designing your career.

12:00 – 13:30 Lunch

Tuesday, June 14, 2022 (continued)

Session 4 and 5: Bioprocessing advances in vaccine manufacturing
(Sponsored by Cytiva)
Chairs: Martina Micheletti, University College London, United Kingdom
Paula Alves, IBET, Portugal
Tara Tagmyer, Merck & Co., Inc., USA

13:30 – 14:00 **Lead Speaker**
From genome to structure and beyond
Mariagrazia Pizza, GSK Vaccines, Italy

14:00 – 14:20 **Production of influenza A virus defective interfering particles in a high cell density perfusion cultivation with continuous virus harvesting**
Marc D. Hein, Max Planck Institute and Otto von Guericke University, Germany

14:20 – 14:40 **Development of an automated microscale platform for conjugate vaccine production in *E. coli***
Jasmin J. Samaras, University College London, United Kingdom

14:40 – 15:00 **Development of a purification process for HIV-1 VLPs, from supernatant to lyophilization**
Elianet Lorenzo Romero, Universitat Autonoma de Barcelona, Spain

15:00 – 15:20 **AMBR®250 HT System: A key process development tool for new live virus and microbial vaccine candidates**
Jessica Olson, Merck & Co, Inc., USA

15:20 – 15:40 **Increasing of PK15 biomass for PCV viral antigen production using model-based and media optimization strategies that consider cellular metabolic requirements**
Ziomara Gerdtzen, University of Chile, Chile

15:40 – 16:00 **Accelerating and intensifying manufacturing to enable large-scale supply of a new adenovirus-vectored vaccine within 100 days**
Sandy Douglas, University of Oxford, United Kingdom

17:30 Sitges – Guided tours – meet in hotel lobby

Dinner on your own

Wednesday, June 15, 2022

07:00 – 08:30 Breakfast

Session 6: Vaccine analytics I
Chairs: Paula Lei, NIH/VRC, USA
Cristiana Campa, GlaxoSmithKline, United Kingdom

08:30 – 09:00 **Lead Speaker**
Driving change in dtap batch release testing
Isabelle Bekeredjian-Ding, Paul-Ehrlich-Institute, Germany

09:00 – 09:20 **The implication of glycans on the ACE2: SARS-CoV-2 spike interaction**
Manuel Reithofer, University of Natural Resources and Life Sciences, Austria

09:20 – 09:40 **Generation of an international standard serum to measure influenza virus hemagglutinin stalk-reactive antibodies**
Juan Manuel Carreno Quiroz, Icahn School of Medicine at Mount Sinai, USA

09:40 – 10:00 **New insights in formaldehyde-induced detoxification of the tetanus toxin: Chemical modification stoichiometry and characterization of intra- and inter-molecular cross-links**
Thierry Eynard, Sanofi, France

10:00 – 10:30 Coffee Break *(Sponsored by NIIMBL)*

Session 7: Vaccine analytics II
Chairs: Laura Palomares, UNAM, Mexico
Patrice Riou, Sanofi, France

10:30 – 10:45 **Development of analytical characterization tools for process monitoring of adenovirus-based vaccines (ChAdOx and Ad5)**
Shaleem I. Jacob, University College London, United Kingdom

10:45 – 11:00 **Advances in bioprocessing, analytics and formulation of influenza HA-VLP vaccine candidates produced by insect cells**
António Roldão, iBET, Portugal

11:00 – 11:15 **On-Line influenza virus quantification for viral production processes thanks to affinity-based surface plasmon resonance biosensor**
Emma Petiot, ICBMS-Gembas Laboratory, France

11:15 – 11:30 **All doses are not the same: Potential role of vaccine quality in vaccine adverse reactions**
Bruce Yu, University of Maryland, USA

11:30 – 12:00 Panel Discussion

12:00 – 13:30 Lunch

13:30 – 14:30 **KEYNOTE**
Development of the Oxford AstaZeneca Covid Vaccine
Sarah Gilbert, University of Oxford, United Kingdom

Wednesday, June 15, 2022 (continued)

14:30 – 16:00 **Workshop: Intensified Vaccine Manufacturing**
Workshop Chairs: Udo Reichl, Max-Planck-Institut Magdeburg, Germany
Charles Lutsch, Sanofi, France

Intensified manufacturing of engineered exosomes and their potential in advanced vaccine design
Konstantin Konstantinov, Codiak BioSciences, Inc., USA

