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motor neurone disease association

Research

Weekly New Publications List

Week commencing 09/05/2022

MND research is a fast-paced area, with new research and results being undertaken and published every day. Here we aim to keep up to date with the latest publications. Please click on the titles of the publications to find out more information about each one.

Disclaimer: *Please note that information provided in this publications list has come from NCBI using the search parameters of 'als, amyotrophic lateral sclerosis' and publication date from 09/05/2022-15/05/2022. This may not be exhaustive list of all publications released in this week. Not all publications will be available to read for free as this is dependent on the researchers and funders to list it as open access. These publications are not written by the MND Association, but we may have funded some of the research, this will be stated in the publication.*

This symbol is used to highlight that there is further information about this publication through our other channels, such as our research blog. We will always link to these next to this symbol.

1. TDP-43 regulates cholesterol biosynthesis by inhibiting sterol regulatory element-binding protein 2.
   Egawa N, Izumi Y, Suzuki H, Tsuge I, Fujita K, Shimano H, Izumikawa K, Takahashi N, Tsukita K, Enami T, Nakamura M, Watanabe A, Naitoh M, Suzuki S, Seki T, Kobayashi K, Toda T, Kaji R, Takahashi R, Inoue H.
   Sci Rep. 2022 May 14;12(1):7988. doi: 10.1038/s41598-022-12133-4.
   PMID: 35568729
2. *C9ORF72*-derived poly-GA DPRs undergo endocytic uptake in iAstrocytes and spread to motor neurons.
   Marchi PM, Marrone L, Brasseur L, Coens A, Webster CP, Bousset L, Destro M, Smith EF, Walther CG, Alfred V, Marroccella R, Graves EJ, Robinson D, Shaw AC, Wan LM, Grierson AJ, Ebbens SJ, De Vos KJ, Hautbergue GM, Ferraiuolo L, Melki R, Azzouz M.
   Life Sci Alliance. 2022 May 13;5(9):e202101276. doi: 10.26508/lsa.202101276. Print 2022 Sep.
   PMID: 35568435
3. Stress granules in the spinal muscular atrophy and amyotrophic lateral sclerosis: The correlation and promising therapy.
   Hu L, Mao S, Lin L, Bai G, Liu B, Mao J.
   Neurobiol Dis. 2022 May 11:105749. doi: 10.1016/j.nbd.2022.105749. Online ahead of print.
   PMID: 35568100 Review.
4. A pilot study using proximity extension assay of cerebrospinal fluid and its extracellular vesicles identifies novel amyotrophic lateral sclerosis biomarker candidates.
   Sjoqvist S, Otake K.
   Biochem Biophys Res Commun. 2022 Apr 30;613:166-173. doi: 10.1016/j.bbrc.2022.04.127. Online ahead of print.
   PMID: 35567903
5. Cracking the cryptic code in amyotrophic lateral sclerosis and frontotemporal dementia: Towards therapeutic targets and biomarkers.
   Akiyama T, Koike Y, Petrucelli L, Gitler AD.
   Clin Transl Med. 2022 May;12(5):e818. doi: 10.1002/ctm2.818.
   PMID: 35567447
6. RhoA Signaling in Neurodegenerative Diseases.
   Schmidt SI, Blaabjerg M, Freude K, Meyer M.
   Cells. 2022 May 1;11(9):1520. doi: 10.3390/cells11091520.
   PMID: 35563826 Review.
7. Advanced Gene-Targeting Therapies for Motor Neuron Diseases and Muscular Dystrophies.
   Chamakioti M, Karantzelis N, Taraviras S.

Int J Mol Sci. 2022 Apr 27;23(9):4824. doi: 10.3390/ijms23094824.
PMID: 35563214 Review.

8. MicroRNA Alteration, Application as Biomarkers, and Therapeutic Approaches in Neurodegenerative Diseases.
Nguyen TPN, Kumar M, Fedele E, Bonanno G, Bonifacino T.
Int J Mol Sci. 2022 Apr 25;23(9):4718. doi: 10.3390/ijms23094718.
PMID: 35563107 Review.
9. Molecular Biomarkers and Their Implications for the Early Diagnosis of Selected Neurodegenerative Diseases.
Doroszkiewicz J, Groblewska M, Mroczko B.
Int J Mol Sci. 2022 Apr 21;23(9):4610. doi: 10.3390/ijms23094610.
PMID: 35563001 Review.
10. The Multifaceted Role of GPCRs in Amyotrophic Lateral Sclerosis: A New Therapeutic Perspective?
Bassani D, Pavan M, Federico S, Spalluto G, Sturlese M, Moro S.
Int J Mol Sci. 2022 Apr 19;23(9):4504. doi: 10.3390/ijms23094504.
PMID: 35562894 Review.
11. Medulla oblongata volume as a promising predictor of survival in amyotrophic lateral sclerosis.
Milella G, Introna A, Ghirelli A, Mezzapesa DM, Maria U, D'Errico E, Fraddosio A, Simone IL.
Neuroimage Clin. 2022 Apr 22;34:103015. doi: 10.1016/j.nicl.2022.103015. Online ahead of print.
PMID: 35561555
12. Assistive Technologies for Communication Empower Patients With ALS to Generate and Self-Report Health Data.
Londral A.
Front Neurol. 2022 Apr 26;13:867567. doi: 10.3389/fneur.2022.867567. eCollection 2022.
PMID: 35557618 **Free PMC article.** No abstract available.
13. AAV9-synapsin-caveolin-1 (AAV9-SynCav1) gene delivery preserves motor neuron and neuromuscular junction morphology, motor function and body weight, and extends survival in hSOD1^{G93A} mice.
Wang S, Ichinomiya T, Head B.
FASEB J. 2022 May;36 Suppl 1. doi: 10.1096/fasebj.2022.36.S1.R6305.
PMID: 35557138
14. The Impact of Profilin-1 Mutations on Protein Homeostasis in Amyotrophic Lateral Sclerosis.
Castle J, Ferrara J, Gau D, Gleixner A, Roy P, Kolarcik CL.
FASEB J. 2022 May;36 Suppl 1. doi: 10.1096/fasebj.2022.36.S1.R3947.
PMID: 35556829

15. Integrative therapies for amyotrophic lateral sclerosis disease using dynamic physiological systems.
Nnake I, Tulp OL, Einstein GP.
FASEB J. 2022 May;36 Suppl 1. doi: 10.1096/fasebj.2022.36.S1.R2497.
PMID: 35556768
16. Identifying Therapeutic Inhibitors of TDP43 Phase-Separation.
Rubien J, Lavorando E, Padilla G, Shorter J.
FASEB J. 2022 May;36 Suppl 1. doi: 10.1096/fasebj.2022.36.S1.R4947.
PMID: 35556546
17. Application of Ultrasonography in Neurogenic Dysphagia: A Systematic Review.
Potente P, Buoite Stella A, Vidotto M, Passerini M, Furlanis G, Naccarato M, Manganotti P.
Dysphagia. 2022 May 13. doi: 10.1007/s00455-022-10459-9. Online ahead of print.
PMID: 35556172 Review.
18. Role of Superoxide Dismutase in Amyotrophic Lateral Sclerosis.
Link T, Sheth H, Andrews A, Raguram D, Roundhill A, Vijay V.
FASEB J. 2022 May;36 Suppl 1. doi: 10.1096/fasebj.2022.36.S1.R4594.
PMID: 35555820
19. Differential regulation of L84F SOD1 in motor neurons and skeletal muscles: an insight into ALS pathology.
Verma S, Vats A, Devi MG, Khurana S, Ganguly NK, Chakraborti P, Taneja V.
FASEB J. 2022 May;36 Suppl 1. doi: 10.1096/fasebj.2022.36.S1.L7609.
PMID: 35555800
20. Effects of Cannabidiol in a Caenorhabditis Elegans Amyotrophic Lateral Sclerosis Model.
Cavet R, Sostena J, Huang A, Hauser P, De L.
FASEB J. 2022 May;36 Suppl 1. doi: 10.1096/fasebj.2022.36.S1.0R317.
PMID: 35555765
21. Increased Nuclear Localization of Engineered Hsp104 Variants Mitigates aS, FUS, and TDP-43 Toxicity in Yeast.
Mass B, Shorter J, Lin J.
FASEB J. 2022 May;36 Suppl 1. doi: 10.1096/fasebj.2022.36.S1.R2730.
PMID: 35555553
22. Towards the Selection of Single-Stranded DNA Molecular Recognition Element Against Cyanotoxin L-BMAA.
Santiago-Maldonado X, Rodríguez-Martínez J, Nicolau-López E.
FASEB J. 2022 May;36 Suppl 1. doi: 10.1096/fasebj.2022.36.S1.R5342.
PMID: 35554190

23. Exploring the Effect of RNA Binding on TDP-43 Liquid-Liquid Phase Separation.
Padilla G, Shorter J, Rubien J.
FASEB J. 2022 May;36 Suppl 1. doi: 10.1096/fasebj.2022.36.S1.R3072.
PMID: 35554166

24. Developing RNA Therapeutics for TDP-43 Proteinopathy in ALS/FTD.
Copley KE, Smirnov A, Shorter J.
FASEB J. 2022 May;36 Suppl 1. doi: 10.1096/fasebj.2022.36.S1.R4365.
PMID: 35552270

25. Advance care planning in amyotrophic lateral sclerosis (ALS): study protocol for a qualitative longitudinal study with persons with ALS and their family carers.
Vandenbogaerde I, Miranda R, De Bleecker JL, Carduff E, van der Heide A, Van den Block L, Deliens L, De Vleminck A.
BMJ Open. 2022 May 12;12(5):e060451. doi: 10.1136/bmjopen-2021-060451.
PMID: 35551085

26. The distribution and function of GDE2, a regulator of spinal motor neuron survival, are disrupted in Amyotrophic Lateral Sclerosis.
Westerhaus A, Joseph T, Meyers AJ, Jang Y, Na CH, Cave C, Sockanathan S.
Acta Neuropathol Commun. 2022 May 12;10(1):73. doi: 10.1186/s40478-022-01376-x.
PMID: 35550203

27. Computational Insights of Unfolding of N-Terminal Domain of TDP-43 Reveal the Conformational Heterogeneity in the Unfolding Pathway.
Li R, Singh R, Kashav T, Yang C, Sharma RD, Lynn AM, Prasad R, Prakash A, Kumar V.
Front Mol Neurosci. 2022 Apr 25;15:822863. doi: 10.3389/fnmol.2022.822863. eCollection 2022.
PMID: 35548668 **Free PMC article.**

28. The Emerging Role of Central and Peripheral Immune Systems in Neurodegenerative Diseases.
Zang X, Chen S, Zhu J, Ma J, Zhai Y.
Front Aging Neurosci. 2022 Apr 25;14:872134. doi: 10.3389/fnagi.2022.872134. eCollection 2022.
PMID: 35547626 **Free PMC article.** Review.

29. Eye movement desensitization and reprocessing (EMDR) and mediative behavioral therapy for the treatment of suffocation related post-traumatic stress disorder (PTSD) in amyotrophic lateral sclerosis (ALS): A case report.
Oudman E, Baert JCM.

Palliat Support Care. 2022 May 11:1-3. doi: 10.1017/S1478951522000542. Online ahead of print.
PMID: 35543124

30. Zinc binding loop mutations of hSOD1 promote amyloid fibrils under physiological conditions: Implications for initiation of amyotrophic lateral sclerosis.
Baziyar P, Seyedalipour B, Hosseinkhani S.
Biochimie. 2022 May 7:S0300-9084(22)00111-0. doi: 10.1016/j.biochi.2022.05.001. Online ahead of print.
PMID: 35537620

31. Methylome analysis of ALS patients and presymptomatic mutation carriers in blood cells.
Ruf WP, Hannon E, Freischmidt A, Grozdanov V, Brenner D, Müller K, Knehr A, Günther K, Dorst J, Ammerpohl O, Danzer KM, Mill J, Ludolph AC, Weishaupt JH.
Neurobiol Aging. 2022 Apr 20;116:16-24. doi: 10.1016/j.neurobiolaging.2022.04.003. Online ahead of print.
PMID: 35537341

32. ALS and BLS, an Historical Perspective: Time for a New Paradigm!
Koenig KL, Cone DC.
Prehosp Emerg Care. 2022 May-Jun;26(3):323-325. doi: 10.1080/10903127.2022.2060394.
PMID: 35536184 No abstract available.

33. Chemically oligomerizable TDP-43: a novel chemogenetic tool for studying the pathophysiology of amyotrophic lateral sclerosis.
Kanekura K, Yamanaka Y, Miyagi T, Kuroda M.
Neural Regen Res. 2022 Nov;17(11):2434-2436. doi: 10.4103/1673-5374.335803.
PMID: 35535888 No abstract available.

34. Cerebellar pathology in motor neuron disease: neuroplasticity and neurodegeneration.
Chipika RH, Mulkerrin G, Pradat PF, Murad A, Ango F, Raoul C, Bede P.
Neural Regen Res. 2022 Nov;17(11):2335-2341. doi: 10.4103/1673-5374.336139.
PMID: 35535867 Review.

35. Characterization of somatosensory neuron involvement in the SOD1^{G93A} mouse model.
Rubio MA, Herrando-Grabulosa M, Gaja-Capdevila N, Vilches JJ, Navarro X.
Sci Rep. 2022 May 9;12(1):7600. doi: 10.1038/s41598-022-11767-8.
PMID: 35534694 **Free PMC article.**

36. Efficacy and Safety of Ultrahigh-Dose Methylcobalamin in Early-Stage Amyotrophic Lateral Sclerosis: A Randomized Clinical Trial.
Oki R, Izumi Y, Fujita K, Miyamoto R, Nodera H, Sato Y, Sakaguchi S, Nokihara H, Kanai K, Tsunemi T, Hattori N, Hatanaka Y, Sonoo M, Atsuta N, Sobue G, Shimizu T, Shibuya K, Ikeda K, Kano O, Nishinaka K, Kojima Y, Oda M, Komai K, Kikuchi H, Kohara N, Urushitani M, Nakayama Y, Ito H, Nagai M, Nishiyama K, Kuzume D, Shimohama S, Shimohata T, Abe K, Ishihara T, Onodera O, Isose S, Araki N, Morita M, Noda K, Toda T, Maruyama H, Furuya H, Teramukai S, Kagimura T, Noma K, Yanagawa H, Kuwabara S, Kaji R; Japan Early-Stage Trial of Ultrahigh-Dose Methylcobalamin for ALS (JETALS) Collaborators.
JAMA Neurol. 2022 May 9. doi: 10.1001/jamaneurol.2022.0901. Online ahead of print.
PMID: 35532908

37. Bright Tongue Sign in Amyotrophic Lateral Sclerosis.
Saxena S, Tiwari S, Khera PS, Midha NK.
Neurol India. 2022 Mar-Apr;70(2):824-825. doi: 10.4103/0028-3886.344609.
PMID: 35532680 No abstract available.

38. Hitchhiker's guide through the axon: transport and local translation of *Pink1* mRNA support axonal mitophagy.
Metur SP, Klionsky DJ.
Autophagy. 2022 May 9:1-2. doi: 10.1080/15548627.2022.2071081. Online ahead of print.
PMID: 35532369

39. The Global Burden of Motor Neuron Disease: An Analysis of the 2019 Global Burden of Disease Study.
Park J, Kim JE, Song TJ.
Front Neurol. 2022 Apr 21;13:864339. doi: 10.3389/fneur.2022.864339. eCollection 2022.
PMID: 35528743 **Free PMC article.**