



ALS Research Forum e-Newsletter Vol. 206

October 10, 2018

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Research News

[FUS May Cause Energy Loss In Neurons in ALS](#)

Mitochondria malfunction in ALS. But why these powerhouses fail in motor neurons remains unclear, making the design of energy-boosting therapies for the disease especially challenging (see [July 2017](#) news). Now, a research team led by Northwestern University's **Jane Wu** in Chicago, Illinois reports that ALS-linked FUS interferes with the assembly of a key mitochondrial enzyme that produces energy - at least in inducible cellular and fruit fly models of the disease. The findings appeared on September 24 in the *Proceedings of the National Academy of Sciences*.

To learn more, check out [Powering Ahead Targeting Mitochondria in ALS](#).

[Dipeptide Repeat Proteins Trigger TDP-43 Pathology, Faulty Nuclear Import](#)

The disruption of neuronal nucleocytoplasmic transport is emerging as a key hallmark of neurodegenerative diseases including ALS (see [December 2015](#) news). But how to untangle these nuclear traffic tie-ups in motor neurons remains hotly debated (see [April 2018](#) news). Now, a research team led by King's College London's **Frank Hirth** in England propose a new strategy to target nucleocytoplasmic transport in ALS: karyopherin- α (KPNA). The findings build on previous studies which suggest that targeting nuclear import receptors may be of benefit in the disease (see [April 2018](#) news). The study is published on October 1 in *Brain*.

To learn more about the emerging role of nucleocytoplasmic transport dysfunction in ALS, check out [Scientists Pore Over New Strategies To Tackle ALS](#).

[RNA-Binding Protein Linked to Ataxin-2 Toxicity](#)

[A Stress Reliever for Neurons in ALS? Scientists Say Its A Possibility.](#)

The accumulation of RNA stress granules may be a key source of motor neuron toxicity in ALS. But how to reduce this buildup remains unclear. Now, a research team led by University of Utah's **Stefan Pulst** reports that Staufen1 co-localizes with ataxin-2 on stress granule-like structures - at least in the brain of people with spinocerebellar ataxia 2 (SCA2). What's more, reducing Staufen1 levels by 50%, nearly eliminates these structures in SCA2 model mice. Together, the findings open up the possibility that lowering Staufen1 may help reduce motor neuron toxicity in ALS by removing these stress granules from the cytoplasm. Elevated Staufen1

levels could be detected in skin cells that originate from at least one case of TDP-43 ALS. Efforts to develop an antisense oligonucleotide therapy for ALS and SCA2 are currently underway. The study appeared on September 7 in *Nature Communications*.

[ALS Gene Tied to Psychiatric and Neurodevelopmental Disease](#)

Close relatives of people with C9orf72 ALS are more likely to develop neuropsychiatric conditions including schizophrenia according to a new report led by University of Sydney's **Matthew Kiernan** and **John Hodges** in Australia. The findings add to growing evidence which suggests that ALS and schizophrenia may share a common origin: a network disruption in the brain ([October 2017](#) news; for review, see [Chuquilin et al., 2017](#)). Repeat expansions in the C9orf72 gene are the most common genetic cause of ALS. The study appeared on September 26 in *Neurology*.

To learn more, check out [ALS Kin Have More Neuropsychiatric Disease](#).

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

Funding Opportunities:

November 2018

[Biomedical Research Project Grants](#). MND Association. Summary application due by November 2, 2018.

[AP Giannini Foundation Postdoctoral Research Fellowship and Career Development Award](#). Application due by November 5, 2018. California only!

NEW! [Treat FTD](#). Alzheimer's Drug Discovery Foundation and the Association for Frontotemporal Degeneration. Letter of Intent due by November 9, 2018.

NEW! [Basic Science Postdoctoral Fellowships](#). Association for Frontotemporal Degeneration. Letter of Intent due by November 30, 2018.

NEW! [Clinical Research Postdoctoral Fellowships](#). Association for Frontotemporal Degeneration. Letter of Intent due by November 30, 2018.

[Global Grants for Gut Health](#). Nature Research, Yakult. Funding priorities include the gut-brain axis and the role of microbiota in human disease. Applications due by November 30, 2018.

December 2018

NEW! MDA [Venture Philanthropy Program](#). Muscular Dystrophy Association. Letter of Intent due by December 1, 2018.

NEW! [Development Grants](#). Early Career Scientists. Muscular Dystrophy Association. Letter of Intent due by December 1, 2018.

NEW! [Rapid Response: Canada 2019](#). Includes FTD. Weston Brain Institute. Letter of Intent due by December 3, 2018.

NEW! [Transformational Research Canada 2019](#). Includes FTD. Weston Brain Institute. Letter of Intent due by December 3, 2018.

NEW! [McKnight Technological Innovations in Neuroscience](#). Letter of Intent due by December 10, 2018.

NEW! [Edward Scolnick Prize in Neuroscience](#). McGovern Institute for Brain Research. MIT. Nominations due by December 15, 2018.

NEW! [Neuroscience Prize](#). Gruber Foundation. Nominations due by December 15, 2018.

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

Job Opportunities:

Looking to start your own lab? Check out [our job board](#). Multiple faculty positions posted in September 2018 are still accepting applications!

[Assistant Professor](#), Neuroscience. Georgia Tech. Atlanta, GA
[Assistant Professor](#), Neuroscience. University of California. Davis, CA.
[Assistant Professor](#), Aging and Age-Related Disease. University of Denver. Denver, CO.
[Assistant Professor](#), Gene Editing. University of Texas. San Antonio, TX
[Assistant Professor](#), Neuroinformatics. University of Texas. San Antonio, TX
[Assistant Professor](#), Neuroscience. Columbia University. New York, NY.
[Assistant or Associate Professor](#), Neurodegenerative Diseases. Case Western. Cleveland, OH.
[Faculty \(Open Rank\)](#), Neuroscience. Worcester Polytechnic Institute. Worcester, MA
[Faculty \(Open Rank\)](#), Regenerative Medicine(iPSC Disease Modeling). CMRB. Barcelona, Spain.
[Postdoctoral Fellow](#), Bertolotti Lab. MRC Laboratory of Molecular Biology. Cambridge, England.
[Postdoctoral Fellow](#), Strittmatter Lab. Yale University. New Haven, CT.
[Postdoctoral Fellow](#), Pekkumaz Lab. University of California. San Diego, CA.
[Postdoctoral Fellow](#), Wharton and Hart Labs. Brown University. Providence, RI.
[Postdoctoral Fellow](#), University of Sheffield. Sheffield, England.

[Senior Scientist](#), Genentech. San Francisco, CA,

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:

October 2018

October 23-25, 2018. Fort Worth, TX. [ALS Association Clinical Conference](#).

October 25. Philadelphia, PA. [The Molecular Biology of Aging and Neurodegeneration](#). Register free by **October 23, 2018**.

November 2018

November 1-2, 2018. San Diego, CA. [RNA Metabolism In Neurological Disease](#).

November 3-7, 2018. San Diego, CA. [Society for Neuroscience Annual Meeting](#).

November 28-December 1, 2018. Cold Spring Harbor, NY. [Neurodegenerative Diseases, Biology and Therapeutics](#).

December 2018

December 2-4, 2018. Los Angeles, CA. [Translation of Stem Cells To The Clinic, Challenges and Opportunities](#).

December 6, 2018. Glasgow, Scotland. [ALS/MND Allied Professionals Forum](#).

December 7-9, 2018. Glasgow, Scotland. [International Symposia on ALS/MND](#).

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

[Full List of Upcoming Meetings>>](#)

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Lateral Sclerosis
(ALS) Registry

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