An aseptic platform process for recombinant measles viruses
Viktoria Mayer, BOKU, Vienna, Austria

How can process intensification solve bottlenecks in vaccine manufacturing?
Amélie Boulais, Sartorius Stedim FMT S.A.S., France

Process intensification considerations for LMIC
Philippe Alexandre Gilbert, Bill & Melinda Gates Foundation, USA

How does process intensification impact distributed manufacturing and access?
Tania Pereira, Univercells Technologies, Belgium

Discussion

16:00 – 17:00 Coffee Break *(Sponsored by Pfizer)*

Session 8: One health
Chairs: Diego Fontana, Universidad Nacional Del Litoral, Argentina
Jean-Christophe Audonnet, Former Animal Health - Vaccine Industry leader, France

17:00 – 17:30 **Lead Speaker**
Developing a 'One Health' Nipah virus vaccine to protect animal and public health
Simon P. Graham, The Pirbright Institute, United Kingdom

17:30 – 17:50 **Design of mimotopes of a conserved epitope in dengue and Zika viruses for the obtention of broadly neutralizing antibodies**
Esmeralda Cuevas-Juárez, Instituto de Biotecnología, Mexico

17:50 – 18:10 **TBA**

18:10 – 18:30 **Adenovirus-based vaccine platform for mucosal or parenteral immunization of chickens**
Omar Farnos Villar, McGill University, Canada

18:30 – 20:00 Dinner

20:00 – 22:00 **Poster session 2 (Even numbers)**
Poster Chairs: Laura Cervera, UAB, Spain
Antonio Roldao, IBET, Portugal

Thursday, June 16, 2022

07:00 – 08:30 Breakfast

Session 9: Formulation and delivery
Chairs: QinJian Zhao, Xiamen University, China
Lakshmi Khandke, PATH Center for Vaccine Innovation and Access, USA

08:30 – 09:00 **Lead Speaker**
Challenges and opportunities to formulate and stabilize vaccine candidates targeted for use in LMICs
David Volkin, The University of Kansas, USA

09:00 – 09:20 **Development of an oral protein subunit COVID-19 vaccine to induce mucosal and systemic immune response**
Elodie Burlet, VaxForm, LLC, USA

09:20 – 09:40 **Development of a pneumococcal conjugate vaccine drug product: Ensuring stability, a robust manufacturing process and long-term commercial sustainability**
William Smith, Merck and Co. Inc., USA

09:40 – 10:00 **Development of a pentavalent Group B Streptococcus (GBS) glycoconjugate vaccine in Africa**
Matthew Williams, The Biovac Institute, South Africa

10:00 – 10:30 Coffee Break *(Sponsored by Sartorius Stedim Biotech GmbH)*

10:30 – 12:00 **Workshop: Next Gen Sequencing**
Workshop chairs: Jean-Pol Cassart, GSK, Belgium
Marc Eloit, Institut Pasteur, France

Next Generation Sequencing (NGS) also called High-Throughput-Sequencing (HTS) enables sequencing millions of nucleic acid molecules without any *a priori* on their sequences with unprecedented speed, quality, coverage and depth. NGS is revolutionizing vaccine development from the discovery of new antigens to the demonstration of vaccine safety.

The workshop will be organized in two sessions:

In the first session, NGS principles - related to virus detection - will be succinctly presented along with the wet laboratory and bioinformatic workflows.

In the second session, different NGS applications related to vaccines against human infectious diseases will be presented with relevant examples:

1. genetic characterization of vaccines
2. testing for adventitious agents in vaccines
3. pathogen discovery in human diseases as a prerequisite for novel vaccines development

An overview of the regulatory context will make the transition with a questions/answers session on the topics covered during the workshop.

12:00 – 13:30 Lunch

Thursday, June 16, 2022 (continued)

Session 10: Capacity building and intervention plan
Chairs: Martin Eisenhawer, WHO, Switzerland
Matthew Downham, CEPI, United Kingdom

