



ALS Research Forum e-Newsletter Vol. 194

April 11, 2018

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Research News

[Scientists Pore Over New Strategies To Tackle ALS](#)

A nuclear traffic tie-up is emerging as a key hallmark of neurodegenerative diseases including ALS. In this feature, experts weigh in on the role of nucleocytoplasmic transport in ALS and the potential of emerging nuclear export inhibitors to treat the disease going forward.

To learn more about how scientists aim to target nucleocytoplasmic transport in ALS, check out [Ataxin-2 ASOs Aim to De-stress ALS](#) (see [Zhang et al., 2018](#)).

[A New Test For C9orf72 ALS?](#)

A simple blood test may help diagnose and develop therapies for the most common genetic form of ALS. The strategy, proposed by a research team led by the University of Florida's **Maurice Swanson** in Gainesville, screens for the presence of a key intron in transcripts of the C9orf72 gene. The approach is based on RNAseq analysis, which suggests that GC-rich repeat expansions interfere with mRNA splicing, leading to the retention of the first intron in the C9orf72 ALS gene. The strategy is potentially a key alternative to existing PCR-based approaches for detecting C9orf72 repeat expansions in larger populations such as in genome-wide association studies (GWAS) and in clinical trials. The study is published on April 2 in them *Proceedings of the National Academy of Sciences*.

To learn more about emerging approaches to diagnose ALS, check out [Clinicians Work Up a Biomarker-Based Approach to Confirm ALS Diagnosis](#).

[Physicians Make Progress Forecasting ALS Prognosis](#)

A new tool may help physicians predict the outcome of people with ALS. The personalized approach, developed by a research team led by UMC Utrecht's **Leonard van den Berg** in Amsterdam, uses 8 factors to estimate the survival time including age and site of onset, breathing ability (FVC), the presence (or absence) of a C9orf72 repeat expansion and progression rate. The computational approach is one of a growing number of strategies that aims to help forecast the prognosis of people with ALS by predicting the rate of progression and/or outcome of the disease (see [April 2017](#), [November 2017](#) news). The study appeared on March 26 in *Lancet Neurology*.

[Structural Biology Sheds Light on Regulation of Liquid-Liquid Phase Transition](#)

FUS and TDP-43 clump up in motor neurons in most cases of ALS, potentially contributing to toxicity. But how the liquid-liquid phase transition of these RNA-binding proteins is triggered remains unclear. Now, new molecular snapshots of FUS and TDP-43, captured by research teams led by Chinese Academy of Science's **Cong Liu** in Shanghai and Brown University's **Nicolas Fawzi** in Providence, Rhode Island, may provide insight into how these clumps form. The findings build on previous studies, led by Fawzi, which found that DNA-PK mediated phosphorylation blocked the liquid-liquid phase transition of FUS in vitro (see [August 2017](#) news). The studies appeared on March 1 in *EMBO Journal* and April 2 in *Nature Structural and Molecular Biology*.

To learn more about how scientists aim to target proteostasis in ALS, check out [Targeting FUS: DNA damage control in ALS](#).

[Derived Human Microglia Manage Without Functional TREM2](#)

Microglia can be generated quickly and reproducibly from stem cells from people according to a new protocol reported on March 26 in *Stem Cell Reports*. But can this approach help researchers understand how these immune cells contribute to neurodegenerative diseases including ALS? Experts weigh in.

Check out [our website](#) to read more of the latest research advances in ALS.

Funding Opportunities:

April 2018

[Research Grants](#) (Basic Neuroscience). Whitehall Foundation. The focus: neural mechanisms involved in complex behaviors including motor systems. LOIs due by **April 15, 2018**.

[Early Career Grants](#). Brain Canada & Azrieli Foundation. Application due by **April 17, 2018**.

[Ben Barres Early Career Acceleration Awards](#). Chan-Zuckerberg Initiative Neurodegeneration Challenge Network. Applications due by **April 17, 2018**.

[Collaborative Science Awards](#). Chan-Zuckerberg Initiative Neurodegeneration Challenge Network. Applications due by **April 17, 2018**.

[Clinical Validation of a Candidate Biomarker for Neurological Disease](#). NINDS. Application due by **April 17, 2018**.

[Rapid Response: Canada](#). FTD. Weston Brain Institute. LOIs due by **April 19, 2018**.

