

KEYSTONE SYMPOSIA

on Molecular and Cellular Biology

Progress in Vaccine Development for Infectious Diseases (T8)

June 1-4, 2022 • Beaver Run Conference Center • Breckenridge, CO, USA

Scientific Organizers: Katalin Karikó, Karin Loré and Norbert Pardi

Supported by the Directors' Fund

Global Health Travel Award Deadline: May 11, 2022 / Scholarship Deadline: February 15, 2022 / Abstract Deadline: February 22, 2022 / Discounted Registration Deadline: April 1, 2022

WEDNESDAY, JUNE 1

Arrival and Registration

THURSDAY, JUNE 2

Welcome and Keynote Address

Barney S. Graham, Former Deputy Director of NIAID, VRC, National Institutes of Health, USA

Pandemic Vaccines: How Are We Going to Be Better Prepared Next Time?

Genetic Vaccines - From Mechanisms of Action to Clinical Approval

Robert A. Seder, NIAID, National Institutes of Health, USA
Development of Immune Correlates and Mechanisms of Protection for Novel Vaccine Platforms

Sarah Catherine Gilbert, University of Oxford, UK
Design and Clinical Testing of Adenoviral Vector Vaccines

Dan H. Barouch, Beth Israel Deaconess Medical Center, USA
Developing Adenovirus Vaccine and Eradication Strategies using the Non-Human Primate Model

Galit Alter, MIT and Harvard University, USA
Systems Biology to Define the Correlates of Immunity

Short Talks Chosen from Abstracts

Infectious Disease mRNA Vaccines

Norbert Pardi, University of Pennsylvania, USA
mRNA-Based Influenza or Coronavirus Vaccines

Raffael Nachbagauer, Moderna, USA
infectious Disease mRNA Vaccines (Flu)

Katalin Karikó, BioNTech RNA Pharmaceuticals, Germany
From Critical Modifications of mRNA to a Highly Efficacious SARS-CoV-2 Vaccine

Susanne Rauch†, CureVac GmbH, Germany
Development of Unmodified mRNA Vaccines

Short Talks Chosen from Abstracts

Poster Session 1

FRIDAY, JUNE 3

Optimizing Vaccine Delivery and Adjuvant Stimulation

Bali Pulendran, Stanford University School of Medicine, USA
Emerging Concepts in the Science of Vaccine Adjuvants

Karin Loré, Karolinska Institutet, Sweden
Understanding Innate Immune Activation by mRNA Vaccines for Generation of Efficient Responses

Darrell J. Irvine, Massachusetts Institute of Technology, USA
Shaping Vaccine Responses by Adjuvants and Delivery Systems

Short Talks Chosen from Abstracts

Protein Nanoparticle Vaccines: Host:Antigen Interaction

Neil P. King†, University of Washington, USA
Self-Assembling Nanoparticle Vaccine-Design

Gregory M. Glenn†, Novavax, USA

Development of Protein Subunit Vaccines - From RSV to Coronavirus

Kevin O. Saunders, Duke University, USA

Nanoparticle-Based Protein Vaccines against HIV (or Coronaviruses)

Short Talks Chosen from Abstracts

Poster Session 2

SATURDAY, JUNE 4

Vaccine Diplomacy and Distribution

Linda-Gail Bekker, University of Cape Town, South Africa
Overcoming Vaccination Hesitancy

Peter J. Hotez, Baylor College of Medicine, USA
Availability and Attainability of Vaccines to Populations

Patricia Garcia†, Universidad Peruana Cayetano Heredia / University of Washington, Peru
Challenges in Equal Distribution of Vaccines

Diversity and Evolution of Immunity to Vaccination

Gunilla B. Karlsson Hedestam, Karolinska Institutet, Sweden
B Cell Immunity to Vaccination Influenced by Human Genetic Diversity

Hedda Wardemann, German Cancer Research Center, Germany
Evolution of Immune Responses to Controlled Infection and Vaccination

Ali H. Ellebedy, Washington University School of Medicine, USA
Mechanisms of Generation of Durable and High Quality B Cell Responses to Vaccination

Nicole A. Doria-Rose, NIAID, National Institutes of Health, USA
Longitudinal Analyses of Vaccine-Induced Antibodies to Understand Protection

Short Talks Chosen from Abstracts

Structural Immunology-Guided Rational Vaccine Antigen Design

Adam K. Wheatley, University of Melbourne, Australia
Design of Future Vaccines based on Understanding Antibody-Based Protection from Infectious Viral Disease

Jason S. McLellan, University of Texas at Austin, USA
Structure-Based Vaccine Design (TBD)

Laura M. Walker, Adimab LLC and Adagio Therapeutics, USA
Novel Insights into Immunoglobulin Structures

Short Talks Chosen from Abstracts

Meeting Wrap-Up: Outcomes and Future Directions (Organizers)

SUNDAY, JUNE 5

Departure