13:30 – 14:00	**Lead Speaker** **Disease X development and 100 days initiative** Nicolas Havelange, CEPI, United Kingdom
14:00 – 14:24	**Innovative facility options in a new era of urgent capacity needs** Thomas Hauser, G-CON Manufacturing, Inc., Ireland
14:24 – 14:48	**A rapid response vaccine manufacturing platform as a countermeasure to epidemic threats** Tania Pereira Chilima, Univercells Technologies S.A., Belgium
14:48 – 15:12	**Advancing vaccine development and manufacture in Africa** Ebrahim Mohamed, Biovac, South Africa
15:12 – 15:36	**Test tubes and turnaround times: An accelerated biosafety testing approach for new vaccines against emerging pathogens** Sarah Sheridan, Merck, United Kingdom
15:36 – 16:00	**Production of high-quality SARS-CoV-2 antigens for vaccine development and serological assays implementation** Bárbara Fernandes, IBET, Portugal
16:00 – 16:30	Coffee Break
16:30 – 17:30	Poster short talks
17:30 – 18:30	**KEYNOTE** **Shifting the paradigm from global to national: innovative approaches for sustainable production of priority vaccines** Birgitte Giersing, WHO, Switzerland
18:30 – 19:00	Closing Conference Chairs
19:00 – 22:00	Banquet

Friday, June 17, 2022

07:00 – 10:00	Breakfast, Checkout and Departures

Poster Presentations

1. **Sterile filtration of large biomolecules - New insights using live attenuated vaccines and model particle suspensions**
   Adam Kristopeit, Merck & Co., Inc., USA

2. **Production of influenza virus-like particles by insect cells and removal of baculovirus from virus-like particles and other extracellular vesicles**
   Alois Jungbauer, BOKU, Austrian Centre of Industrial Biotechnology, Austria

3. **Chromatographic tools for optimization of IVT reaction and improving mRNA purification process**
   Amélie Boulais, Sartorius Stedim Biotech, United Kingdom

4. **High Density HEK293T culture for high yield, high quality, stable adenoviral vector production in Ambr® 250 stirred tank reactors**
   Amélie Boulais, Sartorius Stedim Biotech, United Kingdom

5. **Unveiling process knowledge for plasmid DNA fermentation across upstream scales**
   Amélie Boulais, Sartorius Stedim Biotech, United Kingdom

6. **Use of sulfated-cellulose membrane adsorbers to intensify purification of cell culture-derived influenza A and B viruses**
   Amélie Boulais, Sartorius Stedim Biotech, United Kingdom

7. **Development of scalable downstream processing platform for HEK293SF cell-based influenza vaccine production**
   Amine Kamen, McGill University, Canada

8. **Multivalent Influenza vaccine production in HEK-293 cells in response to pandemic threats**
   Amine Kamen, McGill University, Canada

9. **The next generation of fibroblast-based vaccine development**
   Anna-Barbara Hachmann, Thermo Fisher Scientific, USA

10. **Optimization, production, purification and characterization of HIV-1 Gag VLPs functionalized with SARS-CoV-2 Spike glycoprotein**
    Arnau Boix-Besora, Grup d'Enginyeria Cel·lular i Bioprocessos, Universitat Autònoma de Barcelona, Spain

11. **Rotavirus VP6 nanotubes show an antigen form-dependent adjuvant activity: Zika virus envelope protein monomer vs Zika virus-like particles**
    Arturo Liñan, Instituto de Biotecnología-Universidad Nacional Autónoma de México, Mexico

12. **Immunogenicity and efficacy of non-adjuvant tissue culture-based rabies vaccine produced in Ethiopia**
    Birhanu Hurisa, Ethiopian Public Health Institute, Ethiopia

13. **Tackling a capacity bottleneck to permit large-scale downstream processing of an adenovirus-vectored vaccine**
    Carina Citra Dewi Joe, University of Oxford/Jenner Institute, United Kingdom

14. **Use of a parallel bioreactor scaledown system for optimisation of a perfusion-based upstream process for adenovirus production**
Carina Citra Dewi Joe, University of Oxford/ Jenner Institute, United Kingdom

15. **Impact of Africa-based manufacturing on cost-per-dose: A theoretical, inside-out analysis**
Casey Selwyn, Bill & Melinda Gates Foundation, USA

16. **Immune-profiling of innate and adaptive immunity following three vaccinations of the MERS vaccine candidate MVA-MERS-S**
Christine Dahlke, Universitätsklinikum Hamburg Eppendorf, Germany

17. **Accurate and precise viral quantification for rapid vaccine development in- process production monitoring using Radiance® Laser Force CytologyTM**
Christof Hasse, LumaCyte Inc., USA

18. **Development of an innovative adenovirus-inspired self-assembling vaccine platform rapidly adaptable to coronaviruses and other emergent viruses**
Christopher Chevillard, National Center for Scientific Research, France

19. **Decisional tools for successful commercialisation of novel vaccine technologies**
Christos Stamatis, University College London, United Kingdom

20. **Suspension Vero cell culture technology for high titer production of viral vaccines**
Chun Fang Shen, National Research Council of Canada, Canada

21. **Intensification of influenza virus production in fed-batch and perfusion cultures of HEK293SF cells**
Cristina Alves Tottoli e Silva, Polytechnique Montréal, Canada

22. **The effect of the production method on the quality of coronavirus spike protein RBD variants of concern: Implications on the specificity and sensitivity of serological assays**
Daniel Barreto, Instituto de Biotecnología - Universidad Nacional Autónoma de México, Mexico

23. **Model-based process development for complex vaccine mixtures**
Daphne Keulen, Delft University of Technology, Netherlands

24. **Protein design and immunogenic analysis of COVID-19 vaccine candidates based on RBD/trimeric-spike antigens and chimeric VLPs antigens**
Diego Fontana, Universidad Nacional del Litoral, Argentina

25. **RHABDO-LIKE RECOMBINANTE (VLPs), a novel veterinary rabies vaccine: Safety and efficacy trials in pets and cattle**
Diego Fontana, Universidad Nacional del Litoral, Argentina

26. **Rational design, expression and characterization of chimeric rabies VLPs displaying the major antigenic site of Foot and Mouth Disease Virus**
Diego Fontana, Universidad Nacional del Litoral, Argentina

27. **Process development for a flexible vaccine vector platform based on recombinant life virus**
Dieter Palmberger, Themis Bioscience GmbH, a subsidiary of Merck & Co., Inc., Austria

28. **Development of a universal group 2 influenza virus vaccine using chimeric hemagglutinin constructs**
Eduard Puente-Massaguer, Icahn School of Medicine at Mount Sinai, USA

29. **Design of a vaccine against dengue and Zika viruses based on a mimotope of the envelope dimer epitope**
Esmeralda Cuevas-Juárez, Instituto de Biotecnología, UNAM, Mexico

30. **Design of mimotopes of a conserved epitope in dengue and Zika viruses for the obtention of broadly neutralizing antibodies**
Esmeralda Cuevas-Juárez, Instituto de Biotecnología, UNAM, Mexico

31. **Optimisation of an alkaline lysis process for a plug- and play plasmid DNA production**
Fatma Mohamed Ebrahim Alhamer Almulla, University College London, United Kingdom

32. **Analytical development to support manufacturing of a sustainable vaccine against Invasive Nontyphoidal Salmonellosis**
Francesca Necchi, GSK Vaccines Institute for Global Health, Italy

33. **A universal Influenza B vaccine using mosaic-hemagglutinin vaccine candidates**
Irene Gonzalez, Icahn School of Medicine, USA

34. **Differential glycosylation and extracellular vesicle biogenesis in HEK293 upon transient transfection.**
Jesús Lavado-García, Universitat Autònoma de Barcelona (UAB), Spain

35. **This is our shot - new measures of vaccine infectivity**
Johanna Bacher, ACIB, University of Natural Resources and Life Sciences, Austria

36. **Production and characterization of hepatitis B Virus-like Particles expressed in HEK293 and CHO-K1 recombinant cell lines. Analysis of the humoral immune response.**
Juan Manuel Battagliotti, Universidad Nacional del Litoral, Argentina

37. **Vaccine manufacturing capacity expansion – An approach to meet global needs based on Covid-19 learnings**
Julia Kuhn, Bill & Melinda Gates Foundation, USA

38. **Biomanufacturing using single use systems: Case study of fluoropolymer material**
Julien Muzard, Entegris, France

39. **Overviews of vaccine technology for neglected diseases in developing Latin America country - Peru**
Karen D. Calvay Sanchez, National Institute of Health, Peru

40. **Production of monoclonal antibodies specific to soluble proteins of Bartonella bacilliformis**
Karen D. Calvay Sanchez, National Institute of Health, Peru

41. **Maximizing viral titer yield at harvest through metabolic process analytical technology (PAT)**
Katherine Forrester, MSD, USA

42. **Affinity resins enable a multi-vaccine/platform purification process and rapid response to new viruses**
Kent Hallenbeck, Avitide, Inc., USA

43. **A novel SARS-CoV-2 (T Cell) vaccine candidate designed using the iVAX platform**
Kirk Haltaufderhyde, EpiVax Inc., USA

44. **Long-term propagation of influenza A virus and its defective interfering particles: Analyzing dynamic competition to select antiviral candidates**
Lars Pelz, Max Planck Institute for Dynamics of Complex Technical Systems, Germany

