



ALS Research Forum e-Newsletter Vol. 197

May 23, 2018

Visit the [ALS Research Forum](#) to read the complete stories featured in this e-newsletter. Friends and colleagues can sign up for the newsletter [here](#). Follow us on [Facebook](#) and [Twitter](#) for the latest updates.

## Research News

### [No, TDP-43 and FUS Are Not Actively Exported From the Nucleus](#)

Reducing motor neuron toxicity in ALS may be more challenging than previously thought. TDP-43 and FUS build up in the cytoplasm by passive diffusion according to studies led by Ludwig-Maximilians University's **Dorothee Dormann** in Germany, and University of Texas Southwestern's **Philip Thomas**- at least in cell culture. The findings come at the heels of previous studies, led by University of Michigan's **Sami Barmada** which suggest that TDP-43 accumulates in the cytoplasm of neurons by multiple mechanisms (see [May 2018](#) news). Together, the studies stoke the debate about whether to target nuclear export in the disease (see [April 2018](#) news). The findings appeared on May 4 in *Scientific Reports*.

To learn more about the emerging role of a nuclear traffic tie-up in ALS, check out [Scientists Pore Over New Strategies to Tackle ALS](#).

### [TDP-43 Skips Out on Some Exons in ALS](#)

A new mouse model of ALS may provide insight into how changes in TDP-43 contribute to ALS. The knock-in mouse, developed by a research team led by University College London's **Pietro Fratta** in England and University Hospital of the Canary Islands' **Abraham Acevedo-Arozena**, exhibits key signs of ALS including muscle weakness and progressive motor neuron loss. The homozygous mutant mice, harboring a mutation in the C-terminal low-complexity domain of its own TDP-43, develop symptoms after one year of age. No TDP-43 pathology, however, could be detected. The model is one of a growing number of knock-in mice that are being created in hopes to more accurately recapitulate ALS to identify new targets for the disease (see [November 2017](#), [December 2017](#) news). The study is published on May 15 in the *EMBO Journal*.

To obtain these mice for further investigation in your laboratory, contact the [RIKEN BioResource Center](#) in Japan.

### [Modeling ALS: Muscle Cells on Demand](#)

Neuromuscular junctions (NMJs) crumble in ALS leading to muscle weakness and paralysis. A growing number of scientists are therefore hoping to identify drugs that stabilize them to help keep muscles moving. However, better protocols may be needed to generate the large number of cells required to create NMJs *in vitro* for drug discovery purposes. Now, a research team led by Erasmus University Medical Center's **Pim Pijnappel** in the Netherlands reports a transgene-free method to

produce skeletal muscle cells from induced pluripotent stem cells (iPSCs) that can be expanded up to  $5 \times 10^{11}$ -fold. The protocol is published on May 3 in *Stem Cell Reports*.

To find out about drugs being developed in ALS that aim to keep muscles and motor neurons connected, check out [Meeting At The ALS Junction](#).

### [Oligodendrocytes Seem to Imprint Specific Alter Ego on \$\alpha\$ -Synuclein](#)

The oligodendrocyte is emerging as a key player in ALS, that may in part, help facilitate the spread of the disease (see [April 2013](#), [April 2017](#) news). But how these cells contribute to ALS remains unclear. Now, a research team led by the University of Pennsylvania's **Virginia Lee** reports that specific factors in oligodendrocytes influence the structure and pathogenicity of key disease-linked protein deposits - at least  $\alpha$ -synuclein aggregates. The findings build on previous studies, which suggest that oligodendrocytes contribute to ALS by a SOD1-based mechanism (see [November 2016](#) news; [Ferraiuolo et al., 2016](#)). The study appeared on May 9 in *Nature*.

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

---

### Funding Opportunities:

The Weston Brain Institute is now accepting applications for [Big Ideas: Canada](#), which aims to support a large-scale, pivotal project that will significantly and sustainably advance translational research in including FTD. Award is up to \$5M to \$20M CAD.