[Rapid Response: Ireland, Netherlands, UK 2018](#). Biomarkers, including FTD. Weston Brain Institute. LOIs due by **April 23, 2018**.

[Graduate Student Fellowship](#). AFM-Téléthon. Application due by **April 24, 2018**.

[Teva CNS Target Identification Crowdsourcing Challenge](#). TEVA and the ALS Association. Proposals due by April 29, 2018.

[Identify, Analyze and Evaluate Potential Risk Factors for ALS](#). CDC. Application due by April 30, 2018.

[Breakthrough Prize](#). [Nominate](#) a scientist by April 30, 2018!

May 2018

[Graduate Studentships](#). MND Association. Applications due by May 4, 2018.

[Non-Clinical Fellowships](#). MND Association. Applications due by May 4, 2018.

[Promotion of Translation-Oriented Collaborative Projects in the Field of Rare Diseases](#). German Federal Ministry of Education and Research (BMBF). Application due by May 8, 2018.

[Harrington Scholar-Innovator Program](#). Physician Scientists. Discovery or Development of Novel Drugs or Biologics. Application due by May 10, 2018.

NEW! [New Investigator Research Grant](#), Neurosciences and Mental Health (UK). MRC. Application due by May 30, 2018.

June 2018

NEW! [MDA Venture Philanthropy Program](#). LOI due by June 1, 2018.

[ALS Canada Project Grant Program](#). ALS Canada. June 8, 2018.

NEW! [Research Grants](#). Muscular Dystrophy Association. Letter of Intent due by June 15, 2018.

NEW! [Scientific Innovations Award](#). Brain Research Foundation. LOI due by June 22, 2018.

NEW! [Roger de Spoelberch Prize](#). Roger de Spoelberch Foundation. Focus: basic and clinical neurodegenerative disease research. Application due before June 30, 2018.

Check out our [updated list](#) of grants and awards.

Job Opportunities:

[Chair, Translational Neurosciences](#). University of Arizona College of Medicine. Phoenix, AZ.
[Group Leader, Neuroscience](#). Netherlands Institute for Neuroscience. Amsterdam, Netherlands.
[Neuropathologist, Physician Scientist](#). Northwestern University. Chicago, IL.
[Assistant Professor, Neurology](#). University of Southern California. Los Angeles, CA.
[Assistant Professor, Neurology](#). University of Southern California. Los Angeles, CA.
[Postdoctoral Fellow, Deleidi Lab](#). DZNE. Tübingen, Germany.
[Postdoctoral Fellow, Durham Lab](#). McGill University. Montreal, Canada.
[Postdoctoral Fellow, Dupuis Lab](#). Inserm U1118. Strasbourg, France.
[Postdoctoral Fellow, Sun Lab](#). Johns Hopkins University School of Medicine. Baltimore, MD.
[Postdoctoral Fellow, Van Damme Lab](#). VIB. Leuven, Belgium.
[Research Associate, McDermott Lab](#). University of Sheffield. Sheffield, England.

[Scientist I, Biomarkers](#). Biogen. Cambridge, MA.

[Senior Research Associate, Neuroscience](#). Voyager Therapeutics. 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:

April 2018

April 17-21, 2018. Cold Spring Harbor Laboratory. Cold Spring Harbor, NY. [Protein Homeostasis in Health and Disease](#).

April 21-27, 2018. Los Angeles, CA. [Annual Meeting of the American Academy of Neurology](#).

April 30-May 4, 2018. Jackson Laboratory. Bar Harbor, ME. Workshop: [Using Mouse Models to Study Neurodegenerative Disease](#).

May 2018

May 14-17, 2018. EMBL. Heidelberg, Germany. [Cellular Mechanisms Driven by Liquid Phase Separation](#).

June 2018

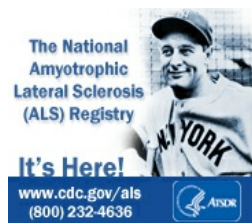
June 17-21, 2018. Keystone, Colorado. [Advances in Neurodegenerative Disease Research and Therapy](#).

June 20-22, 2018. Oxford, England. [ENCALS 2018](#).

June 22-23, 2018. Oxford, England. [TRICALS 2018](#).

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](#)

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