

Weekly New Publications List

Week commencing 02/05/2022

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 02/05/2022. 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. [The pathogenesis of amyotrophic lateral sclerosis: Mitochondrial dysfunction, protein misfolding and epigenetics.](#)
Chen W, Guo L, Li M, Wei C, Li S, Xu R.
Brain Res. 2022 Jul 1;1786:147904. doi: 10.1016/j.brainres.2022.147904.
Epub 2022 Apr 4.
PMID: 35390335 Review.
2. [Respiratory onset in amyotrophic lateral sclerosis: clinical features and spreading pattern.](#)
Pinto S, Gromicho M, Oliveira Santos MO, Swash M, De Carvalho M.
Amyotroph Lateral Scler Frontotemporal Degener. 2022 May 5:1-5. doi: 10.1080/21678421.2022.2067777. Online ahead of print.
PMID: 35510537
3. [Swallowing Safety and Efficiency Impairment Profiles in Individuals with Amyotrophic Lateral Sclerosis.](#)
Robison R, DiBiase L, Ashley A, McElheny K, Anderson A, Wymer JP, Plowman EK.
Dysphagia. 2022 Jun;37(3):644-654. doi: 10.1007/s00455-021-10315-2. Epub 2021 May 26.
PMID: 34037850
4. [Altered SOD1 maturation and post-translational modification in amyotrophic lateral sclerosis spinal cord.](#)
Trist BG, Genoud S, Roudeau S, Rookyard A, Abdeen A, Cottam V, Hare DJ, White M, Altvater J, Fifita JA, Hogan A, Grima N, Blair IP, Kysenius K, Crouch PJ, Carmona A, Rufin Y, Claverol S, Van Malderen S, Falkenberg G, Paterson DJ, Smith B, Troakes C, Vance C, Shaw CE, Al-Sarraj S, Cordwell S, Halliday G, Ortega R, Double KL.
Brain. 2022 May 5:awac165. doi: 10.1093/brain/awac165. Online ahead of print.
PMID: 35512359
5. [Social Cognition deficits in Amyotrophic Lateral Sclerosis: a pilot cross-sectional population-based study.](#)
Palumbo F, Iazzolino B, Peotta L, Canosa A, Manera U, Grassano M, Federico C, Pellegrino G, Rizzone MG, Vasta R, Moglia C, Chiò A, Calvo A.
Eur J Neurol. 2022 May 7. doi: 10.1111/ene.15388. Online ahead of print.
PMID: 35524505
6. [TDP-43 is a ubiquitylation substrate of the SCF^{cyclin F} complex.](#)
Rayner SL, Yang S, Farrarwell NE, Jagaraj CJ, Cheng F, Davidson JM, Luu L, Redondo AG, Rábano A, Borrego-Hernández D, Atkin JD, Morsch M, Blair IP, Yerbury JJ, Chung R, Lee A.
Neurobiol Dis. 2022 Jun 1;167:105673. doi: 10.1016/j.nbd.2022.105673.
Epub 2022 Feb 26.

PMID: 35231559

7. [Motor neuron replacement therapy for amyotrophic lateral sclerosis.](#)
Liu B, Li M, Zhang L, Chen Z, Lu P.
Neural Regen Res. 2022 Aug;17(8):1633-1639. doi: 10.4103/1673-5374.332123.
PMID: 35017408 **Free PMC article.** Review.
8. [Protein synthesis modulation as a therapeutic approach for amyotrophic lateral sclerosis and frontotemporal dementia.](#)
Charif SE, Vassallu MF, Salvañal L, Igaz LM.
Neural Regen Res. 2022 Jul;17(7):1423-1430. doi: 10.4103/1673-5374.330593.
PMID: 34916412 **Free PMC article.** Review.
9. [The combination of autologous mesenchymal stem cell-derived exosomes and neurotrophic factors as an intervention for amyotrophic lateral sclerosis.](#)
Ding Y, Botchway BOA, Zhang Y, Jin T, Liu X.
Ann Anat. 2022 Jun;242:151921. doi: 10.1016/j.aanat.2022.151921. Epub 2022 Mar 9.
PMID: 35278658
10. [Catching a killer: Mechanisms of programmed cell death and immune activation in Amyotrophic Lateral Sclerosis.](#)
Neel DV, Basu H, Gunner G, Chiu IM.
Immunol Rev. 2022 May 7. doi: 10.1111/imr.13083. Online ahead of print.
PMID: 35524757 Review.
11. [Purinergic P2X₇ Receptor: A Therapeutic Target in Amyotrophic Lateral Sclerosis.](#)
Mckenzie ADJ, Garrett TR, Werry EL, Kassiou M.
ACS Chem Neurosci. 2022 May 5. doi: 10.1021/acscchemneuro.2c00133.
Online ahead of print.
PMID: 35512313 Review.
12. [MicroRNA biomarkers in frontotemporal dementia and to distinguish from Alzheimer's disease and amyotrophic lateral sclerosis.](#)
Martinez B, Peplow PV.
Neural Regen Res. 2022 Jul;17(7):1412-1422. doi: 10.4103/1673-5374.330591.
PMID: 34916411 **Free PMC article.** Review.
13. [Phosphoinositide-3-kinase regulatory subunit 4 participates in the occurrence and development of amyotrophic lateral sclerosis by regulating autophagy.](#)
Liu Y, Wei CH, Li C, Chen WZ, Zhu Y, Xu RS.
Neural Regen Res. 2022 Jul;17(7):1609-1616. doi: 10.4103/1673-5374.330621.

- PMID: 34916448 **Free PMC article.**
14. [Protein network analysis to prioritize key genes in amyotrophic lateral sclerosis.](#)
Kumar R, Haider S.
IBRO Neurosci Rep. 2021 Dec 7;12:25-44. doi: 10.1016/j.ibneur.2021.12.002. eCollection 2022 Jun.
PMID: 34918006 **Free PMC article.**
 15. [Targeting TNF \$\alpha\$ produced by astrocytes expressing amyotrophic lateral sclerosis-linked mutant fused in sarcoma prevents neurodegeneration and motor dysfunction in mice.](#)
Jensen BK, McAvoy KJ, Heinsinger NM, Lepore AC, Ilieva H, Haeusler AR, Trotti D, Pasinelli P.
Glia. 2022 Jul;70(7):1426-1449. doi: 10.1002/glia.24183. Epub 2022 Apr 26.
PMID: 35474517
 16. [Glucose metabolism in amyotrophic lateral sclerosis: it is bitter-sweet.](#)
Lerskiatphanich T, Marallag J, Lee JD.
Neural Regen Res. 2022 Sep;17(9):1975-1977. doi: 10.4103/1673-5374.335154.
PMID: 35142682 **Free PMC article.** No abstract available.
 17. [Altered blood-brain barrier and blood-spinal cord barrier dynamics in amyotrophic lateral sclerosis: Impact on medication efficacy and safety.](#)
Pan Y, Nicolazzo JA.
Br J Pharmacol. 2022 Jun;179(11):2577-2588. doi: 10.1111/bph.15802. Epub 2022 Feb 7.
PMID: 35048358 Review.
 18. [ATXN2 intermediate expansions in amyotrophic lateral sclerosis.](#)
Glass JD, Dewan R, Ding J, Gibbs RJ, Dalgard C, Keagle PJ, Shankaracharya F, García-Redondo A, Traynor BJ, Chia R, Landers JE.
Brain. 2022 May 6:awac167. doi: 10.1093/brain/awac167. Online ahead of print.
PMID: 35521889
 19. [Nuclear pore destruction and loss of nuclear TDP-43 in FUS mutation-related amyotrophic lateral sclerosis motor neurons.](#)
Aizawa H, Teramoto S, Hideyama T, Kato H, Terashi H, Suzuki Y, Kimura T, Kwak S.
J Neurol Sci. 2022 May 15;436:120187. doi: 10.1016/j.jns.2022.120187. Epub 2022 Feb 16.
PMID: 35232585 No abstract available.
 20. [Neurons undergo pathogenic metabolic reprogramming in models of familial ALS.](#)

Riechers SP, Mojsilovic-Petrovic J, Belton TB, Chakrabarty RP, Garjani M, Medvedeva V, Dalton C, Wong YC, Chandel NS, Diemel G, Kalb RG. *Mol Metab.* 2022 Jun;60:101468. doi: 10.1016/j.molmet.2022.101468. Epub 2022 Mar 3.
PMID: 35248787 **Free PMC article.**

