



# **Neuro Gene Therapy Symposium**

Thursday and Friday October 12 - 13, 2023 Gaulton Auditorium, BRB University of Pennsylvania

# Day 1: Thursday, October 12, 2023

08:00 am - 09:00 am Check-in & Breakfast

09:00 am - 09:15 am **Welcome & Introductory Remarks** 

Frances Jensen, MD & Raquel Gur, MD, PhD; Co-Directors, PTNC

#### Session I: Introduction to Gene Therapy & Current Scope - Chair: Frances Jensen, MD

09:15 am - 09:45 am Kenneth (Kurt) Fischbeck, MD, NIH Distinguished Investigator, National

Institute of Neurological Disorders and Stroke (NINDS)

Diagnosis and Treatment of Hereditary Neurological and Neuromuscular Diseases

09:45 am - 10:15 am Daniel J. Rader, MD, Seymour Gray Professor of Molecular Medicine; Chair of

> the Department of Genetics Chief of the Division of Translational Medicine and Human Genetics in the Department of Medicine, University of Pennsylvania

Translational Resources for Genetics at Penn

10:15 am - 11:00 am Joint Talk:

> **Lauren Elman, MD,** Professor of Neurology, Director of the Muscular Dystrophy Association Clinic; Medical Center Director of the Penn Comprehensive Amyotrophic Lateral Sclerosis Center, University of Pennsylvania

Two Clinics Separated By 20 Years & a Cautionary Tale

Ingo Helbig, MD, Assistant Professor, Division of Neurology, Children's Hospital

of Philadelphia and the Clinical Director, Center for Epilepsy and

Neurodevelopmental Disorders (ENDD) at University of Pennsylvania and

Children's Hospital of Philadelphia

Clinical Trial Readiness and Natural History in Pediatric Epilepsies and

Neurodevelopmental Disorders

11:00 am - 11:15 am: Break

#### Session II: Successes & Current Landscape - Chair: Steven Scherer, MD, PhD

**11:15** am – **11:45** am **Jean Bennett, MD, PhD,** F.M. Kirby Professor of Ophthalmology, Department of

Cell and Developmental Biology and Vice Chair for Basic Research, Department of Ophthalmology; Director of DNA, Tissue and Cell Line Bank for Retinal Degeneration & Molecular Diagnostic Studies Unit for Patients with Retinal Degeneration, F. M. Kirby Center for Molecular Ophthalmology, University of

Pennsylvania

 $The \ Luxturna \ Experience: In sights \ Into \ Development \ of \ Gene-Based \ Treatments \ for$ 

Other Blinding Disorders (pre-recorded talk)

**11:45 am – 12:15 pm Toby Ferguson, MD, PhD,** Head Neuromuscular and Movement Disorders

Development Unit, Biogen

Use of Neurofilament in Development of Tofersen for SOD1 ALS

**12:15 pm – 12:45 pm Steven Scherer, MD, PhD,** Ruth Wagner Van Meter and J. Ray Van Meter

Professor of Neurology, Director of Penn Neurogenetics Therapy Center,

University of Pennsylvania

Successful Treatments for Transthyretin Amyloidosis (ATTR)

**12:45 pm – 01:15 pm Kevin Flanigan, MD,** Robert F. and Edgar T. Wolfe Foundation Endowed Chair

in Neuromuscular Research; Director, Center for Gene Therapy at the Abigail

Wexner Research Institute, Nationwide Children's Hospital

*Next Directions in Dystrophinopathy Gene Therapy* 

#### 01:15 pm - 2:15 pm: Lunch/Break

#### Session III: Different Methodologies/Mechanisms - Chair: Frances Jensen, MD

**02:15 pm - 02:45 pm Beverly L. Davidson, PhD,** Katherine A. High Chair in Cell and Gene Therapy,

Director, Raymond G. Perelman Center for Cellular and Molecular Therapeutics,

Chief Scientific Strategy Officer, Children's Hospital of Philadelphia and Professor of Pathology and Laboratory Medicine, University of Pennsylvania

Advancing Brain Gene Therapies

02:45 pm - 03:15 pm Drew Weissman, MD, PhD, Nobel Laureate

Roberts Family Professor in Vaccine Research; Director, Penn Institute for RNA

Innovation; Director, Vaccine Research in the Infectious Disease Division;

