

# Mitochondrial disorders : The Essentials



**2<sup>nd</sup> quarter 2024**



## **Quarterly literature follow-up**

carried out by the AFM-Téléthon documentation department

This literature follow-up, carried out based on queries on PubMed® without claiming to be exhaustive, presents a selection of references to medical-scientific articles concerning the field of mitochondrial diseases.

## Mitochondrial disorders : The Essentials

MMITO-2024-2 from april 1<sup>st</sup> to june 30, 2024

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### Ataxie de Friedreich - *Friedreich ataxia*

1. Alemany-Perna, B., Tamarit, J., Cabisco, E., Delaspre, F., Miguela, A., Huertas-Pons, J. M., Quiroga-Varela, A., Merchan Ruiz, M., López Domínguez, D., Ramió I Torrentà, L., Genís, D., & Ros, J. (2024). Calcitriol Treatment Is Safe and Increases Frataxin Levels in Friedreich Ataxia Patients. *Movement Disorders: Official Journal of the Movement Disorder Society*, 39(7), 1099-1108. <https://doi.org/10.1002/mds.29808>
2. Balderas, E., Lee, S. H. J., Rai, N. K., Mollinedo, D. M., Duron, H. E., & Chaudhuri, D. (2024). Mitochondrial Calcium Regulation of Cardiac Metabolism in Health and Disease. *Physiology (Bethesda, Md.)*, 39(5), 0. <https://doi.org/10.1152/physiol.00014.2024>
3. Boesch, S., & Indelicato, E. (2024). Approval of omaveloxolone for Friedreich ataxia. *Nature Reviews. Neurology*, 20(6), 313-314. <https://doi.org/10.1038/s41582-024-00957-9>
4. Cantrell, A. C., Besanson, J., Williams, Q., Hoang, N., Edwards, K., Bishop, G. R., Chen, Y., Zeng, H., & Chen, J.-X. (2024). Ferrostatin-1 specifically targets mitochondrial iron-sulfur clusters and aconitase to improve cardiac function in Sirtuin 3 cardiomyocyte knockout mice. *Journal of Molecular and Cellular Cardiology*, 192, 36-47. <https://doi.org/10.1016/j.yjmcc.2024.05.003>
5. Corben, L. A., Blomfield, E., Tai, G., Bilal, H., Harding, I. H., Georgiou-Karistianis, N., Delatycki, M. B., & Vogel, A. P. (2024). The Role of Verbal Fluency in the Cerebellar Cognitive Affective Syndrome Scale in Friedreich Ataxia. *Cerebellum (London, England)*, 23(5), 1975-1980. <https://doi.org/10.1007/s12311-024-01694-x>
6. Da Conceição, L. M. A., Cabral, L. M., Pereira, G. R. C., & De Mesquita, J. F. (2024). An In Silico Analysis of Genetic Variants and Structural Modeling of the Human Frataxin Protein in Friedreich's Ataxia. *International Journal of Molecular Sciences*, 25(11), 5796. <https://doi.org/10.3390/ijms25115796>
7. Dong, Y. N., Mercado-Ayón, E., Coulman, J., Flatley, L., Ngaba, L. V., Adeshina, M. W., & Lynch, D. R. (2024). The Regulation of the Disease-Causing Gene FXN. *Cells*, 13(12), 1040. <https://doi.org/10.3390/cells13121040>
8. Ferreira, J. (2024). AAV gene therapy to treat Friedreich's ataxia cardiomyopathy. *Lab Animal*, 53(4), 86. <https://doi.org/10.1038/s41684-024-01351-0>

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9. Fichera, M., Nanetti, L., Monelli, A., Castaldo, A., Marchini, G., Neri, M., Vukaj, X., Marzorati, M., Porcelli, S., & Mariotti, C. (2024). Accelerometer-based measures in Friedreich ataxia : A longitudinal study on real-life activity. *Frontiers in Pharmacology*, 15, 1342965. <https://doi.org/10.3389/fphar.2024.1342965>
10. Gnimpieba, E., Diing, D. M., Ailts, J., Cucak, A., Gakh, O., Isaya, G., Vitiello, S., Wang, S., Pierce, P., Cooper, A., Roux, K., Rogers, L. K., & Vitiello, P. F. (2024). Mapping Novel Frataxin Mitochondrial Networks Through Protein- Protein Interactions. *Research Square*, rs.3.rs-4259413. <https://doi.org/10.21203/rs.3.rs-4259413/v1>
11. Grander, M., Haschka, D., Indelicato, E., Kremser, C., Amprosi, M., Nachbauer, W., Henninger, B., Stefani, A., Högl, B., Fischer, C., Seifert, M., Kiechl, S., Weiss, G., & Boesch, S. (2024). Genetic Determined Iron Starvation Signature in Friedreich's Ataxia. *Movement Disorders: Official Journal of the Movement Disorder Society*, 39(7), 1088-1098. <https://doi.org/10.1002/mds.29819>
12. Gunther, K., & Lynch, D. R. (2024). Pharmacotherapeutic strategies for Friedreich Ataxia : A review of the available data. *Expert Opinion on Pharmacotherapy*, 25(5), 529-539. <https://doi.org/10.1080/14656566.2024.2343782>
13. Harding, I. H., Nur Karim, M. I., Selvadurai, L. P., Corben, L. A., Delatycki, M. B., Monti, S., Saccà, F., Georgiou-Karistianis, N., Coccozza, S., & Egan, G. F. (2024). Localized Changes in Dentate Nucleus Shape and Magnetic Susceptibility in Friedreich Ataxia. *Movement Disorders: Official Journal of the Movement Disorder Society*, 39(7), 1109-1118. <https://doi.org/10.1002/mds.29816>
14. Hynes, S. M., Goldsberry, A., Henneghan, P. D., Murai, M., Shinde, A., Wells, J. A., Wu, L., Wu, T., Zahir, H., & Khan, S. (2024). Relative Bioavailability of Omaveloxolone When Capsules Are Sprinkled Over and Mixed in Applesauce Compared With Administration as Intact Omaveloxolone Capsules : A Phase 1, Randomized, Open-Label, Single-Dose, Crossover Study in Healthy Adults. *Journal of Clinical Pharmacology*, 64(10), 1304-1311. <https://doi.org/10.1002/jcph.2482>
15. Indelicato, E., & Boesch, S. (2024). Reply to : « Advancing Understanding of Predictive Factors for Survival in Friedreich's Ataxia: A Review of Current Evidence and Future Directions ». *Movement Disorders: Official Journal of the Movement Disorder Society*, 39(6), 1082. <https://doi.org/10.1002/mds.29873>
16. Jullian, E., Russi, M., Turki, E., Bouvelot, M., Tixier, L., Middendorp, S., Martin, E., & Monnier, V. (2024). Glial overexpression of Tspos extends lifespan and protects against frataxin deficiency in Drosophila. *Biochimie*, 224, 71-79. <https://doi.org/10.1016/j.biochi.2024.05.003>



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17. Kissell, J., Rochmann, C., Minini, P., Eichler, F., Stephen, C. D., Lau, H., Toro, C., Johnston, J. M., Krupnick, R., Hamed, A., & Cox, G. F. (2024). Clinical outcome assessments of disease burden and progression in late-onset GM2 gangliosidoses. *Molecular Genetics and Metabolism*, 142(3), 108512. <https://doi.org/10.1016/j.ymgme.2024.108512>
18. Koka, M., Li, H., Akther, R., Perlman, S., Wong, D., Fogel, B. L., Lynch, D. R., & Chandran, V. (2024). Long non-coding RNA TUG1 is downregulated in Friedreich's ataxia. *Brain Communications*, 6(3), fcae170. <https://doi.org/10.1093/braincomms/fcae170>
19. Lowit, A., Greenfield, J., Cutting, E., Wallis, R., & Hadjivassiliou, M. (2021). Symptom burden of people with progressive ataxia, and its wider impact on their friends and relatives: A cross-sectional study. *AMRC Open Research*, 3, 28. <https://doi.org/10.12688/amrcopenres.13036.1>
20. Lynch, D. R., Sharma, S., Hearle, P., Greeley, N., Gunther, K., Keita, M., Strawser, C., Hauser, L., Park, C., Schadt, K., & Lin, K. Y. (2024). Characterization of clinical serum cardiac biomarker levels in individuals with Friedreich ataxia. *Journal of the Neurological Sciences*, 461, 123053. <https://doi.org/10.1016/j.jns.2024.123053>
21. Mahale, R., Purushottam, M., Singh, R., Yelamanchi, R., Kamble, N., Holla, V., Pal, P. K., Jain, S., & Yadav, R. (2024). Revisiting Friedreich's Ataxia : Phenotypic and Imaging Characteristics. *Annals of Indian Academy of Neurology*, 27(2), 152-157. [https://doi.org/10.4103/aian.aian\\_1001\\_23](https://doi.org/10.4103/aian.aian_1001_23)
22. Mantle, D., & Hargreaves, I. P. (2024). Efficacy and Safety of Coenzyme Q10 Supplementation in Neonates, Infants and Children: An Overview. *Antioxidants (Basel, Switzerland)*, 13(5), 530. <https://doi.org/10.3390/antiox13050530>
23. Miellet, S., Maddock, M., Napierala, J. S., Napierala, M., & Dottori, M. (2024). Generation of genetically modified Friedreich's ataxia induced pluripotent stem cell lines and isogenic control lines carrying an inducible neurogenin-2 expression cassette. *Stem Cell Research*, 79, 103477. <https://doi.org/10.1016/j.scr.2024.103477>
24. Motamed-Gorji, N., Khalil, Y., Gonzalez-Robles, C., Khan, S., Mills, P., Garcia-Moreno, H., Ging, H., Tariq, A., Clayton, P. T., & Giunti, P. (2024). Elevated Bile Acid 3 $\beta$ ,5 $\alpha$ ,6 $\beta$ -Trihydroxycholanoil Glycine in a Subset of Adult Ataxias Including Niemann-Pick Type C. *Antioxidants (Basel, Switzerland)*, 13(5), 561. <https://doi.org/10.3390/antiox13050561>

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25. O'Brien, E. M., Neiswenter, N., Lin, K. Y., Lynch, D., Baldwin, K., Profeta, V., Flynn, J. M., & Muhly, W. T. (2024). Perioperative management and outcomes for posterior spinal fusion in patients with Friedreich ataxia: A single-center, retrospective study. *Paediatric Anaesthesia*, 34(7), 654-661. <https://doi.org/10.1111/pan.14896>
26. Pasol, J., Uddin, M. S., Tekin, M., & Moore, H. P. (2024). Leber Hereditary Optic Neuropathy in 2 Sisters With Friedreich Ataxia. *Journal of Neuro-Ophthalmology: The Official Journal of the North American Neuro-Ophthalmology Society*. <https://doi.org/10.1097/WNO.0000000000002143>
27. Peverill, R. E., Lin, K. Y., Fogel, M. A., Cheung, M. M. H., Moir, W. S., Corben, L. A., Cahoon, G., & Delatycki, M. B. (2024). Insights into the effects of Friedreich ataxia on the left ventricle using T1 mapping and late gadolinium enhancement. *PloS One*, 19(5), e0303969. <https://doi.org/10.1371/journal.pone.0303969>
28. Rojsajakul, T., Selvan, N., De, B., Rosenberg, J. B., Kaminsky, S. M., Sondhi, D., Janki, P., Crystal, R. G., Mesaros, C., Khanna, R., & Blair, I. A. (2024). Expression and processing of mature human frataxin after gene therapy in mice. *Scientific Reports*, 14(1), 8391. <https://doi.org/10.1038/s41598-024-59060-0>
29. Rudaks, L. I., Yeow, D., Ng, K., Deveson, I. W., Kennerson, M. L., & Kumar, K. R. (2024). An Update on the Adult-Onset Hereditary Cerebellar Ataxias : Novel Genetic Causes and New Diagnostic Approaches. *Cerebellum (London, England)*, 23(5), 2152-2168. <https://doi.org/10.1007/s12311-024-01703-z>
30. Rummey, C., Perlman, S., Subramony, S. H., Farmer, J., & Lynch, D. R. (2024). Evaluating mFARS in pediatric Friedreich's ataxia : Insights from the FACHILD study. *Annals of Clinical and Translational Neurology*, 11(5), 1290-1300. <https://doi.org/10.1002/acn3.52057>
31. Saini, A. K., Anil, N., Vijay, A. N., Mangla, B., Javed, S., Kumar, P., & Ahsan, W. (2024). Recent Advances in the Treatment Strategies of Friedreich's Ataxia : A Review of Potential Drug Candidates and their Underlying Mechanisms. *Current Pharmaceutical Design*, 30(19), 1472-1489. <https://doi.org/10.2174/0113816128288707240404051856>
32. Schulz, V., Steinhilper, R., Oltmanns, J., Freibert, S.-A., Krapoth, N., Linne, U., Welsch, S., Hoock, M. H., Schünemann, V., Murphy, B. J., & Lill, R. (2024). Mechanism and structural dynamics of sulfur transfer during de novo [2Fe-2S] cluster assembly on ISCU2. *Nature Communications*, 15(1), 3269. <https://doi.org/10.1038/s41467-024-47310-8>