21. [Safety and Clinical Benefits of Laryngeal Closure in Patients with Amyotrophic Lateral Sclerosis.](#)
Yokoi S, Nishio N, Maruo T, Hiramatsu M, Mukoyama N, Tsuzuki H, Wada A, Atsuta N, Ito D, Tsuboi T, Sobue G, Katsuno M, Fujimoto Y, Sone M. *Dysphagia.* 2022 May 4. doi: 10.1007/s00455-022-10454-0. Online ahead of print.
PMID: 35507038
22. [Serum uric acid level predicts the progression of amyotrophic lateral sclerosis following treatment with edaravone.](#)
Han HJ, Shin HY, Choi YC, Kim SM, Kim SW. *Redox Rep.* 2022 Dec;27(1):79-84. doi: 10.1080/13510002.2022.2051964.
PMID: 35296219 **Free PMC article.**
23. [A SUMO4 initiator codon variant in amyotrophic lateral sclerosis reduces SUMO4 expression and alters stress granule dynamics.](#)
Osmanovic A, Förster A, Widjaja M, Auber B, Das AM, Christians A, Brand F, Petri S, Weber RG. *J Neurol.* 2022 May 3. doi: 10.1007/s00415-022-11126-7. Online ahead of print.
PMID: 35503374
24. [Survival Analyses From the CENTAUR Trial in Amyotrophic Lateral Sclerosis: Evaluating the Impact of Treatment Crossover on Outcomes.](#)
Paganoni S, Watkins C, Cawson M, Hendrix S, Dickson SP, Knowlton N, Timmons J, Manuel M, Cudkowicz M. *Muscle Nerve.* 2022 May 4. doi: 10.1002/mus.27569. Online ahead of print.
PMID: 35508892
25. [Nucleoporin POM121 signals TFEB-mediated autophagy via activation of SIGMAR1/sigma-1 receptor chaperone by pridopidine.](#)
Wang SM, Wu HE, Yasui Y, Geva M, Hayden M, Maurice T, Cozzolino M, Su TP. *Autophagy.* 2022 May 4:1-26. doi: 10.1080/15548627.2022.2063003. Online ahead of print.
PMID: 35507432
26. [Focal thalamus pathology in frontotemporal dementia: Phenotype-associated thalamic profiles.](#)
McKenna MC, Li Hi Shing S, Murad A, Lope J, Hardiman O, Hutchinson S, Bede P.

- J Neurol Sci. 2022 May 15;436:120221. doi: 10.1016/j.jns.2022.120221. Epub 2022 Mar 8.
PMID: 35279595
27. [Spinal motor neuron transplantation to enhance nerve reconstruction strategies: Towards a cell therapy.](#)
Bazarek S, Johnston BR, Sten M, Mandeville R, Eggan K, Wainger BJ, Brown JM.
Exp Neurol. 2022 Jul;353:114054. doi: 10.1016/j.expneurol.2022.114054.
Epub 2022 Mar 24.
PMID: 35341748 Review.
 28. [The mechanism of the WNT5A and FZD4 receptor mediated WNT/ \$\beta\$ -catenin pathway in the degeneration of ALS spinal cord motor neurons.](#)
Jiang X, Liu J, Guan Y, Zhao Z, Meng F, Wang X, Gao X, Zhou F, Chen Y, Wang X.
Biochem Biophys Res Commun. 2022 Jun 18;609:23-30. doi: 10.1016/j.bbrc.2022.03.126. Epub 2022 Apr 1.
PMID: 35413536
 29. [Neurovascular unit pathology is observed very early in disease progression in the mutant SOD1^{G93A} mouse model of amyotrophic lateral sclerosis.](#)
Yoshikawa M, Aizawa S, Oppenheim RW, Milligan C.
Exp Neurol. 2022 Jul;353:114084. doi: 10.1016/j.expneurol.2022.114084.
Epub 2022 Apr 16.
PMID: 35439439
 30. [Inhibition of Crmp1 phosphorylation at Ser522 ameliorates motor function and neuronal pathology in amyotrophic lateral sclerosis model mice.](#)
Asano T, Nakamura H, Kawamoto Y, Tada M, Kimura Y, Takano H, Yao R, Saito H, Ikeda T, Komiya H, Kubota S, Hashiguchi S, Takahashi K, Kunii M, Tanaka K, Goshima Y, Nakamura F, Takeuchi H, Doi H, Tanaka F.
eNeuro. 2022 May 6:ENEURO.0133-22.2022. doi: 10.1523/ENEURO.0133-22.2022. Online ahead of print.
PMID: 35523582
 31. [Feasibility of imaging synaptic density in the human spinal cord using \[¹¹C\]UCB-J PET.](#)
Rossano S, Toyonaga T, Bini J, Nabulsi N, Ropchan J, Cai Z, Huang Y, Carson RE.
EJNMMI Phys. 2022 May 3;9(1):32. doi: 10.1186/s40658-022-00464-0.
PMID: 35503134 **Free PMC article.**
 32. [Phytochemicals as inhibitors of tumor necrosis factor alpha and neuroinflammatory responses in neurodegenerative diseases.](#)
Zahedipour F, Hosseini SA, Henney NC, Barreto GE, Sahebkar A.

