BIOGRAPHICAL SKETCH / Curriculum Vitae

NAME: Hornstein, Eran

eRA COMMONS USER NAME: eran.hornstein

POSITION TITLE: Full Professor, Principal Investigator, Weizmann Institute of Science, Rehovot,Israel.

e-mail: eran.hornstein@weizmann.ac.il | Website: http://www.weizmann.ac.il/molgen/hornstein/

EDUCATION/TRAINING

INSTITUTION AND LOCATION	DEGREE	Completion Date	FIELD OF STUDY
Hebrew University Jerusalem	B.Sc	1997	
Hadassah Medical Center	Medical Internship	2001-2002	
Hebrew University	Post-doc	2002-2003	Human stem cells
Hebrew University- Hadassah Med. School	M.D.	2003	
Hebrew University, w/ Oded Meyuhas.	Ph.D.	2003	Translational control
Harvard Medical School, w/ Cliff Tabin	Post-doc	2003-2006	microRNA

A. Personal Statement

Hornstein lab is undertaking 'systems biology' approaches towards uncovering the impact of regulatory genetic networks in ALS. We utilize computational data science, mouse genetics and iPS cell-derived human neurons and microglia as well as human genetics (via Project MinE and NYGC ALS sequencing consortiums). We seek to provide new means to discover genetics drivers and modifiers of ALS and to understand their functional impact. We also develop new biomarkers. In current projects, we develop pooled, high throughput, screening methods for ALS genes and the next generation of machine-learning based cellular phenotyping platforms.

Pubmed Published Work https://www.ncbi.nlm.nih.gov/pubmed/?term=hornstein+eran+%5Bauthor%5D

B. Positions, Scientific Appointments and Honors

2022 -	Head, Weizmann Institute Biomedical Flagship Initiative.
2022 -	Head, Andi and Larry Wolfe Center for Neuromodulation, Weizmann Institute
2022 -	Head, Steering committee, Neuroscience Flagship Initiative, Weizmann Institute
2022	Full Professor of Molecular Neuroscience and Molecular Genetics
2021 -	Founding Chair, Department of Molecular Neuroscience, Weizmann Institute
2020	Recipient of Radala Foundation Award for ALS Research
2020 -	Steering committee, Neuroscience Flagship Initiative, Weizmann Institute
2018-20	Head, Study section on Molecular Medicine, Israel Science Foundation
2018	Incumbent, Mondry Family Professorial Chair, Weizmann Institute
2016 -21	Head, Nella and Leon Benoziyo Center for Neurological Diseases, Weizmann Institute
2016 -	Creator and member, Institute Review Board (IRB), Weizmann Institute
2015-	Tenured Associate Professor, Weizmann Institute

C. Contributions to Science

Talks in international conferences (2018-present)

2023	EMBO Workshop Noncoding RNAs development & differentiation	Rehovot, IL
2022	International Symposium on MND/ALS	On line
2021	Israel ALS meeting (Organizer)	Rehovot, IL
2021	EMBO Workshop Neuron Size and Growth Regulation	Rehovot, IL
2022	CReATe consortium for ALS biomarker development	On line
2022	22st Annual Symposium of Robert Packard Center for ALS research	Baltimore
2021	21st Annual Symposium of Robert Packard Center for ALS research	On line
2021	ENCALS - The European Network for the Cure of ALS	On line
2021	NY Genome Center ALS consortium meeting	On line
2021	CReATe consortium for ALS biomarker development	On line
2020	Project MinE ALS sequencing Consortium	On line
2020	FENS, the Federation of European Neuroscience Societies	On line
2020	ILANIT/FISEB federation of Israeli societies of exp. Biology	Eilat, IL
2020	28th Tel Aviv University Alzheimer Disease meeting	Tel Aviv, IL
2020	20th Annual Symposium of Robert Packard Center for ALS research	Baltimore, MD
2019	Gordon Research Conference ALS & Motor Neuron Diseases (poster)	West Dover, VT
2019	Project MinE ALS sequencing Consortium	Amsterdam, NL
2019	Israel Society for Neuroscience (ISFN)	Eilat, IL
2019	TARGET ALS symposium	Cambridge, MA
2019	ENCALS meeting 2019 (2 student talks)	Tours, FR
2019	ENCALS - European Network for the Cure of ALS - Session chair	Tours, FR
2019	19th Annual Symposium of Robert Packard Center for ALS research	Baltimore, MD
2019	Answer ALS Symposium (listener)	Baltimore, MD
2019	XVI International Symposium on Cholinergic Mechanisms	Rehovot, IL
2018	Project MinE ALS sequencing Consortium	Amsterdam, NL
2018	ENCALS - The European Network for the Cure of ALS	Oxford, UK
2018	Thierry Latran Foundation	Oxford, UK
2018	International Symposium on MND/ALS	Glasgow SCT

Five most relevant publications

1. Non-Coding Genetic Analysis Implicates Interleukin 18 Receptor Accessory Protein 3'UTR in Amyotrophic Lateral Sclerosis. Eitan et al.,...and Hornstein E. Nature Neuroscience Nat Neuroscience 2022 Apr;25(4):433-445. 10.1038/s41593-022-01040-6.
2. Circulating miR-181 is a prognostic biomarker for amyotrophic lateral sclerosis. Magen et al.,…and Hornstein E. Nature Neuroscience 2021 (11):1534-1541 10.1038/s41593-021-00936-z.
3. Spatiotemporal Proteomic Analysis of Stress Granule Disassembly Using APEX Reveals Regulation by SUMOylation and Links to ALS Pathogenesis. Marmor-Kollet et al.….and Hornstein E. Mol Cell. 2020 80(5):876-891.e6. 10.1016/j.molcel.2020.10.032.
4. Human genetics and neuropathology suggest a link between miR-218 and amyotrophic lateral sclerosis pathophysiology. Reichenstein et al.,…and Hornstein E. Sci Transl Med. 2019 Dec 18;11(523):eaav5264. 10.1126/scitranslmed.aav5264
5. Dysregulated miRNA biogenesis downstream of cellular stress and ALS-causing mutations: a new mechanism for ALS. Emde A, et al.,…and Hornstein E. EMBO J. 2015 34(21):2633-51 10.15252/embj.201490493.

Five other significant publications

1. TDP-43 loss and ALS-risk SNPs drive mis-splicing and depletion of UNC13A. Brown et al., Nature. 2022 Mar;603(7899):131-137.
2. Genome-wide identification of the genetic basis of amyotrophic lateral sclerosis. Zhang et al., Neuron. 2022 S0896-6273(21)01036-9.
3. Muscle microRNAs in the cerebrospinal fluid predict clinical response to nusinersen therapy in type II and type III spinal muscular atrophy patients.
4. Magen et al., Eur J Neurol. 2022 Aug;29(8):2420-2430.
5. Rare Variant Burden Analysis within Enhancers Identifies CAV1 as an ALS Risk Gene. Cooper-Knock et al., Cell Rep. 2020 33(9):108456.
6. Genome-wide Analyses Identify KIF5A as a Novel ALS Gene. Nicolas et al, Neuron. 2018 97(6):1268-1283.e6.