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33. Sciarretta, F., Zaccaria, F., Ninni, A., Ceci, V., Turchi, R., Apolloni, S., Milani, M., Della Valle, I., Tiberi, M., Chiurchiù, V., D'Ambrosi, N., Pedretti, S., Mitro, N., Volontè, C., Amadio, S., Aquilano, K., & Lettieri-Barbato, D. (2024). Frataxin deficiency shifts metabolism to promote reactive microglia via glucose catabolism. *Life Science Alliance*, 7(7), e202402609. <https://doi.org/10.26508/lsa.202402609>
34. Seabury, J., Varma, A., Weinstein, J., Rosero, S. J., Engebrecht, C., Khosa, S., Zizzi, C., Wagner, E. S., Alexandrou, D., Cohen, B. L., Dilek, N., Heatwole, J. M., Lynch, D. R., Park, C. C., Wells, M., Subramony, S. H., & Heatwole, C. R. (2024). Friedreich Ataxia Caregiver-Reported Health Index: Development of a Novel, Disease-Specific Caregiver-Reported Outcome Measure. *Neurology. Clinical Practice*, 14(3), e200303. <https://doi.org/10.1212/CPJ.0000000000200300>
35. Sureshkumar, S., Bandaranayake, C., Lv, J., Dent, C. I., Bhagat, P. K., Mukherjee, S., Sarwade, R., Atri, C., York, H. M., Tamizhselvan, P., Shamaya, N., Folini, G., Bergey, B. G., Yadav, A. S., Kumar, S., Grummisch, O. S., Saini, P., Yadav, R. K., Arumugam, S., ... Balasubramanian, S. (2024). SUMO protease FUG1, histone reader AL3 and chromodomain protein LHP1 are integral to repeat expansion-induced gene silencing in *Arabidopsis thaliana*. *Nature Plants*, 10(5), 749-759. <https://doi.org/10.1038/s41477-024-01672-5>
36. Vancheri, C., Quatrana, A., Morini, E., Mariotti, C., Mongelli, A., Fichera, M., Rufini, A., Condò, I., Testi, R., Novelli, G., Malisan, F., & Amati, F. (2024). An RNA-seq study in Friedreich ataxia patients identified hsa-miR-148a-3p as a putative prognostic biomarker of the disease. *Human Genomics*, 18(1), 50. <https://doi.org/10.1186/s40246-024-00602-y>
37. Vogt, L., Quiroz, V., & Ebrahimi-Fakhari, D. (2024). Emerging therapies for childhood-onset movement disorders. *Current Opinion in Pediatrics*, 36(3), 331-341. <https://doi.org/10.1097/MOP.0000000000001354>
38. Xia, F., & Su, C. (2024). Advancing Understanding of Predictive Factors for Survival in Friedreich's Ataxia : A Review of Current Evidence and Future Directions. *Movement Disorders: Official Journal of the Movement Disorder Society*, 39(6), 1081-1082. <https://doi.org/10.1002/mds.29869>
39. Yetkin, N. A., Yetkin, M. F., Baran Ketencioğlu, B., Oymak, F. S., Gülmez, İ., Yilmaz, İ., & Tutar, N. (2023). Evaluation of diaphragm functions with diaphragm ultrasound and pulmonary function tests in individuals with Friedreich's ataxia. *Turkish Journal of Medical Sciences*, 53(5), 1301-1311. <https://doi.org/10.55730/1300-0144.5696>

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**Atrophie optique autosomique dominante – Autosomal dominant optic atrophy (ADOA)**

40. Borbolis, F., & Palikaras, K. (2024). Identifying therapeutic compounds for autosomal dominant optic atrophy (ADOA) through screening in the nematode *C. elegans*. *Methods in Cell Biology*, 188, 89-108. <https://doi.org/10.1016/bs.mcb.2024.04.004>
41. Calcagni, A., Neveu, M. M., Jurkute, N., & Robson, A. G. (2024). Electrodiagnostic tests of the visual pathway and applications in neuro-ophthalmology. *Eye (London, England)*, 38(12), 2392-2405. <https://doi.org/10.1038/s41433-024-03154-6>
42. Gao, Z., Zhu, X., Ren, H., Wang, Y., Hua, C., & Kong, X. (2024). Prenatal exome sequencing for morphologically normal fetus : Should we be doing it? *Prenatal Diagnosis*. <https://doi.org/10.1002/pd.6624>
43. Lambiri, D. W., & Levin, L. A. (2024). Maculopapillary Bundle Degeneration in Optic Neuropathies. *Current Neurology and Neuroscience Reports*, 24(7), 203-218. <https://doi.org/10.1007/s11910-024-01343-0>
44. Lin, Y., Wang, D., Li, B., Wang, J., Xu, L., Sun, X., Ji, K., Yan, C., Liu, F., & Zhao, Y. (2024). Targeting DRP1 with Mdivi-1 to correct mitochondrial abnormalities in ADOA+ syndrome. *JCI Insight*, 9(15), e180582. <https://doi.org/10.1172/jci.insight.180582>
45. Lombardo, M., Cusumano, A., Mancino, R., Aiello, F., Sorge, R. P., Nucci, C., & Cesareo, M. (2024). Short Wavelength Automated Perimetry, Standard Automated Perimetry, and Optical Coherence Tomography in Dominant Optic Atrophy. *Journal of Clinical Medicine*, 13(7), 1971. <https://doi.org/10.3390/jcm13071971>
46. Martucci, M., Moretton, A., Tarrés-Solé, A., Ropars, V., Lambert, L., Vernet, P., Solà, M., Falkenberg, M., Farge, G., & van den Wildenberg, S. (2024). The mutation R107Q alters mtSSB ssDNA compaction ability and binding dynamics. *Nucleic Acids Research*, 52(10), 5912-5927. <https://doi.org/10.1093/nar/gkae354>
47. Wang, E. H.-H., Lin, P.-H., Wu, P.-L., Kang, E. Y.-C., Liu, L., Yeh, L.-K., Chen, K.-J., Hsiao, M.-C., & Wang, N.-K. (2024). Genetic underpinnings explored : OPA1 deletion and complex phenotypes on chromosome 3q29. *BMC Medical Genomics*, 17(1), 94. <https://doi.org/10.1186/s12920-024-01850-6>

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### Encéphalopathie myo-neuro-gastrointestinale - Mitochondrial neurogastrointestinal encephalomyopathy (MNGIE)

48. Du, J., Liu, F., Liu, X., Zhao, D., Wang, D., Sun, H., Yan, C., & Zhao, Y. (2024). Lysosomal dysfunction and overload of nucleosides in thymidine phosphorylase deficiency of MNGIE. *Journal of Translational Medicine*, 22(1), 449. <https://doi.org/10.1186/s12967-024-05275-8>
49. Finsterer, J., & Strobl, W. (2024). Gastrointestinal involvement in neuromuscular disorders. *Journal of Gastroenterology and Hepatology*, 39(10), 1982-1993. <https://doi.org/10.1111/jgh.16650>
50. Sifeddine, N., Elkhatabi, L., Ait El Cadi, C., Krami, A. M., Mounaji, K., El Khalfi, B., & Barakat, A. (2024). Insights from the SNP analysis of TYMP gene linking MNGIE. *Bioinformatics*, 20(3), 261-270. <https://doi.org/10.6026/973206300200261>

### Maladie de Charcot-Marie-Tooth d'origine mitochondriale – Mitochondrial Charcot-Marie-Tooth

51. Abati, E., Rizzuti, M., Anastasia, A., Comi, G. P., Corti, S., & Rizzo, F. (2024). Charcot-Marie-Tooth type 2A in vivo models: Current updates. *Journal of Cellular and Molecular Medicine*, 28(9), e18293. <https://doi.org/10.1111/jcmm.18293>
52. Ceprian, M., Juntas-Morales, R., Campbell, G., Walther-Louvier, U., Rivier, F., Camu, W., Esselin, F., Echaniz-Laguna, A., Stojkovic, T., Bouhour, F., Latour, P., & Tricaud, N. (2024). The Hexokinase 1 5'-UTR Mutation in Charcot-Marie-Tooth 4G Disease Alters Hexokinase 1 Binding to Voltage-Dependent Anion Channel-1 and Leads to Dysfunctional Mitochondrial Calcium Buffering. *International Journal of Molecular Sciences*, 25(8), 4364. <https://doi.org/10.3390/ijms25084364>
53. Kumar, A., Larrea, D., Pero, M. E., Infante, P., Conenna, M., Shin, G. J., Van Elias, V., Grueber, W. B., Di Marcotullio, L., Area-Gomez, E., & Bartolini, F. (2024). MFN2 coordinates mitochondria motility with  $\alpha$ -tubulin acetylation and this regulation is disrupted in CMT2A. *iScience*, 27(6), 109994. <https://doi.org/10.1016/j.isci.2024.109994>
54. Li, Z., Zeng, S., Xie, Y., Li, X., Huang, S., Zhao, H., Cao, W., Liu, L., Wang, M., Gong, Q., Liu, J., Rong, P., & Zhang, R. (2024). Genetic and clinical profile of 15 Chinese families with GDAP1-related Charcot-Marie-Tooth disease and identification of H256R as a frequent mutation. *Journal of the Peripheral Nervous System: JPNS*, 29(2), 232-242. <https://doi.org/10.1111/jns.12628>

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55. Song, B., Cho, H., Yun, J., & Moon, I. J. (2024). Cochlear implantation in patients with Charcot-Marie-Tooth disease : Two cases with a review of the literature. *European Archives of Oto-Rhino-Laryngology: Official Journal of the European Federation of Oto-Rhino-Laryngological Societies (EUFOS): Affiliated with the German Society for Oto-Rhino-Laryngology - Head and Neck Surgery*, 281(7), 3845-3851. <https://doi.org/10.1007/s00405-024-08592-2>
56. Subramanian, B., Williams, S., Karp, S., Hennino, M.-F., Jacas, S., Lee, M., Riella, C. V., Alper, S. L., Higgs, H. N., & Pollak, M. R. (2024). Missense Mutant Gain-of-Function Causes Inverted Formin 2 (INF2)-Related Focal Segmental Glomerulosclerosis (FSGS). *bioRxiv: The Preprint Server for Biology*, 2024.06.08.598088. <https://doi.org/10.1101/2024.06.08.598088>
57. Trajano, L. A. da S. N., Siqueira, P. B., Rodrigues, M. M. de S., Pires, B. R. B., da Fonseca, A. de S., & Mencialha, A. L. (2024). Does photobiomodulation alter mitochondrial dynamics? *Photochemistry and Photobiology*. <https://doi.org/10.1111/php.13963>

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### Maladies liées au gène ACO2 - ACO2-related disorders

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58. Penkl, M., Mayr, J. A., Feichtinger, R. G., Reilmann, R., Debus, O., Fobker, M., Penkl, A., Reunert, J., Rust, S., & Marquardt, T. (2024). Anaplerotic Therapy Using Triheptanoin in Two Brothers Suffering from Aconitase 2 Deficiency. *Metabolites*, 14(4), 238. <https://doi.org/10.3390/metabo14040238>

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### Maladie liée au gène GFM1 – GFM1-related disorder

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59. Cilleros-Holgado, P., Gómez-Fernández, D., Piñero-Pérez, R., Romero Domínguez, J. M., Talaverón-Rey, M., Reche-López, D., Suárez-Rivero, J. M., Álvarez-Córdoba, M., Romero-González, A., López-Cabrera, A., Oliveira, M. C. D., Rodríguez-Sacristan, A., & Sánchez-Alcázar, J. A. (2024). Polydatin and Nicotinamide Rescue the Cellular Phenotype of Mitochondrial Diseases by Mitochondrial Unfolded Protein Response (mtUPR) Activation. *Biomolecules*, 14(5), 598. <https://doi.org/10.3390/biom14050598>
60. Key, J., Gispert, S., & Auburger, G. (2024). Knockout Mouse Studies Show That Mitochondrial CLPP Peptidase and CLPX Unfoldase Act in Matrix Condensates near IMM, as Fast Stress Response in Protein Assemblies for Transcript Processing, Translation, and Heme Production. *Genes*, 15(6), 694. <https://doi.org/10.3390/genes15060694>

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### Maladies liées au gène POLG (inclus SANDO, SCAE) - POLG-related disorders (included SANDO, SCAE)

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61. Ali, M. J. (2024). Alterations of lacrimal sac vasculature in lacrimal disorders : Chromo endoscopic assessment with changes in effective spectral response. *Journal Francais D'ophtalmologie*, 47(5), 104133. <https://doi.org/10.1016/j.jfo.2024.104133>
62. Brañas Casas, R., Zuppardo, A., Risato, G., Dinarello, A., Celeghin, R., Fontana, C., Grelloni, E., Gilea, A. I., Viscomi, C., Rasola, A., Dalla Valle, L., Lodi, T., Baruffini, E., Facchinello, N., Argenton, F., & Tiso, N. (2024). Zebrafish polg2 knock-out recapitulates human POLG-disorders; implications for drug treatment. *Cell Death & Disease*, 15(4), 281. <https://doi.org/10.1038/s41419-024-06622-9>
63. Cakmak, C., & Zempel, H. (2021). A perspective on human cell models for POLG-spectrum disorders: Advantages and disadvantages of CRISPR-Cas-based vs. patient-derived iPSC models. *Medizinische Genetik: Mitteilungsblatt Des Berufsverbandes Medizinische Genetik e.V.*, 33(3), 245-249. <https://doi.org/10.1515/medgen-2021-2090>
64. Guan, Q., Zhang, Y., Wang, Z.-K., Liu, X.-H., Zou, J., & Zhang, L.-L. (2024). Skeletal phenotypes and molecular mechanisms in aging mice. *Zoological Research*, 45(4), 724-746. <https://doi.org/10.24272/j.issn.2095-8137.2023.397>
65. Hikmat, O., Naess, K., Engvall, M., Klingenberg, C., Rasmussen, M., Brodtkorb, E., Ostergaard, E., de Coo, I., Pias-Peleiteiro, L., Isohanni, P., Uusimaa, J., Majamaa, K., Kärppä, M., Ortigoza-Escobar, J. D., Tangeraas, T., Berland, S., Harrison, E., Biggs, H., Horvath, R., ... Bindoff, L. A. (2024). Status epilepticus in POLG disease : A large multinational study. *Journal of Neurology*, 271(8), 5156-5164. <https://doi.org/10.1007/s00415-024-12463-5>
66. Illés, A., Pikó, H., Árvai, K., Donka, V., Szepesi, O., Kósa, J., Lakatos, P., & Beke, A. (2024). Screening of premature ovarian insufficiency associated genes in Hungarian patients with next generation sequencing. *BMC Medical Genomics*, 17(1), 98. <https://doi.org/10.1186/s12920-024-01873-z>
67. Kristensen, E., Mathisen, L., Berland, S., Klingenberg, C., Brodtkorb, E., Rasmussen, M., Tangeraas, T., Blikrud, Y. T., Rahman, S., Bindoff, L. A., & Hikmat, O. (2024). Epidemiology and natural history of POLG disease in Norway : A nationwide cohort study. *Annals of Clinical and Translational Neurology*, 11(7), 1819-1830. <https://doi.org/10.1002/acn3.52088>

## Mitochondrial disorders : The Essentials

MMITO-2024-2 from april 1<sup>st</sup> to june 30, 2024

68. Liang, K. X., Chen, A., Kianian, A., Kristiansen, C. K., Yangzom, T., Furriol, J., Høyland, L. E., Ziegler, M., Kråkenes, T., Tzoulis, C., Fang, E. F., Sullivan, G. J., & Bindoff, L. A. (2024). Activation of Neurotoxic Astrocytes Due to Mitochondrial Dysfunction Triggered by POLG Mutation. *International Journal of Biological Sciences*, 20(8), 2860-2880. <https://doi.org/10.7150/ijbs.93445>
  
69. Lopriore, P., Palermo, G., Meli, A., Bellini, G., Benevento, E., Montano, V., Siciliano, G., Mancuso, M., & Ceravolo, R. (2024). Mitochondrial Parkinsonism : A Practical Guide to Genes and Clinical Diagnosis. *Movement Disorders Clinical Practice*, 11(8), 948-965. <https://doi.org/10.1002/mdc3.14148>
  
