THE ALS RESEARCH FORUM
Discovering a Common Goal, Discovering a Cure
PRIZE4LIFE ALS ASSOCIATION

ALS Research Forum e-Newsletter Vol. 202 **August 8, 2018**

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Research News

Identifying Environmental Risk Factors In ALS: Take Two?

ALS is thought to be much more than a genetic disease. But how to identify which environmental exposures and/or life choices also contribute to the onset of ALS has proved challenging. Now, a research team led by University of Torino's **Adriano Chio** in Italy, in collaboration with Kings College London's **Ammar Al-Chalabi** in England, propose a new approach: study people with inherited forms of the disease. The report appeared on July 25 in *Neurology*.

MicroRNA May Be To Blame For Loss of Key Support Network in Motor Neurons In ALS

Astrocytes may destroy motor neurons in ALS (see August 2011, October 2011, January 2017, February 2017 news). But according to some studies, in at least some forms of ALS, astrocytes might simply fail to support them (see August 2017 news). Now, a research team led by **Timothy Miller** at the Washington University in St Louis, Missouri report that astrocytes may lose the ability to soak up excess glutamate in motor neurons in ALS by a microRNA-based mechanism. The study appeared on July 10 in *Brain*.

No Mutation Required? Cell Stress Goads Aggregation of Wild-Type SOD1

Mutations in superoxide dismutase 1 (SOD1) are a known cause of familial ALS, but does the protein also misbehave in sporadic forms of the disease? A July 23 study led by University of Chile's **Claudio Hetz** in the *Proceedings of the National Academy of Sciences* supports this idea. Experts weigh in.

To learn more about the potential role of SOD1 in sporadic ALS, check out *A New Study Fires Up the Debate About Misfolded SOD1 and its Potential Role in sALS*.

Could Dipeptide Repeat Proteins Explain Selective Vulnerability In C9orf72 ALS?

Motor neurons degenerate in ALS. But why these cells are selectively vulnerable to the disease remains unclear. Now, a research team Shanghai Institutes for Biological Sciences' **Jin Xu** in China report that arginine-rich dipeptide repeat proteins specifically degenerate glutamatergic neurons including motor neurons - at least in the fruit fly. The findings add to growing evidence that repeat expansions in the C9orf72 gene make motor neurons more susceptible to glutamate-mediated excitotoxicity (see February 2018 news; Selvaraj et al., 2018). The study is published on July 23 in the *Journal of Neuroscience*.

Osmotic Stress Ushers FUS Out of Nucleus and Into Stress Granules

Transportins first emerged as a potential target in ALS due to their ability to break up aggregates of key RNA-binding proteins including FUS and TDP-43 (see May 2017, April 2018 news). But according to a new study **Magdalini Polymenidou** at the University of Zurich in Switzerland, the mislocalization of these nuclear import receptors may also fuel the build-up of at least some of these proteins in the cytoplasm. Efforts to target transportins in ALS are ongoing. The findings appeared on July 24 in *Cell Reports*.

Check out our website to read more of the latest research advances in ALS.

Funding Opportunities:

August 2018

Clinical Trial Readiness for Rare Neurological and Neuromuscular Diseases. NINDS. Funding focus: clinical outcome measures and biomarkers. Application due by August 17, 2018.

Postdoctoral Fellowships. Clinical Research Fellowships. AFM-Téléthon. Researchers across the globe are invited to apply. Applications due: August 28, 2018.

Betty Laidlaw MND Research Prize. Research Grants. Postdoctoral Research Fellowships. MND Australia. Application due by August 31, 2018.

September 2018

MDA Venture Philanthropy Program. MDA. LOI due by September 1, 2018.

Tools to Target, Identify and Characterize Non-Neuronal Cells in the Brain. NIH Brain Initiative. LOI due by September 4, 2018.

Basic Science Pilot Grant. Clinical Research Pilot Grant. AFTD. Application due by September 7, 2018.