- Neural Regen Res. 2022 Aug;17(8):1675-1684. doi: 10.4103/1673-5374.332128.
PMID: 35017414 **Free PMC article.** Review.
33. [Hyperexcitability in young iPSC-derived C9ORF72 mutant motor neurons is associated with increased intracellular calcium release.](#)
Burley S, Beccano-Kelly DA, Talbot K, Llana OC, Wade-Martins R.
Sci Rep. 2022 May 5;12(1):7378. doi: 10.1038/s41598-022-09751-3.
PMID: 35513421 **Free PMC article.**
 34. [Optimization of IL-1RA structure to achieve a smaller protein with a higher affinity to its receptor.](#)
Nouri Barkestani M, Naserian S, Khoddam F, Shamdani S, Bamba B.
Sci Rep. 2022 May 6;12(1):7483. doi: 10.1038/s41598-022-11100-3.
PMID: 35523814
 35. [Ubiquitin homeostasis disruption, a common cause of proteostasis collapse in amyotrophic lateral sclerosis?](#)
Chisholm CG, Lum JS, Farrowell NE, Yerbury JJ.
Neural Regen Res. 2022 Oct;17(10):2218-2220. doi: 10.4103/1673-5374.335786.
PMID: 35259837 No abstract available.
 36. [Toxic SOD1 trimers are off-pathway in the formation of amyloid-like fibrils in ALS.](#)
Hnath B, Dokholyan NV.
Biophys J. 2022 May 3:S0006-3495(22)00365-4. doi: 10.1016/j.bpj.2022.04.037. Online ahead of print.
PMID: 35505609
 37. [Unraveling pathological mechanisms in neurological disorders: the impact of cell-based and organoid models.](#)
Langlie J, Mittal R, Finberg A, Bencie NB, Mittal J, Omidian H, Omid Y, Eshraghi AA.
Neural Regen Res. 2022 Oct;17(10):2131-2140. doi: 10.4103/1673-5374.335836.
PMID: 35259819 Review.
 38. [Pathogenic variants of Valosin Containing Protein induce lysosomal damage and transcriptional activation of autophagy regulators in neuronal cells.](#)
Ferrari V, Cristofani R, Cicardi ME, Tedesco B, Crippa V, Chierichetti M, Casarotto E, Cozzi M, Mina F, Galbiati M, Piccolella M, Carra S, Vaccari T, Nalbandian A, Kimonis V, Fortuna TR, Pandey UB, Gagliani MC, Cortese K, Rusmini P, Poletti A.
Neuropathol Appl Neurobiol. 2022 May 2:e12818. doi: 10.1111/nan.12818. Online ahead of print.
PMID: 35501124

39. [Parallel Appearance of Polyglutamine and Transactivation-Responsive DNA-Binding Protein 43 and Their Complementary Subcellular Localization in Brains of Patients With Spinocerebellar Ataxia Type 2.](#)
Koyano S, Yagishita S, Tada M, Doi H, Uchihara T, Tanaka F.
J Neuropathol Exp Neurol. 2022 May 2:nlac032. doi: 10.1093/jnen/nlac032.
Online ahead of print.
PMID: 35511239
40. [Cytoskeleton saga: Its regulation in normal physiology and modulation in neurodegenerative disorders.](#)
Sen S, Lagas S, Roy A, Kumar H.
Eur J Pharmacol. 2022 May 4:175001. doi: 10.1016/j.ejphar.2022.175001.
Online ahead of print.
PMID: 35525310 Review.
41. [How can we define the presymptomatic C9orf72 disease in 2022? An overview on the current definitions of preclinical and prodromal phases.](#)
Saracino D, Le Ber I.
Rev Neurol (Paris). 2022 May 4:S0035-3787(22)00555-0. doi:
10.1016/j.neurol.2022.03.007. Online ahead of print.
PMID: 35525633 Review.