45. **High cell density culture for VLP production in latent virus-free insect cell line**
Lena Achleitner, ACIB - Austrian Centre of Industrial Biotechnology, University of Natural Resources and Life Sciences, Austria

46. **Novel purification strategies for Influenza neuraminidase-VLPs**
Leticia Guzmán-Ruiz, University of Natural Resources and Life Sciences, Vienna, Austria

47. **Intensified high yield production of GMMA based vaccines for high burden neglected disease**
Luigi Sollai, GSK Vaccines Institute for Global Health, Italy

48. **Influence of DNA-protein interactions on purification and assembly of virus-like particles**
Lukas Gerstweiler, University of Adelaide, Australia

49. **Bioanalytical tools for the quantification of in-process and final product samples of a rotavirus vaccine**
Mafalda M. Dias, iBET, ITQB-NOVA, Portugal

50. **A versatile capillary gel electrophoresis methodology for in-process and final product characterization of virus-based targets**
Mafalda M. Dias, iBET, ITQB-NOVA, Portugal

51. **Development of a new magnetic bead platform for use in GMP production of mRNA vaccines**
Marie Bosnes, Thermofisher Scientific, Norway

52. **WITHDRAWN**

53. **Biomanufacturing technology advances enable rapid response to disease outbreaks**
Marie Jourdan, Univercells Technologies S.A., Belgium

54. **Improved Ad26 vaccine stability by mitigating interaction of viral particles with glass surfaces**
Martinus Capelle, Janssen Vaccines, Netherlands

55. **Development of a pentavalent Group B Streptococcus (GBS) glycoconjugate vaccine in Africa**
Matthew Williams, The Biovac Institute, South Africa

56. **Evaluation of a low-serum medium for growth and virus production with MRC-5 cells cultured on Cytodex 1 microcarriers**
Michael Bruno, Thermo Fisher Scientific, USA

57. **WITHDRAWN**

58. **Development of two monovalent antivenoms against two Moroccan viper venoms– daboia Mauritanica and Cerastes Cerastes**
Naoual Oukkache, Pasteur Institute, Morocco

59. **Development of the filamentous fungus Thermothelomyces heterothallica C1 into a next-generation production platform for human and animal vaccines**
Noelia Valbuena, Dyadic International Inc., Spain

60. **An adenovirus-based vaccine manufacturing technology platform for mucosal or parenteral immunization against poultry diseases in sub-Saharan Africa**
Omar Farnos, McGill University, Canada

61. **Production and purification of an immunogenic G protein of rabies virus from S2 insect cells**
Renato Mancini Astray, Instituto Butantan, Brazil

62. **Enhancing production of the malaria asexual blood-stage vaccine candidate PfRipr5 in insect cells by modulating expression vector and culture temperature**
Ricardo Correia, iBET, ITQB-NOVA, Portugal

63. **Acceleration of vaccine development by improvement of process understanding - Analysis of the host cell proteome**
Roxana Disela, Delft University of Technology, GlaxoSmithKline Vaccines, Netherlands

64. **Microbial platform for vaccine production for Low-and Medium-Income Countries (LMICs): 2 case studies**
Salomé de Sá Magalhães, UCL, United Kingdom

65. **Optimization of rAd5 vectored Newcastle vaccine production in HEK293 at high cell densities**
Samia Rourou, Institut Pasteur de Tunis, Tunisia

66. **Towards a virus production platform based on VeroS cells grown on chemically defined media**
Samia Rourou, Institut Pasteur de Tunis, Tunisia

67. **Influenza A virus-derived defective interfering particles for antiviral treatment**
Sascha Y. Kupke, Max Planck Institute for Dynamics of Complex Technical Systems, Germany

68. **Virus like particles expressed in insect cells and mammalian cells as a plataform for the development of a Zika vaccine**
Selene J. Uribe, Instituto de Biotecnología, UNAM, Mexico

69. **Mutation of a conserved, hydrophobic, cryptic epitope improves manufacturability and immunogenicity of the SARS-CoV-2 RBD**
Sergio Rodriguez Aponte, MIT, USA

70. **A quality- by- design approach for the implementation of a manufacturing license change using a qualified scale- down process model**
Shari Narayanan, Seqirus Vaccines, United Kingdom

71. **Intranasal administration of NDV-HXP-S COVID19 vaccines induces robust protective mucosal and systemic immunity in mice**
Stefan Slamanig, Icahn School of Medicine at Mount Sinai, USA

72. **Adapting Flublok/supemtek® recombinant protein expression systems to Sars-cov-2**
Steven Hauser, Sanofi, USA

73. **Production of a fusogenic oncolytic rVSV-NDV virus in perfusion processes**
Sven Göbel, Max-Planck Institute, Germany

74. **Upstream process optimization to support efficient HEK293 cell growth and adenovirus production**
Syed Khalil, Thermo Fisher Scientific, USA

75. **WITHDRAWN**

76. **Lessons in vaccine process development**
Tara Tagmyer, Merck & Co., Inc, USA

77. **Development of a standardized multiplex Filovirus and SARS-CoV2 antibody immunoassay**
Teri Ann S. Wong, University of Hawaii, USA

78. **Biophysical technologies in vaccines**
Thierry Eynard, Sanofi, France

79. **Automated single-cell cloning in chemically defined medium for new suspension MDCK cell lines and scale-down of influenza A virus production into ambr®15 microbioreactors**
Tilia Zinnecker, Max Planck Institute for Dynamics of Complex Technical Systems, Germany

80. **Producing viruses in orbit: Current developments for orbital shaken viral vaccine manufacturing**
Tim Bürgin, Adolf Kühner AG, Switzerland

81. **Multimodal chromatography combining steric exclusion and cation exchange as an intermediate downstream step to purify yellow fever virus-like particles**
Tulio M. Lima, UFRJ, Brazil

82. **Towards updatable, multivalent Covid vaccines: A platform process to produce trimeric spike protein of SARS-COV-2 variants expressed in HEK293 stable cell clones**
Tulio M. Lima, UFRJ, Brazil

83. **Salt tolerant endonucleases for the removal of host cell DNA in Downstream Processing of enveloped viruses**
Viktoria Mayer, Austrian Centre of Industrial Biotechnology (ACIB), Austria

84. P**re-fabrication for providing biocapacity to support vaccine manufacturing**
Thomas Hauser, GCon Manufacturing, Germany

85. **A platform approach for the production of Hand, Foot, Mouth Disease vaccines**
Yvonne Thomassen, Intravacc, Netherlands

86. **Genetically detoxified diphtheria and tetanus toxins, EcoCRM$_{197}$® and 8MTT, expressed in an engineered *E. coli* strain and use as conjugate vaccine carrier proteins**
Renaud Jacquemart, Omnium Global, Canada

87. **Affinity purification of SARS-COV-2 spike protein receptor binding domain produced in a C1 fungal expression system**
Renaud Jacquemart, Omnium Global, Canada