Research Grants. Cure SMA. Funding priorities include SMN regulatory mechanisms. Proposal due by September 7, 2018.

Biomarkers Across Neurodegenerative Diseases. Alzheimer's Association, ARUK, Michael J. Fox Foundation, Weston Brain Institute. LOI due by September 10, 2018.

Rare Diseases Clinical Research Consortia. NIH. Projects funded: biomarkers, outcome assessment measures and studies that inform clinical trial design. LOI due by September 9, 2018.

Sloan Research Fellowships. Alfred P. Sloan Foundation. Nominate an early-career scientist today! Letters of support due by September 17, 2018.

NEW! Innovative Technologies to Deliver Genome Editing Machinery to Disease-Relevant Cells and Tissues. NIH. LOI due by September 18, 2018.

NEW! Genomics of Rare Diseases. French Foundation for Rare Diseases. Funding focus: Next-Gen Sequencing Initiatives. Applications due by September 25, 2018.

Pilot Projects Investigating Understudied G Protein-Coupled Receptors, Ion Channels, and Protein Kinases. Illuminating the Druggable Genome. NIH. LOI due by September 26, 2018.

October 2018

Clinical Research Training Scholarship in ALS. ALS Association and the American Brain Foundation. Application due by October 1, 2018.

Richard Olney Clinical Scientist Development Award. ALS Association and the American Brain Foundation. Application due by October 1, 2018.

NEW! Excellent Paper In Neuroscience Award. Network of European Funding for Neuroscience Research. Early Career Scientists. Application due by October 1, 2018.

Sartorius & Science Prize for Regenerative Medicine & Cell Therapy. Science Magazine and the Sartorius Group. Publish in *Science*! Application due by October 1, 2018.

NEW! New Investigator Research Grant. Neuroscience and Mental Health. MRC. UK. Application due by October 3, 2018.

Research Grants. Frick Foundation for ALS Research. Application due by October 8, 2018.

Check out our **updated list** of grants and awards.

Job Opportunities:

Associate Professor, Neuroscience. University of Oxford. Oxford, England.
Assistant, Associate or Full Professor, Neurobiology. University of Helsinki. Helsinki, Finland.
Director of Therapeutic Development, University of Pennsylvania. Philadelphia, PA.
Postdoctoral Fellow, Chandran Lab. University of Florida. Gainesville, FL.
Postdoctoral Fellow, Kiskisnis Lab. Northwestern University. Chicago, IL.
Postdoctoral Fellow, Mueller Lab. University of Massachusetts Medical Center. Worcester, MA.
Postdoctoral Fellow, Verfaille Lab. KU Leuven. Leuven, Belgium.
Postdoctoral Fellow. Neuroscience. Masaryk University. Brno, Czech Republic.
Research Associate, Wang Lab. University of Texas-Dallas. Richardson, TX.
Lab Manager, Miles Lab. University of St. Andrews. St. Andrews, Scotland.

Senior Scientist, Neuroscience and Imaging. Celgene. Cambridge, MA.

Hiring someone onto your team? Contact us to add your listing to our updated job board: ALSjobs@prize4life.org.

Full List of Job Opportunities >>

Upcoming Meetings:

There is still time to submit abstracts for poster presentations at the SfN18 satellite meeting RNA Metabolism and Neurological Disease in San Diego! Deadline: August 31.

August 2018

August 5-10, 2018. Castelldefels, Spain. GRC: The Role of Innate Immunity, Glia, Neurons, and the Blood-Brain Barrier in the Pathogenesis.

September 2018

September 16-19, 2018. Heidelberg, Germany. EMBL. The Human Microbiome.

October 2018

October 2-4, 2018. Clearwater Beach, FL. NEALS Annual Meeting.

October 23-25, 2018. Fort Worth, TX. ALS Association Clinical Conference.

Organizing an ALS meeting? Contact us to add your conference to our updated calendar: ALSmeetings@prize4life.org.

Full List of Upcoming Meetings>>

Download the Working with ALS Mice Manual Here

STAY CONNECTED: