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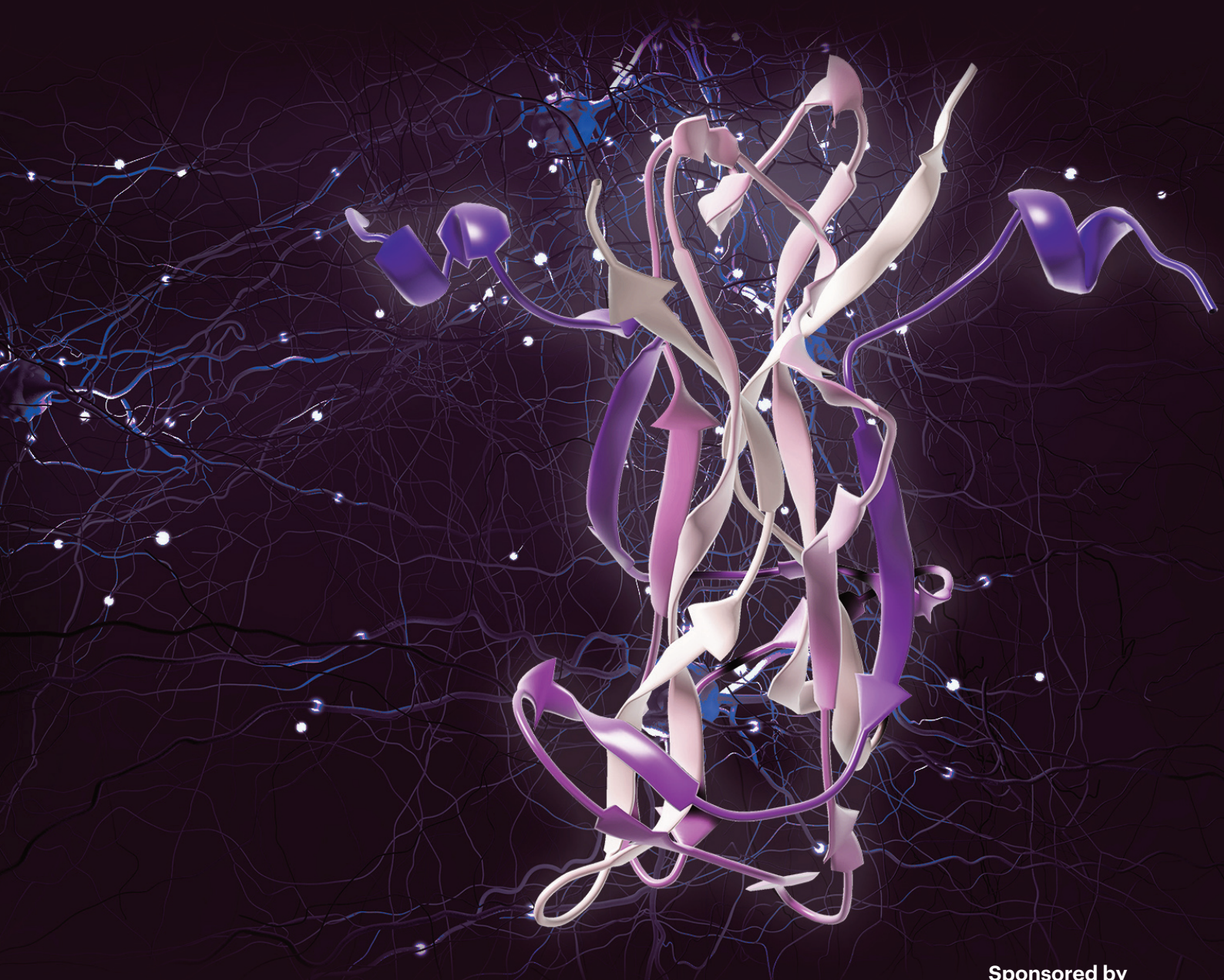
Nature Forum

# From the Eye to the Brain

**Translational research on neurotrophins  
from corneal disease to the central nervous system**

**Rome, Italy June 11-12th 2024**

**Galleria del Cardinale Colonna Via Della Pilotta, 17/A**



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# Bridging Neuroscience: The Journey of Neurotrophins

We are delighted to present "From the Eye to the Brain", an international conference that aims to involve the relevant scientific communities in a discussion on the state of the art and future directions of research on neurotrophins. Research on this family of proteins has a long history, starting in the 1950s with Rita Levi Montalcini and Stanley Cohen's discovery of the Nerve Growth Factor (NGF), for which the two neuroscientists was awarded the Nobel Prize for Medicine in 1986.

The past decade saw a key breakthrough with the first successful therapeutic application of NGF, in the field of rare corneal diseases. Scientists worldwide are now working to expand the potential of neurotrophins not only in other areas of ophthalmology, but in the Central Nervous System as well. From the eye to the brain, as our title suggests.

Over two days, world-renowned experts from research institutions worldwide will present exciting new research on the therapeutic potential of Nerve Growth Factor (NGF), Brain-Derived Neurotrophic Factor (BDNF), and other neurotrophins for either ocular or Central Nervous System disorders. The talks will span from corneal, retinal and optic nerve degeneration to dysregulated cognitive and motor functions, impairment of synaptic plasticity and aberrant social behavior.