70. Mancuso, M., Papadopoulou, M. T., Ng, Y. S., Ardisson, A., Bellusci, M., Bertini, E., Di Vito, L., Evangelista, T., Fons, C., Hikmat, O., Horvath, R., Klopstock, T., Kornblum, C., Lamperti, C., Licchetta, L., Molnar, M. J., Varhaug, K. N., O'Callaghan, M., Pressler, R. M., ... Rahman, S. (2024). Management of seizures in patients with primary mitochondrial diseases : Consensus statement from the InterERNs Mitochondrial Working Group. *European Journal of Neurology*, 31(7), e16275. <https://doi.org/10.1111/ene.16275>
  
71. Ramesh, R., Amanmahanya, C., Krishnamoorthy, V., Krishnan, V., Palani, S., & Narasimhan Ranganathan, L. (2024). Oculomasticatory rhythmic movements, insomnia and stroke-like episodes in a patient with POLG mutation. *BMJ Case Reports*, 17(4), e259426. <https://doi.org/10.1136/bcr-2023-259426>
  
72. Ratnaike, T. E., Elkhateeb, N., Lochmüller, A., Gilmartin, C., Schon, K., Horváth, R., & Chinnery, P. F. (2024). Evidence for sodium valproate toxicity in mitochondrial diseases : A systematic analysis. *BMJ Neurology Open*, 6(1), e000650. <https://doi.org/10.1136/bmjno-2024-000650>
  
73. Riccio, A. A., Brannon, A. J., Krahn, J. M., Bouvette, J., Williams, J. G., Borgnia, M. J., & Copeland, W. C. (2024). Coordinated DNA polymerization by Poly and the region of LonP1 regulated proteolysis. *Nucleic Acids Research*, 52(13), 7863-7875. <https://doi.org/10.1093/nar/gkae539>
  
74. Trease, A. J., Totusek, S., Lichter, E. Z., Stauch, K. L., & Fox, H. S. (2024). Mitochondrial DNA Instability Supersedes Parkin Mutations in Driving Mitochondrial Proteomic Alterations and Functional Deficits in Polg Mutator Mice. *International Journal of Molecular Sciences*, 25(12), 6441. <https://doi.org/10.3390/ijms25126441>

## Mitochondrial disorders : The Essentials

MMITO-2024-2 from april 1<sup>st</sup> to june 30, 2024

75. VanPortfliet, J. J., Lei, Y., Martinez, C. G., Wong, J., Pflug, K., Sitcheran, R., Kneeland, S. C., Murray, S. A., McGuire, P. J., Cannon, C. L., & West, A. P. (2024). Caspase-11 drives macrophage hyperinflammation in models of Polg-related mitochondrial disease. *bioRxiv: The Preprint Server for Biology*, 2024.05.11.593693. <https://doi.org/10.1101/2024.05.11.593693>
76. Wang, C., Li, M., Liu, Z., Guo, Y., Liu, H., Zhao, P., & Acute Liver Failure Study Team. (2024). Genetic evaluation in indeterminate acute liver failure : A post hoc analysis. *Arab Journal of Gastroenterology: The Official Publication of the Pan-Arab Association of Gastroenterology*, 25(2), 125-128. <https://doi.org/10.1016/j.ajg.2024.03.004>

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## MELAS

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77. Argov, Z. (2024). Statins in hereditary myopathies : To give or not to give. *Neuromuscular Disorders: NMD*, 41, 35-39. <https://doi.org/10.1016/j.nmd.2024.06.004>
78. Barros, C. D. S., Coutinho, A., & Tengan, C. H. (2024). Arginine Supplementation in MELAS Syndrome : What Do We Know about the Mechanisms? *International Journal of Molecular Sciences*, 25(7), 3629. <https://doi.org/10.3390/ijms25073629>
79. Cai, H., Li, L.-M., Zhang, M., Zhou, Y., & Li, P. (2024). Case report : Late-onset MELAS syndrome with mtDNA 5783G>A mutation diagnosed by urinary sediment genetic testing. *Frontiers in Genetics*, 15, 1367716. <https://doi.org/10.3389/fgene.2024.1367716>
80. Du, J., Liu, F., Liu, X., Zhao, D., Wang, D., Sun, H., Yan, C., & Zhao, Y. (2024). Lysosomal dysfunction and overload of nucleosides in thymidine phosphorylase deficiency of MNGIE. *Journal of Translational Medicine*, 22(1), 449. <https://doi.org/10.1186/s12967-024-05275-8>
81. El Ouali, I., Naggar, A., Berrada, K., Jiddane, M., & Touarsa, F. (2024). A burning encephalitis : Fluid-attenuated inversion recovery-hyperintense lesions in Anti-myelin oligodendrocyte glycoprotein-associated encephalitis with seizures in anti-myelin oligodendrocyte glycoprotein-associated encephalitis with seizures-A case report and review of the literature. *SAGE Open Medical Case Reports*, 12, 2050313X241261021. <https://doi.org/10.1177/2050313X241261021>



## Mitochondrial disorders : The Essentials

MMITO-2024-2 from april 1<sup>st</sup> to june 30, 2024

82. Finsterer, J. (2024a). Before Attributing Malnutrition in Melas to Superior Mesenteric Artery Syndrome, all Differentials must be Excluded. *European Journal of Case Reports in Internal Medicine*, 11(4), 004388. [https://doi.org/10.12890/2024\\_004388](https://doi.org/10.12890/2024_004388)
83. Finsterer, J. (2024b). Diagnostic accuracy is required when analysing cohorts with mitochondrial disorders. *European Journal of Paediatric Neurology: EJPN: Official Journal of the European Paediatric Neurology Society*, 51, 71-72. <https://doi.org/10.1016/j.ejpn.2024.05.017>
84. Finsterer, J., & Strobl, W. (2024). Gastrointestinal involvement in neuromuscular disorders. *Journal of Gastroenterology and Hepatology*, 39(10), 1982-1993. <https://doi.org/10.1111/jgh.16650>
85. Huang, Q., Trumpff, C., Monzel, A. S., Rausser, S., Haahr, R., Devine, J., Liu, C. C., Kelly, C., Thompson, E., Kurade, M., Michelson, J., Shaulson, E. D., Li, S., Engelstad, K., Tanji, K., Lauriola, V., Wang, T., Wang, S., Zuraikat, F. M., ... Picard, M. (2024). Psychobiological regulation of plasma and saliva GDF15 dynamics in health and mitochondrial diseases. *bioRxiv: The Preprint Server for Biology*, 2024.04.19.590241. <https://doi.org/10.1101/2024.04.19.590241>
86. Khanna, S., & Smith, B. T. (2024). Neovascular Glaucoma in MELAS syndrome. *American Journal of Ophthalmology Case Reports*, 34, 102064. <https://doi.org/10.1016/j.ajoc.2024.102064>
87. Liufu, T., Zhao, X., Yu, M., Xie, Z., Meng, L., Lv, H., Zhang, W., Yuan, Y., Xing, G., Deng, J., & Wang, Z. (2024). Multiomics analysis reveals serine catabolism as a potential therapeutic target for MELAS. *FASEB Journal: Official Publication of the Federation of American Societies for Experimental Biology*, 38(12), e23742. <https://doi.org/10.1096/fj.202302286RRR>
88. Momoh, R., & Kollamparambil, S. (2024). A Case Report of a Clinically Suspected Diagnosis of Mitochondrial Encephalomyopathy, Lactic Acidosis, and Stroke-Like Episodes (MELAS) Syndrome With Cardiac Impairment. *Cureus*, 16(3), e56980. <https://doi.org/10.7759/cureus.56980>
89. Namani, S., Kavetsky, K., Lin, C.-Y., Maharjan, S., Gamper, H. B., Li, N.-S., Piccirilli, J. A., Hou, Y.-M., & Drndic, M. (2024). Unraveling RNA Conformation Dynamics in Mitochondrial Encephalomyopathy, Lactic Acidosis, and Stroke-like Episode Syndrome with Solid-State Nanopores. *ACS Nano*, 18(26), 17240-17250. <https://doi.org/10.1021/acsnano.4c04625>

## Mitochondrial disorders : The Essentials

MMITO-2024-2 from april 1<sup>st</sup> to june 30, 2024

### MERFF

90. Barbour, K., Tian, N., Yozawitz, E. G., Wolf, S., McGoldrick, P. E., Sands, T. T., Nelson, A., Basma, N., & Grinspan, Z. M. (2024). Population-based study of rare epilepsy incidence in a US urban population. *Epilepsia*, 65(8), 2341-2353. <https://doi.org/10.1111/epi.18029>
91. Dupuis, H., Lemaitre, M., Jannin, A., Douillard, C., Espiard, S., & Vantyghem, M.-C. (2024). Lipomatoses. *Annales D'endocrinologie*, 85(3), 231-247. <https://doi.org/10.1016/j.ando.2024.05.003>
92. Zhang, J., Zhou, J., Ji, C., Wu, D., & Wang, K. (2024). [Progressive myoclonic epilepsy : A retrospective study of newly-diagnosed adult patients from a single center]. *Zhonghua Yi Xue Yi Chuan Xue Za Zhi = Zhonghua Yixue Yichuanxue Zazhi = Chinese Journal of Medical Genetics*, 41(4), 432-436. <https://doi.org/10.3760/cma.j.cn511374-20230214-00073>

### Neuropathie optique héréditaire de Leber - *Leber hereditary optic neuropathy (LHON)*

93. Battista, M., Carelli, V., Bottazzi, L., Bandello, F., Cascavilla, M. L., & Barboni, P. (2024). Gene therapy for Leber hereditary optic neuropathy. *Expert Opinion on Biological Therapy*, 24(6), 521-528. <https://doi.org/10.1080/14712598.2024.2359015>
94. Bocca, C., Kouassi-Nzoughet, J., Chao de la Barca, J. M., Bonneau, D., Verny, C., Gohier, P., Orssaud, C., & Reynier, P. (2024). Letter to the editor on : Prophylactic nicotinamide treatment protects from rotenone-induced neurodegeneration by increasing mitochondrial content and volume. *Acta Neuropathologica Communications*, 12(1), 53. <https://doi.org/10.1186/s40478-024-01768-1>
95. Calcagni, A., Neveu, M. M., Jurkute, N., & Robson, A. G. (2024). Electrodiagnostic tests of the visual pathway and applications in neuro-ophthalmology. *Eye (London, England)*, 38(12), 2392-2405. <https://doi.org/10.1038/s41433-024-03154-6>
96. de Muijnck, C., van Schooneveld, M. J., Plomp, A. S., Rodenburg, R. J., van Genderen, M. M., & Boon, C. J. F. (2024). Leber's hereditary optic neuropathy like disease in MT-ATP6 variant m.8969G>A. *American Journal of Ophthalmology Case Reports*, 34, 102070. <https://doi.org/10.1016/j.ajoc.2024.102070>

## Mitochondrial disorders : The Essentials

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97. Emperador, S., Habbane, M., López-Gallardo, E., Del Rio, A., Llobet, L., Mateo, J., Sanz-López, A. M., Fernández-García, M. J., Sánchez-Tocino, H., Benbunan-Ferreiro, S., Calabuig-Goena, M., Narvaez-Palazón, C., Fernández-Vega, B., González-Iglesias, H., Urreiziti, R., Artuch, R., Pacheu-Grau, D., Bayona-Bafaluy, P., Montoya, J., & Ruiz-Pesini, E. (2024). Identification and characterization of a new pathologic mutation in a large Leber hereditary optic neuropathy pedigree. *Orphanet Journal of Rare Diseases*, 19(1), 148. <https://doi.org/10.1186/s13023-024-03165-2>
98. Esteban-Vasallo, M. D., Domínguez-Berjón, M. F., Chalco-Orrego, J. P., & González Martín-Moro, J. (2024). Prevalence of Leber hereditary optic neuropathy in the Community of Madrid (Spain), estimation with a capture-recapture method. *Orphanet Journal of Rare Diseases*, 19(1), 220. <https://doi.org/10.1186/s13023-024-03225-7>
99. Giannoccaro, M. P., Morelli, L., Ricciardiello, F., Donadio, V., Bartiromo, F., Tonon, C., Carbonelli, M., Amore, G., Carelli, V., Liguori, R., & La Morgia, C. (2024). Co-occurrence of glial fibrillary acidic protein astrocytopathy in a patient with Leber's hereditary optic neuropathy due to DNAJC30 mutations. *European Journal of Neurology*, 31(9), e16344. <https://doi.org/10.1111/ene.16344>
100. Handzic, A., Donaldson, L., & Margolin, E. (2024). Preserved Ganglion Cell Analysis in a Case of Longstanding Leber Hereditary Optic Neuropathy : A Sign of Hibernating Neurons? *Journal of Neuro-Ophthalmology: The Official Journal of the North American Neuro-Ophthalmology Society*. <https://doi.org/10.1097/WNO.0000000000002165>
101. Iorga, R. E., Munteanu-Dănulescu, R. S., & Danielescu, C. (2024). A challenging differential diagnosis—Leber's Hereditary Optic Neuropathy. *Romanian Journal of Ophthalmology*, 68(1), 65-71. <https://doi.org/10.22336/rjo.2024.13>
102. Joo, H. J., Moon, Y., & Jung, J. H. (2024). Variability of relationship between inner-retinal structural changes and visual dysfunction in optic neuropathy. *Scientific Reports*, 14(1), 12069. <https://doi.org/10.1038/s41598-024-62704-w>
103. Kaur, G., Ganev, Y., Rodriguez, W., Tseng, S., Orozco, L., & Chand, P. (2024). Deep Brain Stimulation for Medication Refractory Tremor in Leber Optic Neuropathy Plus Syndrome. *Cureus*, 16(4), e58255. <https://doi.org/10.7759/cureus.58255>
104. Lambiri, D. W., & Levin, L. A. (2024). Maculopapillary Bundle Degeneration in Optic Neuropathies. *Current Neurology and Neuroscience Reports*, 24(7), 203-218. <https://doi.org/10.1007/s11910-024-01343-0>