University of Pennsylvania

2023 Nobel Prize in Physiology or Medicine

*Nucleoside-Modified mRNA-LNP Therapeutics* 

**03:15 pm – 03:45 pm Ricardo Dolmetsch, PhD,** President and Chief Scientific Officer, uniQure

Developing a Gene Therapy to Treat Huntington's Disease

#### 03:45 pm - 4:00 pm: Break

#### Session IV: Frontiers & Vision Forward - Chair: Raquel Gur, MD, PhD

**04:00 pm – 04:30 pm Benjamin L. Prosser, PhD,** Associate Professor, Physiology; Director, Center for

Epilepsy and Neurodevelopmental Disorders (ENDD); Associate Director, Pennsylvania Muscle Institute; Lead Coordinator, Leducq Transatlantic Network of Excellence (Leducq Cytoskeletal Network), University of Pennsylvania

Developing and Accelerating Therapeutics for Rare Neurodevelopmental Disorders

(pre-recorded talk)

**04:30 pm – 05:00 pm Steven E. Hyman, MD,** Core Institute Member, Director of the Stanley Center for

Psychiatric Research, Broad Institute at MIT and Harvard

Schizophrenia: The Challenging Path from Genetics to Therapeutics

#### **Day 2: Friday, October 13, 2023**

08:00 am - 08:30 am Check-in & Breakfast

#### Session V: Academic Gene Therapy Centers - Chair: Colin Quinn, MD

**08:30 am – 09:00 am** Sara-Claude Michon, PhD, Director of Operations, Penn Neurogenetics Therapy

Center, University of Pennsylvania

Amy T. Waldman, MD, MSCE, Associate Director, Clinical In Vivo Gene Therapy,

Children's Hospital of Philadelphia

<u>Joint talk:</u> Setting Up an Academic Gene Therapy Center: Penn Neurogenetics

Therapy Center and CHOP Clinical In Vivo Gene Therapy Center

**09:00 am - 09:30 am James Wilson, MD, PhD,** Director, Gene Therapy Program; Rose H. Weiss

Professor and Director, Orphan Disease Center; Professor of Medicine and

Pediatrics, University of Pennsylvania

A Penn-Based Platform for Global Delivery of AAV Vectors to CNS

**09:30 am - 10:00 am Pedro Gonzalez-Alegre, MD, PhD,** Head of Gene Therapy Research, Spark

Therapeutics, Inc

From Academia to Industry, and Back

### 10:00 am - 10:15 am: Break

#### Session VI: Ethics & Regulatory Issues - Chair: Lauren Elman, MD

**10:15** am – **10:45** am Holly Tabor, PhD, Associate Professor of Medicine at Stanford University;

Associate Director for Clinical Ethics and Education for the Stanford Center for Biomedical Ethics (SCBE), Co-Chair of the Ethics Committees at Stanford

Hospital and Lucile Packard Children's Hospital

Ethical Issues of Gene Therapy

**10:45 am – 11:15 am Peter Marks, MD, PhD,** Director of the Center for Biologics Evaluation and

Research (CBER) at the Food and Drug Administration (FDA)

Facilitating the Development and Availability of Gene Therapy for Small

**Populations** 

11:15 am - 11:45 am

**Allyson Berent, DVM, DACVIM,** Chief Science Officer, Foundation for Angelman Syndrome Therapeutics (FAST); Co-Director, Angelman Syndrome Biomarker and Outcome Measure Consortium; Chief Development Officer, Mahzi Therapeutics

A Journey Through Drug Development: How parents and patients are taking the lead: The Angelman Story of making the impossible possible

## <u> 11:45 am – 12:00 pm: Break</u>

#### Session VII: Future Directions & Emerging Targets - Chair: Stewart Anderson, MD

**12:00 pm – 12:30 pm David Irwin, MD,** Assistant Professor, Neurology; Co-Director, Penn

Frontotemporal Degeneration Center, University of Pennsylvania

Hope Renewed: Gene Therapy Research for FTD Caregiver speaker – recorded talk with live Q&A

**12:30 pm – 01:00 pm Erik Roberson, MD, PhD,** Professor, Rebecca Gale Endowed Professor,

Vice Chair for Basic & Translational Research, Department of Neurology; Director, Alzheimer's Disease Center; Director, Center for Neurodegeneration and Experimental Therapeutics, University of Alabama at Birmingham Optimizing Progranulin Gene Therapy for Frontotemporal Dementia Using

Preclinical Models

**01:00 pm - 01:30 pm Michael Kaplitt, MD, PhD,** Professor of Neurological Surgery;

Residency Director and Vice Chairman for Research, Weill Cornell Medical

College

Opportunities and Challenges for Gene Therapies in Neurodegenerative Diseases

Concluding Remarks Raquel Gur, MD, PhD & Frances Jensen, MD; Co-Directors, PTNC

take away lunch available

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