#### May 2018

[ALS Canada-Brain Canada Trainee Program](#). Postdoctoral and graduate fellowships available. Application due by **May 25, 2018**.

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

#### June 2018

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

[ALS Canada Project Grant Program](#). ALS Canada. Application due by **June 8, 2018**.

**NEW!** [TREAT ALS Clinical Management Grant](#). Abstracts due by June 11, 2018.

[Graduate Student Fellowship](#). MND Australia/NHMRC. Application due by June 13, 2018.

[Research Grants](#). Muscular Dystrophy Association. LOI due by June 15, 2018.

[Eppendorf & Science Prize for Neurobiology](#). Application due by June 15, 2018.

[Innovation Grants to Nurture Initial Translational Efforts \(IGNITE\): Development and Validation of Model Systems and/or Pharmacodynamic Markers to Facilitate Neurotherapeutic Discovery](#). NINDS. Application due by June 19, 2018.

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

[ALSRP Therapeutic Development Award](#). Application due by June 22, 2018.

[ALSRP Therapeutic Idea Award](#). Application due by June 22, 2018.

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

## July 2018

**NEW! [Brain Health and Cognitive Impairment Initiative](#).** AHA and Paul G. Allen Frontiers Group. Application due by July 6, 2018.

[Nonclinical and Early-Phase Clinical Development for Biologics](#). NINDS. Funding focus: IND-enabling studies and phase 1 clinical trials. Application due by July 18, 2018.

[Harrington Rare Disease Scholar Award](#). Takeda Pharmaceutical Company. Application due by July 19, 2018.

**The following awards accept applications at any time on a rolling basis.**

[Early Phase Clinical Trials: Canada. Weston Brain Institute](#). Funding priorities include FTD.

[Human Clinical Trials Grant](#). Muscular Dystrophy Association.

[Wellcome Trust Innovator Award \(UK\)](#). Funding focus: development of diagnostics and repurposed medicines for neurological disorders including rare diseases.

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

---

## Job Opportunities:

[Group Leader, Neurobiology](#). UKRI MRC Laboratory of Molecular Biology. Cambridge, England.  
[Assistant Professor, Cell and Molecular Biology](#). University of Rhode Island. Kingston, RI.  
[Asst., Assoc., or Full Professor, Neuroepidemiology](#). Michigan State University. East Lansing, MI.  
[Bioinformatics Specialist](#). German Center for Neurodegenerative Diseases. Tübingen, Germany.  
[Bioinformatics Specialist](#). VIB. Leuven, Belgium.  
[Postdoctoral Fellow, Zhang Lab](#). University of Wisconsin. Madison, WI.  
[Graduate Studentship, Locker Lab](#). University of Surrey. Guildford, England.  
[Research Specialist](#). Emory University. Atlanta, GA.

[Principal Scientist](#). Astellas Pharma. Cambridge, MA.  
[Senior Scientist, Analytical Sciences](#). Voyager Therapeutics. Cambridge, MA.  
[Program Leader, Neurodegeneration](#). MSD. London, England.

[Director, Registry Operations](#). Muscular Dystrophy Association. Boston, MA.

**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 >>](#)

---

## Upcoming Meetings:

**Still time to submit your abstract to the SfN 2018 satellite meeting, [RNA Metabolism in Neurological Disease](#) in San Diego! The deadline is now June 1, 2018.**

### 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](#).

### July 2018

July 6-10, 2018. Vienna, Austria. [International Congress on Neuromuscular Diseases](#).

July 7-11, 2018. Berlin, Germany. [FENS Forum of Neuroscience](#).

July 19-23, 2018. Cold Spring Harbor, NY. [Glia In Health And Disease.](#)

July 20-21, 2018. Seoul, South Korea. [International Meeting of the Pan-Asian Consortium for Treatment and Research in ALS.](#)

**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>>](#)

---



[Download the Working with ALS Mice Manual Here](#)

STAY CONNECTED:

