



ALS Research Forum e-Newsletter Vol. 207

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Research News

[ALS on a Chip-A Model for Screening Therapeutics?](#)

A new technique may facilitate the discovery of therapies for ALS that help muscles and motor neurons stay connected. The microfluidic device, developed by a research team led by Massachusetts Institute of Technology's **Roger Kamm**, recreated neuromuscular junctions, including from one case of ALS. What's more, these synapses crumble just like in ALS, enabling the researchers to screen for drugs that strengthen these connections. The findings appeared on October 10 in *Science Advances*.

To learn more, check out [Scientists Call In The Chips To Model NMJs in ALS](#).

[Scientists Take A Stab At Modeling ALS Using A TDP-43 Bac](#)

A new mouse model may help scientists elucidate early stages of ALS, including sporadic disease. The model, developed by **Kevin Talbot** and colleagues at the University of Oxford in England, exhibits key signs of ALS including progressive motor deficits and loss of muscle strength. No microglia-mediated neuroinflammation or cytoplasmic TDP-43 aggregates could be detected. The model is one of a growing number of mice that exhibit key features of the human disease without overexpressing the disease gene (see [November 2017](#), [May 2018](#) news). The study is published on October 2 in *Neurobiology of Disease*.

[Drug Discovery ReFRAMEd and Reimagined?](#)

A new tool may help researchers identify potential treatment strategies for ALS. The high-throughput screening library, known as ReFRAME, includes nearly all small molecules that have been previously tested in the clinic. The results of human safety studies and PK/PD analysis for each compound are also available. The open-access resource, developed by **Peter Schultz**, **Arnab Chatterjee** and colleagues at the California Institute for Biomedical Research (Calibr), is the largest and most comprehensive collection of investigational and FDA-approved drugs developed for drug repurposing to date.

[Across Time and Space: Machine Learning Reveals Paths to Dementia](#)

A new approach may help scientists evaluate potential therapies for neurodegenerative diseases including C9orf72 ALS. The strategy, developed by **Daniel Alexander**, **Jonathan Rohrer**, **Jonathan Schott** and colleagues at University College London in England, uses MRI-based computational methods to

retrace the pattern of disease progression in the brain. The approach, known as SuStaln, may in future help stratify participants in clinical trials by identifying subtypes of disease. The strategy is one of a growing number of approaches that aims to use neuroimaging to identify potential responders of therapies being tested in the clinic (for example, see [Alshiko et al., 2016](#)). The study appeared on October 15 in *Nature Communications*.

[Islands of Mutated Neurons Dot the Brain. Are They Bad for Us?](#)

Between 100,000 and 1 million cells in the brain could harbor mutations in genes related to neurodegenerative disease according to a new analysis published on October 15 in *Nature Communications*. Topping the list: variants of DNMT3A, a key epigenetic regulator implicated in the loss of motor neurons in ALS (see [Chestnut et al., 2011](#)).

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

Funding Opportunities:

Applying for the 2019 US DoD CDRMP ALS Therapeutic Idea or Development Awards? Check out [the pre-announcement](#) to kick-start your applications.

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!

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

NEW! [Clinical Scientist Development Award](#). Doris Duke Charitable Foundation. Pre-Proposals due by November 28, 2018.

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

[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

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

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

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

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

NEW! ALS [Research Grants](#). Thierry Latran Foundation. Abstracts due by December 6, 2018.

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

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

[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 earlier this fall are still accepting applications!

[Assistant or Associate Professor](#), Neuroscience. RIKEN. Wako, Japan.

[Assistant Professor](#), Neurobiology of Disease. Miami University. Oxford, OH.

[Assistant Professor](#), Computational Biology. MGH. Boston, MA.

[Assistant Professor](#), Neurobiology. Augusta University. Augusta, GA.

[Assistant or Associate Professor](#), Translational Neuroscience. University of MA. Amherst, MA.

[Associate or Full Professor](#), Neurodegenerative Disease. University of California. San Diego, CA.

[Associate or Full Professor](#) of Pharmacology. Indiana University Indianapolis, IN.

[Junior Group Leader](#). German Center for Neurodegenerative Diseases (DZNE). Bonn, Germany.

[Faculty \(Open Rank\)](#), Neuropathology. University of California-Davis. Sacramento, CA.

[Faculty \(Open Rank\)](#), Neurodegenerative Disease. Indian Institute of Science. Bangalore, India.

[Faculty \(Open Rank\)](#), Medicine. University of Central Florida. Orlando, FL.

[Lecturer](#), Gene Therapy. ALS and FTD. Kings College London. London, England.

[Physiatrist](#). Baylor College of Medicine. Houston, TX.

[Senior Research Scientist](#). Yumanity Therapeutics. Cambridge, MA.

[Research Scientist II](#), Translational Genome Sciences. Biogen. Cambridge, MA.

[Research Scientist](#), Discovery. Proneurotech. San Francisco, CA.

[Research Scientist](#), Neurobiology. Voyager Therapeutics. Cambridge, MA

[Research Scientist](#). Tiaki 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:

October 2018

October 25. Philadelphia, PA. [The Molecular Biology of Aging and Neurodegeneration](#).

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.

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(ALS) Registry



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