Engineering Conferences International

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Calendar of ECI Conferences

Celebrating 60 years of international, interdisciplinary engineering conferences

2022

May 15-20	**20AH**	**NANOTECHNOLOGY IN MEDICINE III: ENABLING NEXT GENERATION THERAPIES** (Cetraro (Calabria), Italy) M. Radisic, University of Toronto; V. Shahin, University of Munster
May 22-27	**21AE**	**ENZYME ENGINEERING XXVI** (Dallas, Texas) A. Bommarius, Georgia Institute of Technology; V. Mitchell, Codexis; D. Furst, GSK
June 5-8	**20AI**	**ULTRA-HIGH TEMPERATURE CERAMICS: MATERIALS FOR EXTREME ENVIRONMENT APPLICATIONS V** (Snowbird, Utah) C. Carney, AFRL; G. Thompson, University of Alabama; C.Tallon, Virginia Tech; C. Weinberger, Colorado State Univ.; D. Butts, MACH-20, LLC
June 5-10	**20AW**	**WASTELCA 3: LIFE CYCLE SUSTAINABILITY ASSESSMENT FOR WASTE MANAGEMENT AND RESOURCE OPTIMIZATION** III (Cetraro (Calabria), Italy) U. Arena, University of Campania "Luigi Vanvitelli"; T. Astrup, Technical University of Denmark; M. Barlaz, North Carolina State University
June 5-10	**21AP**	**BENEFICIATION OF PHOSPHATES IX** (Helsinki, Finland) P. Zhang, Florida Industrial and Phosphate Research Institute; E. Rova, Yara, Finland; J. Miller, University of Utah; M. Porteus, Fosko, South Africa; L. Leal Filho, University of Sao Paulo, Brazil; E. Wingate, Worley, Australia; A. C. Silva, Federal University of Goiás (UFG), Brazil
June 12-17	**20AA**	**VACCINE TECHNOLOGY VIII** (Sitges, Spain) T. Mukhopadhyay, Merck Research Laboratories; C. Lutsch, Sanofi Pasteur; L. Lua, University of Queensland; F. Godia, Universitat Autònoma de Barcelona
June 19-24	**22AT**	**THERMAL AND ENVIRONMENTAL BARRIER COATINGS VI** (Irsee, Germany) B. Hazel, Pratt & Whitney; Uwe Schulz, German Aerospace Center; Mike Maloney, Pratt & Whitney; R. Vassen, Research Center, Julich; Ram Darolia, GE Aviation (retired); C. Levi, U California Santa Barbara; D. Roth-Fararaseanu, Rolls-Royce
June 26 – 30	**21AM**	**BIOCHEMICAL AND MOLECULAR ENGINEERING XXII** (Cancun, Mexico) K.L. Jones Prather, Massachusetts Institute of Technology; M. Jewett, Northwestern University; M. Koepke, LanzaTech
Oct 2-7	**21AN**	**NANOMECHANICAL TESTING IN MATERIALS RESEARCH AND DEVELOPMENT VIII** (Split, Croatia) S. Korte-Kerzel, RWTH Aachen University
Oct 9-13	**22AA**	**INTEGRATED CONTINUOUS BIOMANUFACTURING V** (Sitges, Spain) J. Walther, Sanofi; A. Azevedo, Instituto Superior Técnico; R. Deshpande, Amgen
Oct 30-Nov 3	**20AE**	**ELECTROPHORETIC DEPOSITION VII: FUNDAMENTALS AND APPLICATIONS** (Santa Fe, New Mexico) A.R. Boccaccini, Univ. of Erlangen-Nuremberg; B. Ferrari, Spanish Research Council; A.J. Pascall, Brookhaven National Laboratory; T. Uchikoshi, National Institute for Materials Science

Nov 13-18	**21AS**	**CERAMIC MATRIX COMPOSITES II** (Santa Fe, New Mexico) Y. Kagawa, Tokyo University of Technology; R. Darolia, GE Aviation (retired); R. Raj, University of Colorado; G. Singh, Kansas State University; D. Koch, University of Augsburg; G. Vignoles, University of Bordeaux; J. Binner, University of Birmingham
Dec 10-14	**21AB**	**POLYMER REACTION ENGINEERING** XI (Scottsdale, AZ) T. Mckenna, Universite Claude Bernard, France; C. Sayer, Federal University of Santa Catania, Brazil; J. Reimers, ExxonMobil, USA
Dec 18-21	**20AY**	**ADVANCES IN COSMETIC FORMULATION DESIGN II** (Durham, NC) S. Amin, Manhattan College; P. Somasundaran, Columbia University
2023		
March 19-24	**22AD**	**THIRD INTERNATIONAL CONFERENCE ON ELECTROMAGNETIC/ELECTRIC FIELDS IN MATERIALS: A PATH TOWARDS ENERGY EFFICIENT PROCESSING** (Tomar, Portugal) R. Raj, University of Colorado at Boulder
April 23-29	**22AC**	**CELL CULTURE ENGINEERING XVIII** (Cancun, Mexico) L. Palomares, IBT-UNAM; C. Goudar, Amgen; T. Wang, Genentech
May 7-12	**23AP**	**PYROLIQ II – 2023: Pyrolysis and Liquefaction of Biomass and Wastes** (Hernstein, Austria) F. Berruti, ICFAR & Western University; A. Dufour, CNRS, ENSIC; M. Garcia-Perez, Washington State University; W. Prins, University of Ghent
May 28-June 2	**21AG**	**ALKALI ACTIVATED MATERIALS AND GEOPOLYMERS: SUSTAINABLE CONSTRUCTION MATERIALS AND CERAMICS MADE UNDER AMBIENT CONDITIONS** (Cetraro (Calabria), Italy) W.M. Kriven, University of Illinois at Urbana-Champaign; C. Leonelli, Universita' degli Studi di Modena e Reggio Emilia; J.L. Provis, University of Sheffield; A.R. Boccaccini, University of Erlangen-Nuremberg
June 11-15	**21AO**	**ADVANCES IN OPTICS FOR BIOTECHNOLOGY, MEDICINE AND SURGERY** (Tomar, Portugal) M. Niedre, Northeastern University; F. Leblond, Polytecnique Montreal
July 16-21	**21AV**	**SIXTH INTERNATIONAL WORKSHOP ON STRESS-ASSISTED CORROSION DAMAGE** (Washington, DC area) A.K. Vasudevan, Office of Naval Research (retired); R. Latanision, Exponent, Inc.; H. Holroyd, Luxfer (retired); F. Friedersdorf, Luna Innovations Inc.
July 24-28	**21AH**	**ASSOCIATION IN SOLUTION V** (Azores, Portugal) I. Voets, Eindhoven University of Technology; J. Strakel, Wageningen University; J. Conrad, University of Houston
Summer	**20AF**	**SYNTACTIC AND COMPOSITE FOAMS VI** (TBA-Europe) G.M. Gladysz and K.K. Chawla, University of Alabama at Birmingham; A. R. Boccaccini, University of Erlangen- Nuremberg; M. Fukushima, National Institute of Advanced Industrial Science and Technology
September 17-21	**23AB**	**BIO-CHAR III (Tomar, Portugal)** F. Berruti, Western University, Canada; D. Chiaramonti, Politecnico di Torino and RE-CORD, Italy; S. Fiore, Politecnico di Torino, Italy; M. Garcia-Perez, Washington State University, USA; O. Masek, University of Edinburgh, UK
September TBA	**23AT**	**SINGLE USE TECHNOLOGIES V** (Boston, USA) M. Barbaroux, Sartorius; S. Kane, Takeda; S. Yoon, University of Massachusetts, Lowell
Nov TBA	**20AO**	**NONSTOICHIOMETRIC COMPOUNDS VIII** (Tainan, Taiwan) W. Chueh, Stanford University; F-Z Fung, National Cheng Kung University; R. Waser, RWTH Aachen; H. Takamura, Tohoku University
TBA	**21AD**	**ADVANCED MEMBRANE TECHNOLOGY VIII: ENVIRONMENT, FOOD, HEALTH AND NEW FRONTIERS** (Casablanca, Morocco) J. Hestekin, University of Arkansas; U. Beusche, W.L. Gore, Inc.; D. Bhattacharyya, University of Kentucky