## Mitochondrial disorders : The Essentials

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105. Larin, I. I., Shatalova, R. O., Laktyushkin, V. S., Rybtsov, S. A., Lapshin, E. V., Shevyrev, D. V., Karabelsky, A. V., Moskalets, A. P., Klinov, D. V., & Ivanov, D. A. (2024). Deep Learning for Cell Migration in Nonwoven Materials and Evaluating Gene Transfer Effects following AAV6-ND4 Transduction. *Polymers*, 16(9), 1187. <https://doi.org/10.3390/polym16091187>
106. Lin, X., Zhou, Y., & Xue, L. (2024). Mitochondrial complex I subunit MT-ND1 mutations affect disease progression. *Heliyon*, 10(7), e28808. <https://doi.org/10.1016/j.heliyon.2024.e28808>
107. McAnnis, K. E., Ruiz-Montenegro, A., Davila, P. A., Laylani, N. A., & Lee, A. G. (2024). Leber Hereditary Optic Neuropathy Plus Phenotype With Double Point Mutations (m.11778 G>A and m.14484T>C) and Concurrent Myelin Oligodendrocyte Glycoprotein Antibody-Associated Disease (MOGAD). *Journal of Neuro-Ophthalmology: The Official Journal of the North American Neuro-Ophthalmology Society*. <https://doi.org/10.1097/WNO.0000000000002153>
108. Nagy, M. A., Cunnane, M. E., Juliano, A. F., Wiggs, J. L., Caruso, P. A., & Gaier, E. D. (2024). Optic Nerve T2 Signal Intensity and Caliber Reflect Clinical Severity in Genetic Optic Atrophy. *Journal of Neuro-Ophthalmology: The Official Journal of the North American Neuro-Ophthalmology Society*. <https://doi.org/10.1097/WNO.0000000000002191>
109. Pandya, B. U., Takyi, N. A., Vosoughi, A. R., Margolin, E. A., & Micieli, J. A. (2024). Novel Mutations in the ND5 Gene Associated With Leber Hereditary Optic Neuropathy. *Journal of Neuro-Ophthalmology: The Official Journal of the North American Neuro-Ophthalmology Society*, 44(2), e227-e229. <https://doi.org/10.1097/WNO.0000000000001796>
110. Pasol, J., Uddin, M. S., Tekin, M., & Moore, H. P. (2024). Leber Hereditary Optic Neuropathy in 2 Sisters With Friedreich Ataxia. *Journal of Neuro-Ophthalmology: The Official Journal of the North American Neuro-Ophthalmology Society*. <https://doi.org/10.1097/WNO.0000000000002143>
111. Pasqualotto, B. A., Nelson, A., Dehesi, S., Sheldon, C. A., Vogl, A. W., & Rintoul, G. L. (2024). Impaired mitochondrial morphological plasticity and failure of mitophagy associated with the G11778A mutation of LHON. *Biochemical and Biophysical Research Communications*, 721, 150119. <https://doi.org/10.1016/j.bbrc.2024.150119>

## Mitochondrial disorders : The Essentials

MMITO-2024-2 from april 1<sup>st</sup> to june 30, 2024

112. Pasqualotto, B. A., Tegeman, C., Frame, A. K., McPhedrain, R., Halangoda, K., Sheldon, C. A., & Rintoul, G. L. (2024). Galactose-replacement unmasks the biochemical consequences of the G11778A mitochondrial DNA mutation of LHON in patient-derived fibroblasts. *Experimental Cell Research*, 439(1), 114075. <https://doi.org/10.1016/j.yexcr.2024.114075>
  
113. Rajagopalan, A., Jeste, S., Borchert, M. S., & Chang, M. Y. (2024). Autosomal Recessive Leber Hereditary Optic Neuropathy Triggered by Superior Mesenteric Artery Syndrome. *Journal of Neuro-Ophthalmology: The Official Journal of the North American Neuro-Ophthalmology Society*. <https://doi.org/10.1097/WNO.0000000000002142>
  
114. Rigobello, L., Lugli, F., Caporali, L., Bartocci, A., Fadanni, J., Zerbetto, F., Iommarini, L., Carelli, V., Ghelli, A. M., & Musiani, F. (2024). A computational study to assess the pathogenicity of single or combinations of missense variants on respiratory complex I. *International Journal of Biological Macromolecules*, 273(Pt 2), 133086. <https://doi.org/10.1016/j.ijbiomac.2024.133086>
  
115. Roomets, E., & Muring, L. (2024). Autosomal recessive leber hereditary optic neuropathy in a choroideremia carrier. A case report. *European Journal of Ophthalmology*, 34(5), NP1-NP7. <https://doi.org/10.1177/11206721241254408>
  
116. Takai, Y., Yamagami, A., & Ishikawa, H. (2024). [Leber's hereditary optic neuropathy]. *Rinsho Shinkeigaku = Clinical Neurology*, 64(5), 326-332. <https://doi.org/10.5692/clinicalneuro.cn-001924>
  
117. Xiao, D., Lhamo, T., Meng, Y., Xu, Y., & Chen, C. (2024). Peripapillary hyperreflective ovoid mass-like structures : Multimodal imaging and associated diseases. *Frontiers in Neurology*, 15, 1379801. <https://doi.org/10.3389/fneur.2024.1379801>
  
118. Xie, Q., Wu, H., Long, H., Xiao, C., Qiu, J., Yu, W., Jiang, X., Liu, J., Zhang, S., Lyu, Q., Suo, L., & Kuang, Y. (2024). Secondary follicles enable efficient germline mtDNA base editing at hard-to-edit site. *Molecular Therapy. Nucleic Acids*, 35(2), 102170. <https://doi.org/10.1016/j.omtn.2024.102170>
  
119. Yang, H. K., Seong, M.-W., Kim, J. Y., Park, S. S., & Hwang, J.-M. (2024). Poor visual prognosis of Asian patients with 3460 mitochondrial DNA mutation in Leber's hereditary optic neuropathy. *Canadian Journal of Ophthalmology. Journal Canadien D'ophtalmologie*, S0008-4182(24)00095-4. <https://doi.org/10.1016/j.jcjo.2024.03.013>



## Mitochondrial disorders : The Essentials

MMITO-2024-2 from april 1<sup>st</sup> to june 30, 2024

120. Yasin, A. L., Mendoza-Santiesteban, C. E., Khodeiry, M. M., & Lam, B. L. (2024). Atypical Late-Onset Leber Hereditary Optic Neuropathy (LHON) Associated With T14484C Mutation. *Journal of Neuro-Ophthalmology: The Official Journal of the North American Neuro-Ophthalmology Society*, 44(2), e224-e226. <https://doi.org/10.1097/WNO.0000000000001835>

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### Ophthalmoplégie externe progressive – Progressive external ophthalmoplegia (PEO)

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121. Dombi, E., Marinaki, T., Spingardi, P., Millar, V., Hadjichristou, N., Carver, J., Johnston, I. G., Fratter, C., & Poulton, J. (2024). Nucleoside supplements as treatments for mitochondrial DNA depletion syndrome. *Frontiers in Cell and Developmental Biology*, 12, 1260496. <https://doi.org/10.3389/fcell.2024.1260496>
122. Moustaine, M. O., Azemour, Z., Mohammed, F., Benlanda, O., Nassik, H., & Karkouri, M. (2024). Management of Ptosis in Kearns-Sayre Syndrome : A Case Report and Literature Review. *Archives of Plastic Surgery*, 51(2), 182-186. <https://doi.org/10.1055/a-2207-7587>

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### Syndrome d'Alpers-Huttenlocher - Alpers-Huttenlocher syndrome

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123. Barbour, K., Tian, N., Yozawitz, E. G., Wolf, S., McGoldrick, P. E., Sands, T. T., Nelson, A., Basma, N., & Grinspan, Z. M. (2024). Population-based study of rare epilepsy incidence in a US urban population. *Epilepsia*, 65(8), 2341-2353. <https://doi.org/10.1111/epi.18029>
124. Dombi, E., Marinaki, T., Spingardi, P., Millar, V., Hadjichristou, N., Carver, J., Johnston, I. G., Fratter, C., & Poulton, J. (2024). Nucleoside supplements as treatments for mitochondrial DNA depletion syndrome. *Frontiers in Cell and Developmental Biology*, 12, 1260496. <https://doi.org/10.3389/fcell.2024.1260496>

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### Syndrome de Kearns-Sayre – Kearns-Sayre syndrome

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125. Moustaine, M. O., Azemour, Z., Mohammed, F., Benlanda, O., Nassik, H., & Karkouri, M. (2024). Management of Ptosis in Kearns-Sayre Syndrome : A Case Report and Literature Review. *Archives of Plastic Surgery*, 51(2), 182-186. <https://doi.org/10.1055/a-2207-7587>

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### Syndrome de Leigh - Leigh syndrome

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126. Alfaraidi, A. T., ALSulimani, N. K., & Garout, W. (2024). Incidental Finding of MEGDEL Syndrome at a Tertiary Care Center in Saudi Arabia. *Cureus*, 16(3), e55308. <https://doi.org/10.7759/cureus.55308>
127. Amar, Z., Hussaini, H., Kachhadia, M. P., Samreen, I., Mohamed, A. S., & Nasir, H. (2024). Late-Onset Leigh Syndrome With Protracted Gastrointestinal Manifestations : A Rare Case Report. *Cureus*, 16(5), e59669. <https://doi.org/10.7759/cureus.59669>
128. Ball, M., Thorburn, D. R., & Rahman, S. (1993). Mitochondrial DNA-Associated Leigh Syndrome Spectrum. In M. P. Adam, J. Feldman, G. M. Mirzaa, R. A. Pagon, S. E. Wallace, & A. Amemiya (Éds.), *GeneReviews*®. University of Washington, Seattle. <http://www.ncbi.nlm.nih.gov/books/NBK1173/>
129. Bernhardt, I., Frajman, L. E., Ryder, B., Andersen, E., Wilson, C., McKeown, C., Anderson, T., Coman, D., Vincent, A. L., Buchanan, C., Roxburgh, R., Pitt, J., De Hora, M., Christodoulou, J., Thorburn, D. R., Wilson, F., Drake, K. M., Leask, M., Yardley, A.-M., ... Glamuzina, E. (2024). Further delineation of short-chain enoyl-CoA hydratase deficiency in the Pacific population. *Molecular Genetics and Metabolism*, 142(3), 108508. <https://doi.org/10.1016/j.ymgme.2024.108508>
130. Galosi, S., Mancini, C., Commone, A., Calligari, P., Caputo, V., Nardecchia, F., Carducci, C., van den Heuvel, L. P., Pizzi, S., Bruselles, A., Niceta, M., Martinelli, S., Rodenburg, R. J., Tartaglia, M., & Leuzzi, V. (2024). Biallelic Variants of MRPS36 Cause a New Form of Leigh Syndrome. *Movement Disorders: Official Journal of the Movement Disorder Society*, 39(7), 1225-1231. <https://doi.org/10.1002/mds.29795>
131. Gélinas, R., Lévesque, C., Thompson Legault, J., Rivard, M.-E., Villeneuve, L., Laprise, C., & Rioux, J. D. (2024). Human induced pluripotent stem cells (hiPSCs) derived cells reflect tissue specificity found in patients with Leigh syndrome French Canadian variant (LSFC). *Frontiers in Genetics*, 15, 1375467. <https://doi.org/10.3389/fgene.2024.1375467>
132. Hanaford, A. R., Khanna, A., James, K., Truong, V., Liao, R., Chen, Y., Mulholland, M., Kayser, E.-B., Watanabe, K., Hsieh, E. S., Sedensky, M., Morgan, P. G., Kalia, V., Sarkar, S., & Johnson, S. C. (2024). Interferon-gamma contributes to disease progression in the Ndufs4(-/-) model of Leigh syndrome. *Neuropathology and Applied Neurobiology*, 50(3), e12977. <https://doi.org/10.1111/nan.12977>

## Mitochondrial disorders : The Essentials

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133. Kanemaru, E., Shimoda, K., Marutani, E., Morita, M., Miranda, M., Miyazaki, Y., Sinow, C., Sharma, R., Dong, F., Bloch, D. B., Akaike, T., & Ichinose, F. (2024). Exclusion of sulfide:quinone oxidoreductase from mitochondria causes Leigh-like disease in mice by impairing sulfide metabolism. *The Journal of Clinical Investigation*, 134(15), e170994. <https://doi.org/10.1172/JCI170994>
  
134. Kayser, E.-B., Chen, Y., Mulholland, M., Truong, V., James, K., Hanaford, A., & Johnson, S. (2024). Evaluating the efficacy of vatiquinone in preclinical models of mitochondrial disease. *Research Square*, rs.3.rs-4202689. <https://doi.org/10.21203/rs.3.rs-4202689/v1>
  
135. Kistol, D., Tsygankova, P., Bostanova, F., Orlova, M., & Zakharova, E. (2024). New Case of Spinocerebellar Ataxia, Autosomal Recessive 4, Due to VPS13D Variants. *International Journal of Molecular Sciences*, 25(10), 5127. <https://doi.org/10.3390/ijms25105127>
  
136. Kobayashi, M., Miyauchi, A., Jimbo, E. F., Oishi, N., Aoki, S., Watanabe, M., Yoshikawa, Y., Akiyama, Y., Yamagata, T., & Osaka, H. (2024). Synthetic aporphine alkaloids are potential therapeutics for Leigh syndrome. *Scientific Reports*, 14(1), 11561. <https://doi.org/10.1038/s41598-024-62445-w>
  
137. Kowalska, A., Figura, M., Zawadka, M., & Kozirowski, D. (2024). Pyruvate dehydrogenase-E1 $\alpha$  deficiency presenting as generalized dystonia : A genetic diagnosis with important clinical implications. *Clinical Neurology and Neurosurgery*, 241, 108307. <https://doi.org/10.1016/j.clineuro.2024.108307>
  
138. Mahesan, A., Choudhary, P. K., Kamila, G., Rohil, A., Meena, A. K., Kumar, A., Jauhari, P., Chakrabarty, B., & Gulati, S. (2024). NDUFV1-Related Mitochondrial Complex-1 Disorders : A Retrospective Case Series and Literature Review. *Pediatric Neurology*, 155, 91-103. <https://doi.org/10.1016/j.pediatrneurol.2024.02.012>
  
139. Meldau, S., Ackermann, S., Riordan, G., van der Watt, G. F., Spencer, C., Raga, S., Khan, K., Blackhurst, D. M., & van der Westhuizen, F. H. (2024). A novel mitochondrial DNA variant in MT-ND6 : M.14430A>C p.(Trp82Gly) identified in a patient with Leigh syndrome and complex I deficiency. *Molecular Genetics and Metabolism Reports*, 39, 101078. <https://doi.org/10.1016/j.ymgmr.2024.101078>
  
140. Misceo, D., Strømme, P., Bitarafan, F., Chawla, M. S., Sheng, Y., Bach de Courtade, S. M., Eide, L., & Frengen, E. (2024). Biallelic NDUF4 Deletion Causes Mitochondrial Complex IV Deficiency in a Patient with Leigh Syndrome. *Genes*, 15(4), 500. <https://doi.org/10.3390/genes15040500>

## Mitochondrial disorders : The Essentials

MMITO-2024-2 from april 1<sup>st</sup> to june 30, 2024

141. Moreno-Loshuertos, R., & Fernández-Silva, P. (2024). Isolation of Mitochondria for Mitochondrial Supercomplex Analysis from Small Tissue and Cell Culture Samples. *Journal of Visualized Experiments: JoVE*, 207. <https://doi.org/10.3791/66771>
  
142. Reynaud-Dulaurier, R., Clément, R., Yjjou, S., Cresson, C., Saoudi, Y., Faideau, M., & Decressac, M. (2024). The Blood-Brain Barrier Is Unaffected in the Ndufs4-/- Mouse Model of Leigh Syndrome. *International Journal of Molecular Sciences*, 25(9), 4828. <https://doi.org/10.3390/ijms25094828>
  
143. Sasaki, M., Okanishi, T., Matsuoka, T., Yoshimura, A., Maruyama, S., Shiohama, T., Hoshino, H., Mori, T., Majima, H., Matsumoto, H., Kobayashi, S., Chiyonobu, T., Matsushige, T., Nakamura, K., Kubota, K., Tanaka, R., Fujita, T., Enoki, H., Suzuki, Y., ... Maegaki, Y. (2024). Infantile Epileptic Spasms Syndrome Complicated by Leigh Syndrome and Leigh-Like Syndrome : A Retrospective, Nationwide, Multicenter Case Series. *Pediatric Neurology*, 157, 29-38. <https://doi.org/10.1016/j.pediatrneurol.2024.05.007>
  
144. Tian, D., Cui, M., & Han, M. (2024). Bacterial mucopeptides promote OXPHOS and suppress mitochondrial stress in mammals. *Cell Reports*, 43(4), 114067. <https://doi.org/10.1016/j.celrep.2024.114067>
  
145. Wortmann, S. B., Feichtinger, R. G., Abela, L., van Gemert, L. A., Aubart, M., Dufeu-Berat, C.-M., Boddaert, N., de Coo, R., Stühn, L., Hebbink, J., Heinritz, W., Hildebrandt, J., Himmelreich, N., Korenke, C., Lehman, A., Leyland, T., Makowski, C., Martinez Marin, R. J., Marzin, P., ... Willemsen, M. A. (2024). Clinical, Neuroimaging, and Metabolic Footprint of the Neurodevelopmental Disorder Caused by Monoallelic HK1 Variants. *Neurology Genetics*, 10(2), e200146. <https://doi.org/10.1212/NXG.0000000000200146>

## Mitochondrial disorders : The Essentials

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### Maladies mitochondriales (autres) – Mitochondrial disorders (other)

146. Agostini, F., Pereyra, L., Dale, J., Yambire, K. F., Maglioni, S., Schiavi, A., Ventura, N., Milosevic, I., & Raimundo, N. (2024). Upregulation of cholesterol synthesis by lysosomal defects requires a functional mitochondrial respiratory chain. *The Journal of Biological Chemistry*, 300(7), 107403. <https://doi.org/10.1016/j.jbc.2024.107403>
147. Aguilar, K., Jakubek, P., Zorzano, A., & Wieckowski, M. R. (2024). Primary mitochondrial diseases: The intertwined pathophysiology of bioenergetic dysregulation, oxidative stress and neuroinflammation. *European Journal of Clinical Investigation*, 54(7), e14217. <https://doi.org/10.1111/eci.14217>
148. Antolínez-Fernández, Á., Esteban-Ramos, P., Fernández-Moreno, M. Á., & Clemente, P. (2024). Molecular pathways in mitochondrial disorders due to a defective mitochondrial protein synthesis. *Frontiers in Cell and Developmental Biology*, 12, 1410245. <https://doi.org/10.3389/fcell.2024.1410245>
149. Argov, Z. (2024). Statins in hereditary myopathies: To give or not to give. *Neuromuscular Disorders: NMD*, 41, 35-39. <https://doi.org/10.1016/j.nmd.2024.06.004>
150. Ball, M., Thorburn, D. R., & Rahman, S. (1993). Mitochondrial DNA-Associated Leigh Syndrome Spectrum. In M. P. Adam, J. Feldman, G. M. Mirzaa, R. A. Pagon, S. E. Wallace, & A. Amemiya (Éds.), *GeneReviews*®. University of Washington, Seattle. <http://www.ncbi.nlm.nih.gov/books/NBK1173/>
151. Barros, C. D. S., Coutinho, A., & Tengan, C. H. (2024). Arginine Supplementation in MELAS Syndrome : What Do We Know about the Mechanisms? *International Journal of Molecular Sciences*, 25(7), 3629. <https://doi.org/10.3390/ijms25073629>
152. Battista, M., Carelli, V., Bottazzi, L., Bandello, F., Cascavilla, M. L., & Barboni, P. (2024). Gene therapy for Leber hereditary optic neuropathy. *Expert Opinion on Biological Therapy*, 24(6), 521-528. <https://doi.org/10.1080/14712598.2024.2359015>
153. Bermejo-Guerrero, L., Hernández-Voth, A., Serrano-Lorenzo, P., Blázquez, A., Martín-Jimenez, P., Martín, M. A., & Domínguez-González, C. (2024). Remarkable clinical improvement with oral nucleoside treatment in a patient with adult-onset TK2 deficiency: A case report. *Mitochondrion*, 76, 101879. <https://doi.org/10.1016/j.mito.2024.101879>
154. Bernardino Gomes, T. M., Vincent, A. E., Menger, K. E., Stewart, J. B., & Nicholls, T. J. (2024). Mechanisms and pathologies of human mitochondrial DNA replication and deletion formation. *The Biochemical Journal*, 481(11), 683-715. <https://doi.org/10.1042/BCJ20230262>

## Mitochondrial disorders : The Essentials

MMITO-2024-2 from april 1<sup>st</sup> to june 30, 2024

155. Brañas Casas, R., Zuppardo, A., Risato, G., Dinarello, A., Celeghin, R., Fontana, C., Grelloni, E., Gilea, A. I., Viscomi, C., Rasola, A., Dalla Valle, L., Lodi, T., Baruffini, E., Facchinello, N., Argenton, F., & Tiso, N. (2024). Zebrafish polg2 knock-out recapitulates human POLG-disorders; implications for drug treatment. *Cell Death & Disease*, 15(4), 281. <https://doi.org/10.1038/s41419-024-06622-9>
156. Brischigliaro, M., Sierra-Magro, A., Ahn, A., & Barrientos, A. (2024). Mitochondrial ribosome biogenesis and redox sensing. *FEBS Open Bio*, 14(10), 1640-1655. <https://doi.org/10.1002/2211-5463.13844>
157. Burr, S. P., & Chinnery, P. F. (2024). Origins of tissue and cell-type specificity in mitochondrial DNA (mtDNA) disease. *Human Molecular Genetics*, 33(R1), R3-R11. <https://doi.org/10.1093/hmg/ddae059>
158. Bury, A., Pyle, A., Vincent, A. E., Actis, P., & Hudson, G. (2024). Nanobiopsy investigation of the subcellular mtDNA heteroplasmy in human tissues. *Scientific Reports*, 14(1), 13789. <https://doi.org/10.1038/s41598-024-64455-0>
159. Cai, H., Li, L.-M., Zhang, M., Zhou, Y., & Li, P. (2024). Case report : Late-onset MELAS syndrome with mtDNA 5783G>A mutation diagnosed by urinary sediment genetic testing. *Frontiers in Genetics*, 15, 1367716. <https://doi.org/10.3389/fgene.2024.1367716>
160. Caron-Godon, C. A., Collington, E., Wolf, J. L., Coletta, G., & Glerum, D. M. (2024). More than Just Bread and Wine : Using Yeast to Understand Inherited Cytochrome Oxidase Deficiencies in Humans. *International Journal of Molecular Sciences*, 25(7), 3814. <https://doi.org/10.3390/ijms25073814>
161. Chen, C., Tang, D., Xu, S., Xiang, L., Wang, B., Yao, Y., Li, Z., Lin, S., Li, S., Shi, X., Gu, C., & Gao, W. (2024). The promotion of non-small cell lung cancer progression by collagen and calcium binding EGF domain 1 is mediated through the regulation of ERK/JNK/P38 phosphorylation by reactive oxygen species. *Molecular Carcinogenesis*, 63(8), 1467-1485. <https://doi.org/10.1002/mc.23736>
162. Chen, J., & Gao, L. (2024). SLC7A11-mediated cystine import protects against NDUFS7 deficiency-induced cell death in HEK293T cells. *Biochemical and Biophysical Research Communications*, 723, 150178. <https://doi.org/10.1016/j.bbrc.2024.150178>
163. Chen, Y., Xu, R., Liu, Q., Zeng, Y., Chen, W., Liu, Y., Cao, Y., Liu, G., & Chen, Y. (2024). Rosmarinic acid ameliorated oxidative stress, neuronal injuries, and mitochondrial dysfunctions mediated by polyglutamine and  $\alpha$ -synuclein in *Caenorhabditis elegans* models. *Molecular Neurobiology*. <https://doi.org/10.1007/s12035-024-04206-4>

## Mitochondrial disorders : The Essentials

MMITO-2024-2 from april 1<sup>st</sup> to june 30, 2024

164. Ciki, K., Alavanda, C., & Kara, M. (2024). Novel Mutation in the HSD17B10 Gene Accompanied by Dysmorphic Findings in Female Patients. *Molecular Syndromology*, 15(3), 211-216. <https://doi.org/10.1159/000535589>
165. Cilleros-Holgado, P., Gómez-Fernández, D., Piñero-Pérez, R., Romero Domínguez, J. M., Talaverón-Rey, M., Reche-López, D., Suárez-Rivero, J. M., Álvarez-Córdoba, M., Romero-González, A., López-Cabrera, A., Oliveira, M. C. D., Rodríguez-Sacristan, A., & Sánchez-Alcázar, J. A. (2024). Polydatin and Nicotinamide Rescue the Cellular Phenotype of Mitochondrial Diseases by Mitochondrial Unfolded Protein Response (mtUPR) Activation. *Biomolecules*, 14(5), 598. <https://doi.org/10.3390/biom14050598>
166. Constante, A. D., Abreu, S. M., & Trigo, C. (2024). Mitochondrial cardiomyopathy : A puzzle for the final diagnosis. *Cardiology in the Young*, 34(6), 1393-1396. <https://doi.org/10.1017/S1047951124025095>
167. Corral-Sarasa, J., Martínez-Gálvez, J. M., González-García, P., Wendling, O., Jiménez-Sánchez, L., López-Herrador, S., Quinzii, C. M., Díaz-Casado, M. E., & López, L. C. (2024). 4-Hydroxybenzoic acid rescues multisystemic disease and perinatal lethality in a mouse model of mitochondrial disease. *Cell Reports*, 43(5), 114148. <https://doi.org/10.1016/j.celrep.2024.114148>
168. Cramer, J. J., Palmer, C. S., Stait, T., Jackson, T. D., Lynch, M., Sinclair, A., Frajman, L. E., Compton, A. G., Coman, D., Thorburn, D. R., Frazier, A. E., & Stojanovski, D. (2024). Reduced Protein Import via TIM23 SORT Drives Disease Pathology in TIMM50-Associated Mitochondrial Disease. *Molecular and Cellular Biology*, 44(6), 226-244. <https://doi.org/10.1080/10985549.2024.2353652>
169. Cwerman-Thibault, H., Malko-Baverel, V., Le Guilloux, G., Torres-Cuevas, I., Ratcliffe, E., Mouri, D., Mignon, V., Saubaméa, B., Boespflug-Tanguy, O., Gressens, P., & Corral-Debrinski, M. (2024). Harlequin mice exhibit cognitive impairment, severe loss of Purkinje cells and a compromised bioenergetic status due to the absence of Apoptosis Inducing Factor. *Biochimica Et Biophysica Acta. Molecular Basis of Disease*, 1870(7), 167272. <https://doi.org/10.1016/j.bbadis.2024.167272>
170. Dobner, J., Nguyen, T., Pavez-Giani, M. G., Cyganek, L., Distelmaier, F., Krutmann, J., Prigione, A., & Rossi, A. (2024). mtDNA analysis using Mitopore. *Molecular Therapy. Methods & Clinical Development*, 32(2), 101231. <https://doi.org/10.1016/j.omtm.2024.101231>
171. Dupuis, H., Lemaitre, M., Jannin, A., Douillard, C., Espiard, S., & Vantyghem, M.-C. (2024). Lipomatoses. *Annales D'endocrinologie*, 85(3), 231-247. <https://doi.org/10.1016/j.ando.2024.05.003>

## Mitochondrial disorders : The Essentials

MMITO-2024-2 from april 1<sup>st</sup> to june 30, 2024

172. Eller, M. M., Zuberi, A. R., Fu, X., Burgess, S. C., Lutz, C. M., & Bailey, R. M. (2024). Valine and Inflammation Drive Epilepsy in a Mouse Model of ECHS1 Deficiency. *bioRxiv: The Preprint Server for Biology*, 2024.06.13.598697. <https://doi.org/10.1101/2024.06.13.598697>
173. Esteban-Vasallo, M. D., Domínguez-Berjón, M. F., Chalco-Orrego, J. P., & González Martín-Moro, J. (2024). Prevalence of Leber hereditary optic neuropathy in the Community of Madrid (Spain), estimation with a capture-recapture method. *Orphanet Journal of Rare Diseases*, 19(1), 220. <https://doi.org/10.1186/s13023-024-03225-7>
174. Falkenberg, M., Larsson, N.-G., & Gustafsson, C. M. (2024). Replication and Transcription of Human Mitochondrial DNA. *Annual Review of Biochemistry*, 93(1), 47-77. <https://doi.org/10.1146/annurev-biochem-052621-092014>
175. Finsterer, J. (2024). Diagnostic accuracy is required when analysing cohorts with mitochondrial disorders. *European Journal of Paediatric Neurology: EJPN: Official Journal of the European Paediatric Neurology Society*, 51, 71-72. <https://doi.org/10.1016/j.ejpn.2024.05.017>
176. Finsterer, J., & Strobl, W. (2024). Gastrointestinal involvement in neuromuscular disorders. *Journal of Gastroenterology and Hepatology*, 39(10), 1982-1993. <https://doi.org/10.1111/jgh.16650>
177. Fortin, O., Christoffel, K., Shoaib, A., Venkatesan, C., Cilli, K., Schroeder, J. W., Alves, C., Ganetzky, R. D., & Fraser, J. L. (2024). Characteristic Fetal Brain MRI Abnormalities in Pyruvate Dehydrogenase Complex Deficiency. *medRxiv: The Preprint Server for Health Sciences*, 2024.04.08.24303574. <https://doi.org/10.1101/2024.04.08.24303574>
178. Galosi, S., Mancini, C., Commone, A., Calligari, P., Caputo, V., Nardecchia, F., Carducci, C., van den Heuvel, L. P., Pizzi, S., Bruselles, A., Niceta, M., Martinelli, S., Rodenburg, R. J., Tartaglia, M., & Leuzzi, V. (2024). Biallelic Variants of MRPS36 Cause a New Form of Leigh Syndrome. *Movement Disorders: Official Journal of the Movement Disorder Society*, 39(7), 1225-1231. <https://doi.org/10.1002/mds.29795>
179. Georgiou, T., Petrou, P. P., Malekkou, A., Ioannou, I., Gavatha, M., Skordis, N., Nicolaidou, P., Savvidou, I., Athanasiou, E., Ourani, S., Papamichael, E., Vogazianos, M., Dionysiou, M., Mavrikiou, G., Grafakou, O., Tanteles, G. A., Anastasiadou, V., & Drousiotou, A. (2024). Inherited metabolic disorders in Cyprus. *Molecular Genetics and Metabolism Reports*, 39, 101083. <https://doi.org/10.1016/j.ymgmr.2024.101083>

