



Cell Modeling and Engineering for Rare Diseases: Tools, Trends, and Opportunities

The Jackson Laboratory | Virtual

November 5, 6, 12 & 13, 2025

1:00-3:00pm UTC, 8:00-10:00am EST, 3:00-5:00pm CAT/EET

Schedule

Session 1: Wednesday, November 5, 2025

Moderators: Samuel Mawuli Adadey, Ph.D., *University of Cape Town* and Magdalena Mroczek, *University of Zurich*

8:00 – 8:10am **Welcome and Opening Remarks**
Ambroise Wonkam, M.D., Ph.D., D.M.Sc., *Johns Hopkins School of Medicine & AfSHG President*
Charlie Wray, Ph.D., *The Jackson Laboratory*

8:10 – 9:00am **Keynotes Address: Rare Diseases in Africa: A Neglected Frontier in Genomic Research**
Aimé Lumaka, M.D., Ph.D., *University of Kinshasa & African Rare Diseases Initiative*

Introduction to Cell Modeling for Rare Diseases

9:00 – 9:30am Maria Mudau, Ph.D., *National Health Laboratory and the University of the Witwatersrand*

9:30 – 10:00am Jennifer SanMiguel, Ph.D., *The Jackson Laboratory*

Session 2: Thursday, November 6, 2025

Moderators: Juliana Xavier de Miranda Cerqueira, *Coeliac Disease Research Center, University of Tampere, & University of Porto* and Kengne Kamga Karen, *Regional Hospital Limbe, Cameroon*

CRISPR, iPSCs & Organoids: Tools for Cell Engineering

8:00 – 9:00am Martin Pera, Ph.D., *The Jackson Laboratory*

9:00 – 9:10am Samuel Mawuli Adadey, Ph.D., *University of Cape Town*

9:10 – 10:00am Antwi-B. Oteng, Ph.D., *Meharry Medical College*



Session 3: Wednesday, November 12, 2025

Moderators: Hamza Chouk, *Higher Institut of Biotechnology of Monastir* and Maria Francesca di Feo, M.D., *University of Helsinki*

Case Study – Modeling Using Patient-Derived Cells

8:00 – 9:00am Chris Baker, Ph.D., *The Jackson Laboratory*
9:00 – 10:00am Joram Mooiweer, *University Medical Center Groningen*

Session 4: Thursday, November 13, 2025

Practical Implementation of Cell Modeling and Engineering for Rare Diseases

Moderators: Maria Mudau, Ph.D., *National Health Laboratory and the University of the Witwatersrand* and Abbas Abel Anzaku, *Institute of Human Virology*

8:00 – 8:40am Louisa Wang, Ph.D. and Rebecca Smith, M.S., C.G.C., *The Jackson Laboratory*
8:40 – 9:20am Valentina Lionello, Ph.D., *University College London*

Panel Discussion: Ethical & Policy Considerations in Cell-Based Rare Disease Research

Moderators: Mohamed Zahir Alimohamed, Ph.D., *Muhimbili University of Health and Allied Sciences & University Medical Center Groningen* and Christopher Kintu, Ph.D., *Makerere University, Uganda & Queen Mary University of London*

9:20 – 10:00am Rebecca Smith, M.S., C.G.C., *The Jackson Laboratory*
Rita Matos, Ph.D., *The Europeans Society for Human Genetics*
Kengne Kanga Karen, *Regional Hospital Limbe, Cameroon*
Dimitra Konstantinidou, *Ludwig Maximillians University of Munich, Germany*