Engineering Conferences International

Engineering Conferences International (ECI) is a not-for-profit global engineering conferences program that has served the engineering/scientific community since 1962 as successor program to Engineering Foundation Conferences. ECI has received recognition as a 501(c)3 organization by the U.S. Internal Revenue Service and is incorporated in the State of New York as a not-for-profit corporation.

The program has been developed and is overseen by volunteers both on the international Board of Directors and international Conferences Committee. More than 1,900 conferences have taken place to date. The conferences program is administered by a professional staff and the conferences are designed to be self-supporting.

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To serve the engineering/scientific community with international, interdisciplinary, leading edge engineering research conferences

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The advancement of engineering arts and sciences by providing a forum for the discussion of advances in the field of science and engineering for the good of mankind by identification and administration of international interdisciplinary conferences

To work with engineering, scientific and social science societies and the interested general public to jointly sponsor conferences and to take other actions that will foster complementary programming.

To initiate conferences that will have a significant impact on engineering education, research practice and/or development.

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The ECI Conferences Committee invites you to suggest topics and leaders for additional conferences and encourages you to submit a proposal for an ECI conference.

Ideally, proposals should be submitted from 18 to 24 months in advance of the conference although the staff can work on a shorter timeline.

The traditional format for an ECI conference is registration Sunday afternoon with technical sessions held each morning and evening through Thursday or Friday noon. Afternoons are used for informal gatherings, poster sessions, field trips, subgroup meetings and relaxation. This format has served well to build important professional networks in many areas.

ECI welcomes proposals for shorter conferences and for conferences which span weekends in order to reduce the number of working days participants are away from their offices.

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Second, after your proposal has been approved by the Conferences Committee, the ECI staff will assume responsibility for the administration of the conference.

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- Recommend, negotiate, contract and make substantial deposits for housing, meals, meeting space, A/V equipment and tours.
- Maintain web sites for the conference and for submission of abstracts.
- Publicize via electronic and print media.
- Administer all finances including grants, contributions and purchase orders. (ECI makes grant funds available as soon as a grant is approved.) There is no need for chairs to set up a conference bank account or file tax returns for their conference.
- Process all applications and registrations.
- Produce bound program/abstracts book.
- Contract for the publication of print or electronic proceedings, if any.
- Provide on-site staff during the conference.

For more information, please contact the ECI Director at Barbara@engconfintl.org