



Mini-Conference at the **FENS Forum 2022**, Paris (France)

Organized by the European Society for Neurochemistry (ESN)

Saturday 9 July 2022, from 9:00 am to 3:00 pm CEST

“Molecular basis for synaptic function highlighting disease mechanisms”

Conference organizers:

Chair: Illana Gozes, ESN Secretary

Organizing Committee: Johannes Hirrlinger, ESN President, Carlos Duarte, ESN Treasurer, Natalia Nalivaeva, ESN Past President

6 confirmed speakers:

- 1] P. Monteiro (Portugal), Title: “SHANK proteins: roles at the synapse and in autism spectrum disorder”
- 2] I. Gozes (Israel), Title: “Essential for the synapse: ADNP a major regulator of development and aging”
- 3] J. Courchet (France), Title: “Fine-tuning of cortical circuits development through a local regulation of mitochondrial metabolism”
- 4] A. Poletti (Italy), Title: “Protein misfolding in motor neuron diseases”
- 5] S. Grassi (Italy), Title: “Lipid rafts in neurodegeneration and neuroprotection”
- 6] N.N. Nalivaeva (UK, Russia) Title: “Prenatal stress and neuronal gene regulation”

Abstract:

There are currently hardly any disease modifying treatments for neurodevelopmental or neurodegenerative diseases presenting malfunctioning synaptic connections. Our Mini-Conference will highlight novel aspects of genes and behavior toward better therapeutics.

Last year, the Autism Sequencing Consortium published the largest autism spectrum disorder (ASD) exome sequencing to date, revealing 102 candidate genes and suggesting that ASD must arise by phenotypic convergence among diverse origins. In other words, common molecular pathways may explain the apparently diverse genomic landscape behind ASD. In line with this hypothesis, our Mini-Conference addresses recent work to bridge the nature of this convergence and brings together a group of scientists who are studying the molecular, cellular and synaptic disruptions caused by mutations in genes associated with ASD. Additional disease mechanisms inflicting synapse function, such as protein mis-folding, mitochondrial activity, lipid rafts and gene regulation will be addressed with converging and disparate mechanisms.