



ALS Research Forum e-Newsletter Vol. 171

April 25, 2017

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This week, we are at the 2017 meeting of the American Academy of Neurology in Boston, Massachusetts. We will be reporting the latest advances in ALS, including potential therapies for the disease. Stay tuned!

## Research News

### [Scientists go for the gut in ALS](#)

Scientists are gearing up in Boston to investigate whether key microbial changes in the gut may contribute to ALS. The study, led by Massachusetts General Hospital's **Katharine Nicholson**, aims to determine whether changes in the composition of intestinal microbiome might be associated with the disease. 100 people with ALS and 100 healthy volunteers are expected to participate. The study builds in part, on previous work from Cal Tech's **Sarkis Mazmanian** in California, which found that these microbial changes may contribute to inflammation in a growing number of neurodegenerative diseases including Parkinson's disease and multiple sclerosis.

[Read more](#) to learn about the emerging role of gut flora in the regulation of neuroinflammation.

### [Scientists target engagement in future C9orf72 ALS clinical trials](#)

Biogen's **Steve Han** weighs in on polyGP and its potential to evaluate emerging C9orf72 therapies in the clinic, including repeat-RNA targeted oligonucleotides (ASOs). The ASO-based strategy, which is advancing toward the clinic, is being developed by Biogen in collaboration with Ionis Pharmaceuticals.

### [Scientists look FTD in the eye](#)

A routine eye test may help clinicians identify early signs of at least one form of FTD according to a new study published on April 12 in *Science Translational Medicine*. The study, led by **Li Gan** and **Ari Green** at the University of California in San Francisco (UCSF), found that people heterozygous for progranulin (GRN) mutations without cognitive symptoms exhibited twice the number of lipid-rich deposits, known as lipofuscin, in the retina than age and gender-matched controls. The study builds on previous results from the UCSF team which found, using optical coherence tomography (OCT), that heterozygous GRN carriers exhibited retinal thinning. Together, the results suggest that noninvasive retinal imaging may help clinicians diagnose at least one form of the disease.

## [Oligodendrocytes may help SOD1 take root in ALS](#)

Oligodendrocytes may facilitate the spread of at least one form of ALS according to a new study led by Yale University's **Arthur Horwich**. The study found that fluorescent-tagged misfolded SOD1 may be transmitted from motor neurons to mature oligodendrocytes in the grey matter of the spinal cord in G85R SOD1 CYP - G85R SOD1 YFP chimeric mice. No transfer could be detected in the brain in either the motor cortex (layer V) or the corpus callosum. The findings add to growing evidence that misfolded SOD1 may travel between neurons in the central nervous system through exosome-dependent and independent mechanisms. The study appeared on March 16 in the *Proceedings of the National Academy of Sciences*.

## [Scientists spear out a new strategy to discover drugs for ALS](#)

A new tool may enable scientists to identify potential therapies for ALS in high-throughput screens according to a new study published on April 17 in *Nature Nanotechnology*. The microfluidic device, which contains nanoscale suspended electrode arrays (nano-SPEARS), records the electrical activity of body wall muscles in *C. elegans*. The strategy is scalable, enabling the measurement of muscle activity of multiple worms multiple times simultaneously. What's more, changes in the electrical signature of the body wall muscles can be detected using this device in a *C. elegans* model of SOD1 ALS, suggesting that this phenotype could be used to screen for drugs for the disease. The approach, developed by the laboratory of Rice University's **Jacob Robinson** in Texas, may help scientists identify potential drugs that keep the muscle fibers and motor neurons connected.

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

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### Funding Opportunities:

Looking to fund your ALS project in Australia? MND Australia will post RFPs in May 2017.

#### April 2017

[PhD studentships](#). Motor Neurone Disease Association. Application due by **April 28, 2017**.

#### May 2017

[Bioengineering Research Partnerships](#). NINDS. Application due by May 18, 2017.

[TREAT ALS](#). Preclinical assessment of potential ALS therapeutics. The ALS Association. LOI due by May 23, 2017.

#### June 2017

[MDA Venture Philanthropy Program](#). Muscular Dystrophy Association. LOI due by June 1, 2017.

[ALS Canada Project Grant Program](#). Includes former ALS Discovery, Bridge and Clinical Management grant programs. Application due by June 2, 2017.

[Discovery Research Grants](#). Muscular Dystrophy Association. LOI due by June 15, 2017.

#### July 2017

**NEW!** [Research and Trampoline Grants](#). AFM-Téléthon. Applicants outside France are encouraged to collaborate with a lab located in France. Application due by July 4, 2017.

**NEW!** [Rapid Response 2017](#). Weston Brain Institute. High-risk high reward translational research.

FTD. Canada only. July 5, 2017.

**NEW!** [Accelerating Drug Discovery for FTD](#). Alzheimer's Drug Discovery Foundation and the Association of Frontotemporal Dementia. LOI due by July 31, 2017.

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

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### Job Opportunities:

[Assistant or Full Professor, Chemical Biology](#). SBP Medical Discovery Institute. La Jolla, CA.

[Postdoctoral Fellow, Tamgüney Lab](#). DZNE. Bonn, Germany.

[Postdoctoral Fellow, Sun Lab](#). Johns Hopkins University. Baltimore, MD.

[Postdoctoral Fellow, Cai Lab](#). Rutgers University. Piscataway, NJ.

[Graduate Studentship, De Vos Lab](#). University of Sheffield. Sheffield, England.

[Director of Clinical Pharmacology](#). Cytokinetics. San Francisco, CA.

[Associate Director/Senior Manager of Business Development and Alliance Management](#). Cytokinetics. San Francisco, CA.

[Clinical Research Fellow, Neuromuscular Diseases](#). Cytokinetics. San Francisco, CA.

**Hiring someone onto your team? Contact us to add your listing to [our updated job board](#): [ALSjobs@prize4life.org](mailto:ALSjobs@prize4life.org).**

[Full List of Job Opportunities >>](#)

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### Upcoming Meetings:

Registration is now open for [SfN 2017](#) in Washington, D.C. Abstracts due: May 4.

#### May 2017

May 2-3, 2017. Leuven, Belgium. [Phase Transitions in Biology and Disease](#).

May 11-13, 2017. Bonn, Germany. [5th Venusberg Meeting on Neuroinflammation](#).

May 18-20, 2017. Ljubljana, Slovenia. [ENCALS 2017](#).

May 22-24, 2017. Barcelona, Spain. [Annual World Congress on NeuroTalk](#). "New Technologies, New Ideas and New Future."

#### June 2017

June 14-17, 2017. EMBL Heidelberg, Germany. [EMBO-EMBL Symposium: Mechanisms of Neurodegeneration](#). Registration deadline: May 3, 2017.

June 19-23, 2017. Keystone, Colorado. [Keystone Symposium: Neuroinflammation: Concepts, Characteristics, Consequences](#).

**NEW!** June 24-27, 2017. Amsterdam, Netherlands. [3rd Congress of the European Academy of Neurology](#). Registration deadline: May 5, 2017.

June 26-27, 2017. Buckinghamshire, England. [Meeting the Challenges of Modelling Neurodegenerative Disease in Mice](#).

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

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

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