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MMITO-2024-2 from april 1<sup>st</sup> to june 30, 2024

180. Gervasoni, J., Primiano, A., Cicchinelli, M., Santucci, L., Servidei, S., Urbani, A., Primiano, G., & Iavarone, F. (2024). Mitochondrial Biomarkers in the Omics Era : A Clinical-Pathophysiological Perspective. *International Journal of Molecular Sciences*, 25(9), 4855. <https://doi.org/10.3390/ijms25094855>
181. Giannoccaro, M. P., Morelli, L., Ricciardiello, F., Donadio, V., Bartiromo, F., Tonon, C., Carbonelli, M., Amore, G., Carelli, V., Liguori, R., & La Morgia, C. (2024). Co-occurrence of glial fibrillary acidic protein astrocytopathy in a patient with Leber's hereditary optic neuropathy due to DNAJC30 mutations. *European Journal of Neurology*, 31(9), e16344. <https://doi.org/10.1111/ene.16344>
182. Gómez González, C., Del Campo Cano, I., Isabel Fernández-Avila, A., Paz Suárez-Mier, M., José Sagastizábal, M., Álvarez García-Rovés, R., Méndez Fernández, I., Vilches, S., Centeno Jiménez, M., Siles Sánchez-Manjavacas, A., Usano Carrasco, A., Gonzalez-Vioque, E., Pablo Ochoa, J., Medrano, C., González López, E., García-Pavía, P., Bermejo, J., & Angeles Espinosa Castro, M. (2024). Sudden cardiac death triggered by minimal alcohol consumption in the context of novel PPA2 mutations in 2 unrelated families. *Gene*, 916, 148437. <https://doi.org/10.1016/j.gene.2024.148437>
183. Gupta, V., Jolly, B., Bhojar, R. C., Divakar, M. K., Jain, A., Mishra, A., Senthivel, V., Imran, M., Scaria, V., & Sivasubbu, S. (2024). Spectrum of rare and common mitochondrial DNA variations from 1029 whole genomes of self-declared healthy individuals from India. *Computational Biology and Chemistry*, 112, 108118. <https://doi.org/10.1016/j.compbiolchem.2024.108118>
184. Han, X., Li, H., Deng, J., Zhuo, X., Liu, Z., Xu, M., Feng, W., Chen, S., & Fang, F. (2024). Genotype and Phenotype Characteristics of 58 Cases of Mitochondrial Epilepsy with Nuclear DNA Mutations in Children. *Neurological Sciences: Official Journal of the Italian Neurological Society and of the Italian Society of Clinical Neurophysiology*, 45(11), 5465-5480. <https://doi.org/10.1007/s10072-024-07586-6>
185. Hanaford, A. R., Khanna, A., James, K., Truong, V., Liao, R., Chen, Y., Mulholland, M., Kayser, E.-B., Watanabe, K., Hsieh, E. S., Sedensky, M., Morgan, P. G., Kalia, V., Sarkar, S., & Johnson, S. C. (2024). Interferon-gamma contributes to disease progression in the Ndufs4(-/-) model of Leigh syndrome. *Neuropathology and Applied Neurobiology*, 50(3), e12977. <https://doi.org/10.1111/nan.12977>
186. Haque, S., Crawley, K., Davis, R., Schofield, D., Shrestha, R., & Sue, C. M. (2024). Clinical drivers of hospitalisation in patients with mitochondrial diseases. *BMJ Neurology Open*, 6(1), e000717. <https://doi.org/10.1136/bmjno-2024-000717>

## Mitochondrial disorders : The Essentials

MMITO-2024-2 from april 1<sup>st</sup> to june 30, 2024

187. Hassani, S., & Esmaeili, A. (2024). The neuroprotective effects of ferulic acid in toxin-induced models of Parkinson's disease : A review. *Ageing Research Reviews*, 97, 102299. <https://doi.org/10.1016/j.arr.2024.102299>
188. Heath, O., Hammerl, E., Spitzinger, A., & Wortmann, S. B. (2024). Ending an Odyssey? The Psychosocial Experiences of Parents after the Genetic Diagnosis of a Mitochondrial Disease in Children. *Journal of Personalized Medicine*, 14(5), 523. <https://doi.org/10.3390/jpm14050523>
189. Hikmat, O., Naess, K., Engvall, M., Klingenberg, C., Rasmussen, M., Brodtkorb, E., Ostergaard, E., de Coo, I., Pias-Peleteiro, L., Isohanni, P., Uusimaa, J., Majamaa, K., Kärppä, M., Ortigoza-Escobar, J. D., Tangeraas, T., Berland, S., Harrison, E., Biggs, H., Horvath, R., ... Bindoff, L. A. (2024). Status epilepticus in POLG disease : A large multinational study. *Journal of Neurology*, 271(8), 5156-5164. <https://doi.org/10.1007/s00415-024-12463-5>
190. Huang, D., Li, Y., Han, J., Zuo, H., Liu, H., & Chen, Z. (2024). Xbp1 promotes odontoblastic differentiation through modulating mitochondrial homeostasis. *FASEB Journal: Official Publication of the Federation of American Societies for Experimental Biology*, 38(7), e23600. <https://doi.org/10.1096/fj.202400186R>
191. Huang, Q., Trumpff, C., Monzel, A. S., Rausser, S., Haahr, R., Devine, J., Liu, C. C., Kelly, C., Thompson, E., Kurade, M., Michelson, J., Shaulson, E. D., Li, S., Engelstad, K., Tanji, K., Lauriola, V., Wang, T., Wang, S., Zuraikat, F. M., ... Picard, M. (2024). Psychobiological regulation of plasma and saliva GDF15 dynamics in health and mitochondrial diseases. *bioRxiv: The Preprint Server for Biology*, 2024.04.19.590241. <https://doi.org/10.1101/2024.04.19.590241>
192. Hughes, L. A., Rackham, O., & Filipovska, A. (2024). Illuminating mitochondrial translation through mouse models. *Human Molecular Genetics*, 33(R1), R61-R79. <https://doi.org/10.1093/hmg/ddae020>
193. Indelicato, E., Schlieben, L. D., Stenton, S. L., Boesch, S., Skorvanek, M., Ncpal, J., Jech, R., Winkelmann, J., Prokisch, H., & Zech, M. (2024). Dystonia and mitochondrial disease: The movement disorder connection revisited in 900 genetically diagnosed patients. *Journal of Neurology*, 271(7), 4685-4692. <https://doi.org/10.1007/s00415-024-12447-5>
194. Iwami, K., Kano, T., Mizushima, K., Yaguchi, H., Nishino, I., & Houzen, H. (2024). [Diagnosis of anti-melanoma differentiation-associated gene 5 antibody-positive dermatomyositis led by sarcoplasmic myxovirus resistance protein A expression on muscle pathology]. *Rinsho Shinkeigaku = Clinical Neurology*, 64(7), 480-485. <https://doi.org/10.5692/clinicalneurology.cn-001963>

**Mitochondrial disorders : The Essentials**

MMITO-2024-2 from april 1<sup>st</sup> to june 30, 2024

195. Jiao, Q., Xiang, L., & Chen, Y. (2024). Mitochondrial transplantation : A promising therapy for mitochondrial disorders. *International Journal of Pharmaceutics*, 658, 124194. <https://doi.org/10.1016/j.ijpharm.2024.124194>
196. Kanemaru, E., Shimoda, K., Marutani, E., Morita, M., Miranda, M., Miyazaki, Y., Sinow, C., Sharma, R., Dong, F., Bloch, D. B., Akaike, T., & Ichinose, F. (2024). Exclusion of sulfide:quinone oxidoreductase from mitochondria causes Leigh-like disease in mice by impairing sulfide metabolism. *The Journal of Clinical Investigation*, 134(15), e170994. <https://doi.org/10.1172/JCI170994>
197. Kang, Y., Hepojoki, J., Maldonado, R. S., Mito, T., Terzioglu, M., Manninen, T., Kant, R., Singh, S., Othman, A., Verma, R., Uusimaa, J., Wartiovaara, K., Kareinen, L., Zamboni, N., Nyman, T. A., Paetau, A., Kipar, A., Vapalahti, O., & Suomalainen, A. (2024). Ancestral allele of DNA polymerase gamma modifies antiviral tolerance. *Nature*, 628(8009), 844-853. <https://doi.org/10.1038/s41586-024-07260-z>
198. Kaufman, O., Donnelly, C., Cork, E., Fiel, M. I., Chu, J., & Ganesh, J. (2024). Shwachman-Diamond syndrome mimicking mitochondrial hepatopathy. *JPGN Reports*, 5(2), 213-217. <https://doi.org/10.1002/jpr3.12064>
199. Kaur, G., Ganev, Y., Rodriguez, W., Tseng, S., Orozco, L., & Chand, P. (2024). Deep Brain Stimulation for Medication Refractory Tremor in Leber Optic Neuropathy Plus Syndrome. *Cureus*, 16(4), e58255. <https://doi.org/10.7759/cureus.58255>
200. Kayser, E.-B., Chen, Y., Mulholland, M., Truong, V., James, K., Hanaford, A., & Johnson, S. (2024). Evaluating the efficacy of vatiquinone in preclinical models of mitochondrial disease. *Research Square*, rs.3.rs-4202689. <https://doi.org/10.21203/rs.3.rs-4202689/v1>
201. Kobayashi, M., Miyauchi, A., Jimbo, E. F., Oishi, N., Aoki, S., Watanabe, M., Yoshikawa, Y., Akiyama, Y., Yamagata, T., & Osaka, H. (2024). Synthetic aporphine alkaloids are potential therapeutics for Leigh syndrome. *Scientific Reports*, 14(1), 11561. <https://doi.org/10.1038/s41598-024-62445-w>
202. Kousa, A., Ahmed, R., & Alasmar, P. D. (2024). Syrian child carrying multiple pathogenic variants in MBOAT7 and MT-TS1 genes: A case report on neurodevelopmental phenotypes and mitochondrial inheritance. *Annals of Medicine and Surgery* (2012), 86(5), 3086-3089. <https://doi.org/10.1097/MS9.0000000000001941>

## Mitochondrial disorders : The Essentials

MMITO-2024-2 from april 1<sup>st</sup> to june 30, 2024

203. Kowalska, A., Figura, M., Zawadka, M., & Kozirowski, D. (2024). Pyruvate dehydrogenase-E1 $\alpha$  deficiency presenting as generalized dystonia: A genetic diagnosis with important clinical implications. *Clinical Neurology and Neurosurgery*, 241, 108307. <https://doi.org/10.1016/j.clineuro.2024.108307>
204. Küçükcongür Yavaş, A., Basan, H., Dinçer, S., Bilginer Gürbüz, B., & Kasapkara, Ç. S. (2024). Mitochondrial phosphate-carrier deficiency mimicking infantile-onset Pompe disease. *American Journal of Medical Genetics. Part A*, 194(9), e63643. <https://doi.org/10.1002/ajmg.a.63643>
205. Kuin, R. E. M., Groothuis, J. T., Buit, P., Janssen, M. C. H., & Knuijt, S. (2024). Dysarthria and dysphagia in patients with mitochondrial diseases. *Molecular Genetics and Metabolism*, 142(3), 108510. <https://doi.org/10.1016/j.ymgme.2024.108510>
206. Kumar, A., Choudhary, A., & Munshi, A. (2024). Epigenetic reprogramming of mtDNA and its etiology in mitochondrial diseases. *Journal of Physiology and Biochemistry*. <https://doi.org/10.1007/s13105-024-01032-z>
207. Launay, N., Lopez-Erauskin, J., Bianchi, P., Guha, S., Parameswaran, J., Coppa, A., Torreni, L., Schlüter, A., Fourcade, S., Paredes-Fuentes, A. J., Artuch, R., Casasnovas, C., Ruiz, M., & Pujol, A. (2024). Imbalanced mitochondrial dynamics contributes to the pathogenesis of X-linked adrenoleukodystrophy. *Brain: A Journal of Neurology*, 147(6), 2069-2084. <https://doi.org/10.1093/brain/awae038>
208. Li, J., Hou, F., Lv, N., Zhao, R., Zhang, L., Yue, C., Nie, M., & Chen, L. (2024). From Rare Disorders of Kidney Tubules to Acute Renal Injury: Progress and Prospective. *Kidney Diseases (Basel, Switzerland)*, 10(2), 153-166. <https://doi.org/10.1159/000536423>
209. Li, T., Aziz, T., Li, G., Zhang, L., Yao, J., & Jia, S. (2024). A zebrafish tu $fm$  mutant model for the COXPD4 syndrome of aberrant mitochondrial function. *Journal of Genetics and Genomics = Yi Chuan Xue Bao*, 51(9), 922-933. <https://doi.org/10.1016/j.jgg.2024.05.009>
210. Liang, D., Zhu, L., Zhu, Y., Huang, M., Lin, Y., Li, H., Hu, P., Zhang, J., Shen, B., & Xu, Z. (2024). A PCR-independent approach for mtDNA enrichment and next-generation sequencing: Comprehensive evaluation and clinical application. *Journal of Translational Medicine*, 22(1), 386. <https://doi.org/10.1186/s12967-024-05213-8>



## Mitochondrial disorders : The Essentials

MMITO-2024-2 from april 1<sup>st</sup> to june 30, 2024

211. Liang, K. X., Chen, A., Kianian, A., Kristiansen, C. K., Yangzom, T., Furriol, J., Høyland, L. E., Ziegler, M., Kråkenes, T., Tzoulis, C., Fang, E. F., Sullivan, G. J., & Bindoff, L. A. (2024). Activation of Neurotoxic Astrocytes Due to Mitochondrial Dysfunction Triggered by POLG Mutation. *International Journal of Biological Sciences*, 20(8), 2860-2880. <https://doi.org/10.7150/ijbs.93445>
  
212. Lin, Y., Wang, J., Xu, R., Xu, Z., Wang, Y., Pan, S., Zhang, Y., Tao, Q., Zhao, Y., Yan, C., Cao, Z., & Ji, K. (2024). HiFi long-read amplicon sequencing for full-spectrum variants of human mtDNA. *BMC Genomics*, 25(1), 538. <https://doi.org/10.1186/s12864-024-10433-9>
  
213. Liu, D., Zhou, X., He, Y., & Zhao, J. (2024). The Roles of CircRNAs in Mitochondria. *Journal of Cancer*, 15(9), 2759-2769. <https://doi.org/10.7150/jca.92111>
  
214. Liu, N., Liang, Y., Wei, T., Huang, X., Zhang, T., & Tang, M. (2024). ROS-mediated NRF2/p-ERK1/2 signaling-involved mitophagy contributes to macrophages activation induced by CdTe quantum dots. *Toxicology*, 505, 153825. <https://doi.org/10.1016/j.tox.2024.153825>
  
215. Liu, N., Pang, B., Kang, L., Li, D., Jiang, X., & Zhou, C.-M. (2024). TUFM in health and disease : Exploring its multifaceted roles. *Frontiers in Immunology*, 15, 1424385. <https://doi.org/10.3389/fimmu.2024.1424385>
  
216. Liufu, T., Zhao, X., Yu, M., Xie, Z., Meng, L., Lv, H., Zhang, W., Yuan, Y., Xing, G., Deng, J., & Wang, Z. (2024). Multiomics analysis reveals serine catabolism as a potential therapeutic target for MELAS. *FASEB Journal: Official Publication of the Federation of American Societies for Experimental Biology*, 38(12), e23742. <https://doi.org/10.1096/fj.202302286RRR>
  
217. Lopes, E. C., Shi, F., Sawant, A., Ibrahim, M., Gomez-Jenkins, M., Hu, Z., Manchiraju, P., Bhatt, V., Wang, W., Hinrichs, C. S., Wallace, D. C., Su, X., Rabinowitz, J. D., Chan, C. S., Guo, J. Y., Ganesan, S., Lattime, E. C., & White, E. (2024). RESPIRATION DEFECTS LIMIT SERINE SYNTHESIS REQUIRED FOR LUNG CANCER GROWTH AND SURVIVAL. *bioRxiv: The Preprint Server for Biology*, 2024.05.28.596339. <https://doi.org/10.1101/2024.05.28.596339>
  
218. Lopriore, P., Palermo, G., Meli, A., Bellini, G., Benevento, E., Montano, V., Siciliano, G., Mancuso, M., & Ceravolo, R. (2024). Mitochondrial Parkinsonism : A Practical Guide to Genes and Clinical Diagnosis. *Movement Disorders Clinical Practice*, 11(8), 948-965. <https://doi.org/10.1002/mdc3.14148>



## Mitochondrial disorders : The Essentials

MMITO-2024-2 from april 1<sup>st</sup> to june 30, 2024

219. Lopriore, P., Vista, M., Tessa, A., Giuntini, M., Caldarazzo lenco, E., Mancuso, M., Siciliano, G., Santorelli, F. M., & Orsucci, D. (2024). Primary Coenzyme Q10 Deficiency-Related Ataxias. *Journal of Clinical Medicine*, 13(8), 2391. <https://doi.org/10.3390/jcm13082391>
220. Male, A. J., Koochi, N., Holmes, S. L., Pitceathly, R. D. S., & Kaski, D. (2024). Acceptability of Audiovestibular Assessment in the Home-A Patient Survey. *Audiology Research*, 14(3), 545-553. <https://doi.org/10.3390/audiolres14030045>
221. Mallawaarachchi, A. C., Fowles, L., Wardrop, L., Wood, A., O'Shea, R., Biros, E., Harris, T., Alexander, S. I., Bodek, S., Boudville, N., Burke, J., Burnett, L., Casauria, S., Chadban, S., Chakera, A., Crafter, S., Dai, P., De Fazio, P., Faull, R., ... Mallett, A. J. (2024). Genomic Testing in Patients with Kidney Failure of an Unknown Cause : A National Australian Study. *Clinical Journal of the American Society of Nephrology: CJASN*, 19(7), 887-897. <https://doi.org/10.2215/CJN.0000000000000464>
222. Mancuso, M., Papadopoulou, M. T., Ng, Y. S., Ardisson, A., Bellusci, M., Bertini, E., Di Vito, L., Evangelista, T., Fons, C., Hikmat, O., Horvath, R., Klopstock, T., Kornblum, C., Lamperti, C., Licchetta, L., Molnar, M. J., Varhaug, K. N., O'Callaghan, M., Pressler, R. M., ... Rahman, S. (2024). Management of seizures in patients with primary mitochondrial diseases : Consensus statement from the InterERNs Mitochondrial Working Group. *European Journal of Neurology*, 31(7), e16275. <https://doi.org/10.1111/ene.16275>
223. Marin-Valencia, I., Kocabas, A., Rodriguez-Navas, C., Miloushev, V. Z., González-Rodríguez, M., Lees, H., Henry, K. E., Vaynshteyn, J., Longo, V., Deh, K., Eskandari, R., Mamakhanyan, A., Berishaj, M., & Keshari, K. R. (2024). Imaging brain glucose metabolism in vivo reveals propionate as a major anaplerotic substrate in pyruvate dehydrogenase deficiency. *Cell Metabolism*, 36(6), 1394-1410.e12. <https://doi.org/10.1016/j.cmet.2024.05.002>
224. Meldau, S., Ackermann, S., Riordan, G., van der Watt, G. F., Spencer, C., Raga, S., Khan, K., Blackhurst, D. M., & van der Westhuizen, F. H. (2024). A novel mitochondrial DNA variant in MT-ND6 : M.14430A>C p.(Trp82Gly) identified in a patient with Leigh syndrome and complex I deficiency. *Molecular Genetics and Metabolism Reports*, 39, 101078. <https://doi.org/10.1016/j.ymgmr.2024.101078>
225. Messina, M., Vaz, F. M., & Rahman, S. (2024). Mitochondrial membrane synthesis, remodelling and cellular trafficking. *Journal of Inherited Metabolic Disease*. <https://doi.org/10.1002/jimd.12766>

## Mitochondrial disorders : The Essentials

MMITO-2024-2 from april 1<sup>st</sup> to june 30, 2024

226. Misceo, D., Strømme, P., Bitarafan, F., Chawla, M. S., Sheng, Y., Bach de Courtade, S. M., Eide, L., & Frengen, E. (2024). Biallelic NDUFA4 Deletion Causes Mitochondrial Complex IV Deficiency in a Patient with Leigh Syndrome. *Genes*, 15(4), 500. <https://doi.org/10.3390/genes15040500>
227. Moisoï, N. (2024). Mitochondrial proteases modulate mitochondrial stress signalling and cellular homeostasis in health and disease. *Biochimie*, S0300-9084(24)00141-X. <https://doi.org/10.1016/j.biochi.2024.06.005>
228. Momoh, R., & Kollamparambil, S. (2024). A Case Report of a Clinically Suspected Diagnosis of Mitochondrial Encephalomyopathy, Lactic Acidosis, and Stroke-Like Episodes (MELAS) Syndrome With Cardiac Impairment. *Cureus*, 16(3), e56980. <https://doi.org/10.7759/cureus.56980>
229. Morcillo, P., Kabra, K., Velasco, K., Cordero, H., Jennings, S., Yun, T. D., Larrea, D., Akman, H. O., & Schon, E. A. (2024). Aberrant ER-mitochondria communication is a common pathomechanism in mitochondrial disease. *Cell Death & Disease*, 15(6), 405. <https://doi.org/10.1038/s41419-024-06781-9>
230. Moustaine, M. O., Azemour, Z., Mohammed, F., Benlanda, O., Nassik, H., & Karkouri, M. (2024). Management of Ptosis in Kearns-Sayre Syndrome : A Case Report and Literature Review. *Archives of Plastic Surgery*, 51(2), 182-186. <https://doi.org/10.1055/a-2207-7587>
231. Neuhofer, C. M., & Prokisch, H. (2024). Digenic Inheritance in Rare Disorders and Mitochondrial Disease-Crossing the Frontier to a More Comprehensive Understanding of Etiology. *International Journal of Molecular Sciences*, 25(9), 4602. <https://doi.org/10.3390/ijms25094602>
232. Oharazawa, A., Maimaituxun, G., Watanabe, K., Nishiyasu, T., & Fujii, N. (2024). Metabolome analyses of skin dialysate : Insights into skin interstitial fluid biomarkers. *Journal of Dermatological Science*, 114(3), 141-147. <https://doi.org/10.1016/j.jdermsci.2024.04.001>
233. Olimpio, C., Paramonov, I., Matalonga, L., Laurie, S., Schon, K., Polavarapu, K., Kirschner, J., Schara-Schmidt, U., Lochmüller, H., Chinnery, P. F., & Horvath, R. (2024). Increased Diagnostic Yield by Reanalysis of Whole Exome Sequencing Data in Mitochondrial Disease. *Journal of Neuromuscular Diseases*, 11(4), 767-775. <https://doi.org/10.3233/JND-240020>

**Mitochondrial disorders : The Essentials**

MMITO-2024-2 from april 1<sup>st</sup> to june 30, 2024

234. Othonicar, M. F., Garcia, G. S., & Oliveira, M. T. (2024). The alternative enzymes-bearing tunicates lack multiple widely distributed genes coding for peripheral OXPHOS subunits. *Biochimica Et Biophysica Acta. Bioenergetics*, 1865(3), 149046. <https://doi.org/10.1016/j.bbabi.2024.149046>
235. Ozlu, C., Messahel, S., Minassian, B., & Kayani, S. (2024). Mitochondrial encephalopathies and myopathies: Our tertiary center's experience. *European Journal of Paediatric Neurology: EJPN: Official Journal of the European Paediatric Neurology Society*, 50, 31-40. <https://doi.org/10.1016/j.ejpn.2024.03.005>
236. Pennings, G., Heindryckx, B., Stoop, D., & Mertes, H. (2024). Attitude of Belgian women towards enucleated egg donation for treatment of mitochondrial diseases and infertility. *Reproductive Biomedicine Online*, 49(3), 104101. <https://doi.org/10.1016/j.rbmo.2024.104101>
237. Pickup, E., Moore, S. A., Suwannarat, P., Grant, C., Ah Mew, N., Gropman, A., & Sen, K. (2024). Expedited Exome Reanalysis Following Deep Phenotyping and Muscle Biopsy in Suspected Mitochondrial Disorder. *Pediatric Neurology*, 156, 178-181. <https://doi.org/10.1016/j.pediatrneurol.2024.04.007>
238. Pieri, M., D'Andria Ursolo, J., Di Prima, A. L., Bugo, S., Barucco, G., Licheri, M., Losiggio, R., Frau, G., Monaco, F., & Collaborators. (2024). Remimazolam for anesthesia and sedation in pediatric patients: A scoping review. *Journal of Anesthesia*, 38(5), 692-710. <https://doi.org/10.1007/s00540-024-03358-w>
239. Qiu, J., Wu, H., Xie, Q., Zhou, Y., Gao, Y., Liu, J., Jiang, X., Suo, L., & Kuang, Y. (2024). Harnessing accurate mitochondrial DNA base editing mediated by DdCBEs in a predictable manner. *Frontiers in Bioengineering and Biotechnology*, 12, 1372211. <https://doi.org/10.3389/fbioe.2024.1372211>
240. Rackham, O., Saurer, M., Ban, N., & Filipovska, A. (2024). Unique architectural features of mammalian mitochondrial protein synthesis. *Trends in Cell Biology*, S0962-8924(24)00097-7. <https://doi.org/10.1016/j.tcb.2024.05.001>
241. Ramesh, R., Amanmahanya, C., Krishnamoorthy, V., Krishnan, V., Palani, S., & Narasimhan Ranganathan, L. (2024). Oculomasticatory rhythmic movements, insomnia and stroke-like episodes in a patient with POLG mutation. *BMJ Case Reports*, 17(4), e259426. <https://doi.org/10.1136/bcr-2023-259426>
242. Ratnaike, T. E., Elkhateeb, N., Lochmüller, A., Gilmartin, C., Schon, K., Horváth, R., & Chinnery, P. F. (2024). Evidence for sodium valproate toxicity in mitochondrial diseases: A systematic analysis. *BMJ Neurology Open*, 6(1), e000650. <https://doi.org/10.1136/bmjno-2024-000650>

## Mitochondrial disorders : The Essentials

MMITO-2024-2 from april 1<sup>st</sup> to june 30, 2024

243. Ray, S., Parmar, U., Saxena, V., & Dias, R. (2024). Delayed awakening after sevoflurane anesthesia for MRI brain in a child with undiagnosed mitochondrial disorder. *Journal of Anaesthesiology, Clinical Pharmacology*, 40(1), 162-163. [https://doi.org/10.4103/joacp.joacp\\_231\\_22](https://doi.org/10.4103/joacp.joacp_231_22)
244. Reynaud-Dulaurier, R., Clément, R., Yjjou, S., Cresson, C., Saoudi, Y., Faideau, M., & Decressac, M. (2024). The Blood-Brain Barrier Is Unaffected in the Ndufs4-/- Mouse Model of Leigh Syndrome. *International Journal of Molecular Sciences*, 25(9), 4828. <https://doi.org/10.3390/ijms25094828>
245. Rezaei, M., Dourandish, Z., Kiani Mehr, G., Ghorbani, A., & Fatehi, F. (2024). Cavitating leukodystrophy in a case of mitochondrial complex III deficiency due to LYRM7 mutation. *Acta Neurologica Belgica*, 124(4), 1409-1410. <https://doi.org/10.1007/s13760-024-02529-6>
246. Riccio, A. A., Brannon, A. J., Krahn, J. M., Bouvette, J., Williams, J. G., Borgnia, M. J., & Copeland, W. C. (2024). Coordinated DNA polymerization by Poly and the region of LonP1 regulated proteolysis. *Nucleic Acids Research*, 52(13), 7863-7875. <https://doi.org/10.1093/nar/gkae539>
247. Rouzier, C., Pion, E., Chaussenot, A., Bris, C., Ait-El-Mkadem Saadi, S., Desquirit-Dumas, V., Gueguen, N., Fragaki, K., Amati-Bonneau, P., Barcia, G., Gaignard, P., Steffann, J., Pennisi, A., Bonnefont, J.-P., Lebigot, E., Bannwarth, S., Francou, B., Rucheton, B., Sternberg, D., ... Procaccio, V. (2024). Primary mitochondrial disorders and mimics : Insights from a large French cohort. *Annals of Clinical and Translational Neurology*, 11(6), 1478-1491. <https://doi.org/10.1002/acn3.52062>
248. Sartorelli, J., Longo, D., Travaglini, L., Orlando, V., D'Amico, A., Bertini, E., & Nicita, F. (2024). Acute Ophthalmoplegia with Wernicke-Like MRI Pattern in a Patient with HPDL-Related Disorder. *Movement Disorders Clinical Practice*, 11(9), 1160-1162. <https://doi.org/10.1002/mdc3.14153>
249. Selvanathan, A., Teo, J., & Parayil Sankaran, B. (2024). Hematologic Manifestations in Primary Mitochondrial Diseases. *Journal of Pediatric Hematology/Oncology*, 46(5), e338-e347. <https://doi.org/10.1097/MPH.0000000000002890>
250. Shen, J., Xie, P., Wang, J., Yang, F., Li, S., Jiang, H., Wu, X., Zhou, F., & Li, J. (2024). Nlrp6 protects from corticosterone-induced NSPC ferroptosis by modulating RIG-1/MAVS-mediated mitophagy. *Redox Biology*, 73, 103196. <https://doi.org/10.1016/j.redox.2024.103196>