We are especially happy to host this conference in Rome, where Rita Levi Montalcini - who passed away in 2012 - worked for several decades, giving essential contributions to modern neuroscience and leaving a lasting scientific legacy.

**Nicola Nosengo**

Chief Editor, Nature Italy

## Speakers



**Thomas C Südhof**  
Professor Investigator,  
Howard Hughes Medical  
Institute  
Stanford University



**Pedram Hamrah**  
Professor of Ophthalmology,  
neuroscience, immunology  
and bioengineering  
Tufts University of Medicine



**Marco Coassin**  
Professor of Ophthalmology  
University Campus Bio-  
medico of Rome



**Jeffrey Goldberg**  
Professor and Chair of  
Ophthalmology  
Byers Eye Institute at  
Stanford University



**Elliott Mufson**  
Greening Chair in  
Neuroscience  
Barrow Neurological  
Institute



**Flavio Mantelli**  
Chief Medical Officer &  
Head of Neurotrophins R&D  
Dompé farmaceutici



**Barbara Hempstead**  
Dean of Weill Cornell  
Graduate School of Medical  
Sciences  
Cornell University



**Baoji Xu**  
Professor  
UF Scripps, University of  
Florida



**Elizabeth Coulson**  
Head of School, School of  
Biomedical Sciences Faculty  
of Medicine  
The University of Queensland



**Zhigang He**  
Professor of Neurology and  
Ophthalmology  
Harvard Medical School



**Michael Sendtner**  
Director  
Institute of Clinical  
Neurobiology, University of  
Wuerzburg



**Lisa Monteggia**  
Professor of Pharmacology  
Vanderbilt Brain Institute



**José-Alain Sahel**  
Chair, Department of  
Ophthalmology  
University of Pittsburgh



**Vittorio Cristini**  
Program Chair  
Houston Methodist



**Steve Galson**  
Senior Advisor  
Boston Consulting Group



**Marcello Allegretti**  
Chief Scientific Officer  
Dompé farmaceutici

## Agenda

### Day 1 - Tuesday, 11 June

12.30- 13:45 - Light Lunch and registration

#### Opening

#### 14:00 - Welcome Address

**Anna Maria Bernini - Minister for University and Research (TBC)**

#### 14:30 - Keynote: Thomas C. Südhof, M. D. - Nobel Prize in Physiology or Medicine 2013

How to build and renew synapses: from molecules to memory mechanisms

#### Session 1 - Neurotrophins in ophthalmology

#### 15.30 - Pedram Hamrah, Tufts University

Neurotrophins for present and upcoming clinical research of corneal neurosensorial abnormalities

#### 16:00 - José Alain Sahel, University of Pittsburgh

Neuroprotection of Cone Photoreceptors as a Gene-Independent therapeutic strategy in Inherited retinal diseases

16:30 - Coffee break

#### 17:00 - Marco Coassin, University Campus Bio-Medico of Rome

Role of Neurotrophins in Retinal Diseases

#### 17:30 - Jeffrey Louis Goldberg, Stanford University

NGF for optic neuropathies

#### 18:00 - Vittorio Cristini, Weill Cornell Medical College

Integrating in-Vivo Experiments and Mathematical Modeling to Quantify Barriers in Retinal Drug Delivery of Macromolecules

### Day 2 - Wednesday, 12 June

#### Session 2 - Neurotrophins in brain research

#### 09:00 - Keynote: Elliott Mufson PhD, Barrow Neurological Institute

Neurotrophins in Neurological Disease

#### 09:45 - Barbara Hempstead, Cornell University

Impact of Neurotrophins on the Development of Social Behavior Circuits

#### 10:15 - Michael Sendtner, University of Wurzburg

Dopaminergic modulation of striatal BDNF/TrkB signalling: Implications for Parkinson's Disease

#### 10:45 - Lisa Monteggia - Vanderbilt University

Role of BDNF in Antidepressant Action

11:15 - Coffee break

#### 11:45 - Baoji Xu, Professor, UF Scripps, University of Florida

BDNF-TrkB signaling and the regulation of appetite and body weight

#### 12:15 - Elizabeth Coulson, Queensland Brain Institute

Targeting the p75 neurotrophin receptor to stop neurodegeneration in dementia

#### 12:45 - Zhigang He Ph.D., B.M. Harvard Medical School

Neurotrophins-based strategies for promoting neuronal survival and axon regeneration

13:15 - 14:30 - Light Lunch

#### 14:30 - Roundtable Discussion

**Steve Galson**, Senior Advisor, Boston Consulting Group

**Marcello Allegretti**, Chief Scientific Officer, Dompé farmaceutici

**Elliott Mufson**, Greening Chair in Neuroscience, Barrow Neurological Institute

**Pedram Hamrah**, Professor of Ophthalmology, neuroscience, immunology and bioengineering - Tufts University of Medicine

**Lisa Monteggia**, Professor of Pharmacology, Vanderbilt Brain Institute

**Flavio Mantelli**, Chief Medical Officer & Head of Neurotrophins R&D - Dompé farmaceutici

15:30 - Closing

**Organizing Committee**

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