## Mitochondrial disorders : The Essentials

MMITO-2024-2 from april 1<sup>st</sup> to june 30, 2024

251. Shinkai, R., Honda, T., Watanabe, R., Ooka, M., Kitsuda, K., Hirata, Y., & Ishikura, K. (2024). Fetal bradycardia as the initial symptom of mitochondrial disease : A case report. *Pediatrics International: Official Journal of the Japan Pediatric Society*, 66(1), e15771. <https://doi.org/10.1111/ped.15771>
252. Singh, D. (2024). Beyond the membrane : Exploring non-viral methods for mitochondrial gene delivery. *Mitochondrion*, 78, 101922. <https://doi.org/10.1016/j.mito.2024.101922>
253. Slade, L., Deane, C. S., Szewczyk, N. J., Etheridge, T., & Whiteman, M. (2024). Hydrogen sulfide supplementation as a potential treatment for primary mitochondrial diseases. *Pharmacological Research*, 203, 107180. <https://doi.org/10.1016/j.phrs.2024.107180>
254. Sniezek Carney, O., Harris, K. W., Wohlfarter, Y., Lee, K., Butschek, G., Anzmann, A., Claypool, S. M., Hamacher-Brady, A., Keller, M., & Vernon, H. J. (2024). Stem cell models of TFAZZIN deficiency reveal novel tissue-specific pathologies in Barth Syndrome. *bioRxiv: The Preprint Server for Biology*, 2024.04.28.591534. <https://doi.org/10.1101/2024.04.28.591534>
255. Song, N., Mei, S., Wang, X., Hu, G., & Lu, M. (2024). Focusing on mitochondria in the brain : From biology to therapeutics. *Translational Neurodegeneration*, 13(1), 23. <https://doi.org/10.1186/s40035-024-00409-w>
256. Southwell, N., Manzo, O., Bacman, S., Zhao, D., Sayles, N. M., Dash, J., Fujita, K., D'Aurelio, M., Di Lorenzo, A., Manfredi, G., & Kawamata, H. (2024). High fat diet ameliorates mitochondrial cardiomyopathy in CHCHD10 mutant mice. *EMBO Molecular Medicine*, 16(6), 1352-1378. <https://doi.org/10.1038/s44321-024-00067-5>
257. Steenberge, L. H., Rogers, S., Sung, A. Y., Fan, J., & Pagliarini, D. J. (2024). Coenzyme Q4 is a functional substitute for coenzyme Q10 and can be targeted to the mitochondria. *The Journal of Biological Chemistry*, 300(5), 107269. <https://doi.org/10.1016/j.jbc.2024.107269>
258. Suiter, E., Baiker, K., Kaczmarek, A., Christen, M., Leeb, T., Ororbia, A., Anselmi, C., Minguez, J., & Gutierrez-Quintana, R. (2024). Novel MRI and histopathological findings in a young Bullmastiff cross dog with mitochondrial fission encephalopathy. *Veterinary Radiology & Ultrasound: The Official Journal of the American College of Veterinary Radiology and the International Veterinary Radiology Association*, 65(5), 463-468. <https://doi.org/10.1111/vru.13342>

## Mitochondrial disorders : The Essentials

MMITO-2024-2 from april 1<sup>st</sup> to june 30, 2024

259. Sun, G., Huang, W., Wang, L., Wu, J., Zhao, G., Ren, H., Liu, L., & Kong, X. (2024). Molecular findings in patients for whole exome sequencing and mitochondrial genome assessment. *Clinica Chimica Acta; International Journal of Clinical Chemistry*, 561, 119774. <https://doi.org/10.1016/j.cca.2024.119774>
260. Sung, A. Y., Guerra, R. M., Steenberge, L. H., Alston, C. L., Murayama, K., Okazaki, Y., Shimura, M., Prokisch, H., Ghezzi, D., Torracco, A., Carrozzo, R., Rötig, A., Taylor, R. W., Keck, J. L., & Pagliarini, D. J. (2024). Systematic analysis of NDUFAF6 in complex I assembly and mitochondrial disease. *Nature Metabolism*, 6(6), 1128-1142. <https://doi.org/10.1038/s42255-024-01039-2>
261. Takai, Y., Yamagami, A., & Ishikawa, H. (2024). [Leber's hereditary optic neuropathy]. *Rinsho Shinkeigaku = Clinical Neurology*, 64(5), 326-332. <https://doi.org/10.5692/clinicalneurool.cn-001924>
262. Tavasoli, A., Kachuei, M., Talebi, S., & Eghdami, S. (2024). Complex mitochondrial disease caused by the mutation of COX10 in a toddler : A case-report study. *Annals of Medicine and Surgery* (2012), 86(6), 3753-3756. <https://doi.org/10.1097/MS9.0000000000002096>
263. Thompson, W. R., Manuel, R., Abbruscato, A., Carr, J., Campbell, J., Hornby, B., Vaz, F. M., & Vernon, H. J. (2024). Long-term efficacy and safety of elamipretide in patients with Barth syndrome : 168-week open-label extension results of TAZPOWER. *Genetics in Medicine: Official Journal of the American College of Medical Genetics*, 26(7), 101138. <https://doi.org/10.1016/j.gim.2024.101138>
264. Tian, D., Cui, M., & Han, M. (2024). Bacterial muropeptides promote OXPHOS and suppress mitochondrial stress in mammals. *Cell Reports*, 43(4), 114067. <https://doi.org/10.1016/j.celrep.2024.114067>
265. Tong, Q., Miao, Y., & Yin, H. (2024). Echocardiographic manifestations of mitochondrial disease with GTPBP3 gene mutations : A case report. *Medicine*, 103(18), e37847. <https://doi.org/10.1097/MD.00000000000037847>
266. Tyczyńska, M., Gędek, M., Brachet, A., Stręk, W., Flieger, J., Teresiński, G., & Baj, J. (2024). Trace Elements in Alzheimer's Disease and Dementia : The Current State of Knowledge. *Journal of Clinical Medicine*, 13(8), 2381. <https://doi.org/10.3390/jcm13082381>

## Mitochondrial disorders : The Essentials

MMITO-2024-2 from april 1<sup>st</sup> to june 30, 2024

267. Van Hove, J. L. K., Friederich, M. W., Hock, D. H., Stroud, D. A., Caruana, N. J., Christians, U., Schniedewind, B., Michel, C. R., Reisdorph, R., Lopez Gonzalez, E. D. J., Brenner, C., Donovan, T. E., Lee, J. C., Chatfield, K. C., Larson, A. A., Baker, P. R., McCandless, S. E., & Moore Burk, M. F. (2024). ACAD9 treatment with bezafibrate and nicotinamide riboside temporarily stabilizes cardiomyopathy and lactic acidosis. *Mitochondrion*, 78, 101905. <https://doi.org/10.1016/j.mito.2024.101905>
268. VanPortfliet, J. J., Lei, Y., Martinez, C. G., Wong, J., Pflug, K., Sitcheran, R., Kneeland, S. C., Murray, S. A., McGuire, P. J., Cannon, C. L., & West, A. P. (2024). Caspase-11 drives macrophage hyperinflammation in models of Polg-related mitochondrial disease. *bioRxiv: The Preprint Server for Biology*, 2024.05.11.593693. <https://doi.org/10.1101/2024.05.11.593693>
269. Vaz, F. M., Ferdinandusse, S., Salomons, G. S., & Wanders, R. J. A. (2024). Disorders of fatty acid homeostasis. *Journal of Inherited Metabolic Disease*. <https://doi.org/10.1002/jimd.12734>
270. Vela-Sebastián, A., Bayona-Bafaluy, P., & Pacheu-Grau, D. (2024). ISR pathway contribution to tissue specificity of mitochondrial diseases. *Trends in Endocrinology and Metabolism: TEM*, 35(10), 851-853. <https://doi.org/10.1016/j.tem.2024.05.001>
271. Wai, T. (2024). Is mitochondrial morphology important for cellular physiology? *Trends in Endocrinology and Metabolism: TEM*, 35(10), 854-871. <https://doi.org/10.1016/j.tem.2024.05.005>
272. Wal, P., Wal, A., Vig, H., Mahmood, D., & Khan, M. M. U. (2024). Potential Applications of Mitochondrial Therapy with a Focus on Parkinson's Disease and Mitochondrial Transplantation. *Advanced Pharmaceutical Bulletin*, 14(1), 147-160. <https://doi.org/10.34172/apb.2024.019>
273. Wang, Y., Lilienfeldt, N., & Hekimi, S. (2024). Understanding coenzyme Q. *Physiological Reviews*, 104(4), 1533-1610. <https://doi.org/10.1152/physrev.00040.2023>
274. Wang, Y., Shi, Y., Shao, Y., Lu, X., Zhang, H., & Miao, C. (2024). S100A8/A9hi neutrophils induce mitochondrial dysfunction and PANoptosis in endothelial cells via mitochondrial complex I deficiency during sepsis. *Cell Death & Disease*, 15(6), 462. <https://doi.org/10.1038/s41419-024-06849-6>
275. Wang, Y., Yang, J.-S., Zhao, M., Chen, J.-Q., Xie, H.-X., Yu, H.-Y., Liu, N.-H., Yi, Z.-J., Liang, H.-L., Xing, L., & Jiang, H.-L. (2024). Mitochondrial endogenous substance transport-inspired nanomaterials for mitochondria-targeted gene delivery. *Advanced Drug Delivery Reviews*, 211, 115355. <https://doi.org/10.1016/j.addr.2024.115355>

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MMITO-2024-2 from april 1<sup>st</sup> to june 30, 2024

276. Wu, Z., Bezwada, D., Cai, F., Harris, R. C., Ko, B., Sondhi, V., Pan, C., Vu, H. S., Nguyen, P. T., Faubert, B., Cai, L., Chen, H., Martin-Sandoval, M., Do, D., Gu, W., Zhang, Y., Zhang, Y., Brooks, B., Kelekar, S., ... DeBerardinis, R. J. (2024). Electron transport chain inhibition increases cellular dependence on purine transport and salvage. *Cell Metabolism*, 36(7), 1504-1520.e9. <https://doi.org/10.1016/j.cmet.2024.05.014>
277. Xu, H., Ma, K., Gao, Y., Song, Q., Chen, C., Xu, X., Peng, J., & Sun, Y. (2024). Clinical characteristics of a case of multiple mitochondrial dysfunction syndrome 3. *Molecular Genetics & Genomic Medicine*, 12(6), e2485. <https://doi.org/10.1002/mgg3.2485>
278. Xu, Y., Hong, Z., Yu, S., Huang, R., Li, K., Li, M., Xie, S., & Zhu, L. (2024). Fresh Insights Into SLC25A26 : Potential New Therapeutic Target for Cancers: A Review. *Oncology Reviews*, 18, 1379323. <https://doi.org/10.3389/or.2024.1379323>
279. Yazicioglu, Y. F., Mitchell, R. J., & Clarke, A. J. (2024). Mitochondrial control of lymphocyte homeostasis. *Seminars in Cell & Developmental Biology*, 161-162, 42-53. <https://doi.org/10.1016/j.semcdb.2024.03.002>
280. Yin, X., Dong, Q., Fan, S., Yang, L., Li, H., Jin, Y., Laurentinah, M. R., Chen, X., Sysa, A., Fang, H., Lyu, J., Yu, Y., & Wang, Y. (2024). A novel pathogenic mitochondrial DNA variant m.4344T>C in tRNAGln causes developmental delay. *Journal of Human Genetics*, 69(8), 381-389. <https://doi.org/10.1038/s10038-024-01254-5>
281. Yuan, T., Kumar, S., Skinner, M. E., Victor-Joseph, R., Abuaita, M., Keijer, J., Zhang, J., Kunkel, T. J., Liu, Y., Petrunak, E. M., Saunders, T. L., Lieberman, A. P., Stuckey, J. A., Neamati, N., Al-Murshedi, F., Alfadhel, M., Spelbrink, J. N., Rodenburg, R., de Boer, V. C. J., & Lombard, D. B. (2024). Human SIRT5 variants with reduced stability and activity do not cause neuropathology in mice. *iScience*, 27(6), 109991. <https://doi.org/10.1016/j.isci.2024.109991>
282. Zhai, N., Hu, J., & Yan, H. (2024). Recurrent mitochondrial disease caused by the "m.3243A> G" mutation : A case report. *Asian Journal of Surgery*, S1015-9584(24)01160-6. <https://doi.org/10.1016/j.asjsur.2024.05.251>
283. Zhang, F., Zhang, L., Hu, G., Chen, X., Liu, H., Li, C., Guo, X., Huang, C., Sun, F., Li, T., Cui, Z., Guo, Y., Yan, W., Xia, Y., Liu, Z., Lin, Z., Duan, W., Lu, L., Wang, X., ... Tao, L. (2024). Rectifying METTL4-Mediated N6-Methyladenine Excess in Mitochondrial DNA Alleviates Heart Failure. *Circulation*, 150(18), 1441-1458. <https://doi.org/10.1161/CIRCULATIONAHA.123.068358>

### Mitochondrial disorders : The Essentials

MMITO-2024-2 from april 1<sup>st</sup> to june 30, 2024

284. Zhou, W., Wang, N., Dong, S., Huan, Z., Sui, L., & Ge, X. (2024). PRG4 mitigates hemorrhagic shock-induced cardiac injury by inhibiting mitochondrial dysregulation, oxidative stress and NLRP3-mediated pyroptosis. *International Immunopharmacology*, 137, 112507. <https://doi.org/10.1016/j.intimp.2024.112507>
285. Zhu, X.-X., Meng, X.-Y., Zhang, A.-Y., Zhao, C.-Y., Chang, C., Chen, T.-X., Huang, Y.-B., Xu, J.-P., Fu, X., Cai, W.-W., Hou, B., Du, B., Zheng, G.-L., Zhang, J.-R., Lu, Q.-B., Bai, N., Han, Z.-J., Bao, N., Qiu, L.-Y., & Sun, H.-J. (2024). Vaccarin alleviates septic cardiomyopathy by potentiating NLRP3 palmitoylation and inactivation. *Phytomedicine: International Journal of Phytotherapy and Phytopharmacology*, 131, 155771. <https://doi.org/10.1016/j.phymed.2024.155771>