

Szakmai önéletrajz

Személyes adatok

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Jelenlegi munkahelyek és beosztások

Magyarságkutató Intézet

- tudományos főmunkatárs
 - Archeogenetikai Kutatóközpont
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Felsőfokú tanulmányok

- 1990–1995: PHD – biokémia - molekuláris biológia Purdue University
 - 1983-1989: MD - orvosdoktor POTE
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Kutatási területek

- archeogenetika
 - humángenetika
 - új generációs szekvenálás (NGS)
 - filogenetika
 - populációgenetika
 - epigenetika
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Szakmai tagságok

N/A

Kitüntetések

NA

Nyelvismeret

- angol
 - francia
 - német
-

Tudományos profil

MTMT:

<https://m2.mtmt.hu/gui2/?type=authors&mode=browse&sel=10030445>

Válogatott publikációk

2024

1. Rodriguez-Gil JL, Nagy PL, Francke U. Optical genome mapping with genome sequencing identifies subtelomeric Xq28 deletion and inserted 7p22.3 duplication in a male with multisystem developmental disorder. *American Journal of Medical Genetics Part A*. 2024;194(12):e63814.

2023

2. Iqbal MA, Broeckel U, Levy B, Skinner S, Sahajpal NS, Rodriguez V, ..., Nagy PL, et al. Multisite Assessment of Optical Genome Mapping for Analysis of Structural Variants in Constitutional Postnatal Cases. *The Journal of Molecular Diagnostics*. 2023;25(3):175-188.
3. Varga GIB, Kristóf LA, Maár K, Kis L, Schütz O, Váradi O, Kovács B, ..., Nagy PL, et al. The archaeogenomic validation of Saint Ladislaus' relic provides insights into the Árpád dynasty's genealogy. *Journal of Genetics and Genomics*. 2023;50(1):58-61.

2022

4. Maróti Z, Neparáczki E, Schütz O, Maár K, Varga GIB, Kovács B, Kalmár T, ..., Nagy PL, et al. The genetic origin of Huns, Avars, and conquering Hungarians. *Current Biology*. 2022;32(13):2858-2870.e7.
5. Mikhail AI, Nagy PL, Manta K, Rouse N, Manta A, Ng SY, Nagy MF, et al. Aerobic exercise elicits clinical adaptations in myotonic dystrophy type 1 patients independently of pathophysiological changes. *The Journal of Clinical Investigation*. 2022;132(10).
6. Neparáczki E, Kis L, Maróti Z, Kovács B, Varga GIB, Makoldi M, ..., Nagy PL, et al. The genetic legacy of the Hunyadi descendants. *Heliyon*. 2022;8(11).

7. Barseghyan H, Pang AWC, Zhang Y, Sahajpal NS, Delpu Y, Lai CYJ, ..., Nagy PL, et al. Neurogenetic Variant Analysis by Optical Genome Mapping for Structural Variation Detection. In: *Genomic Structural Variants in Nervous System Disorders*. 2022:155-172.
8. Broeckel U, Iqbal MA, Levy B, Sahajpal N, Nagy PL, Scharer G, et al. Multisite Study of Optical Genome Mapping of Retrospective and Prospective Constitutional Disorder Cohorts. *medRxiv*. 2022;2022.12.26.22283900.

2021

9. Shan CM, Kim JK, Wang J, Bao K, Sun Y, Chen H, Yue JX, Stirpe A, ..., Nagy PL, et al. The histone H3K9M mutation synergizes with H3K14 ubiquitylation to selectively sequester histone H3K9 methyltransferase Clr4 at heterochromatin. *Cell Reports*. 2021;35(7).
10. Blake B, Brady LI, Rouse NA, Nagy P. The efficacy of whole genome sequencing and RNA-seq in the diagnosis of whole exome sequencing negative patients with complex neurological phenotypes. *Journal of Pediatric Genetics*. 2021.
11. Iqbal MA, Broeckel U, Levy B, Skinner S, Sahajpal N, Rodriguez V, ..., Nagy PL, et al. Multi-site technical performance and concordance of optical genome mapping: constitutional postnatal study for SV, CNV, and repeat array analysis. *medRxiv*. 2021;2021.12.27.21268432.
12. Peña-Padilla C, Romero-Valenzuela I, Baldomero-López A, ..., Nagy PL, et al. Third case of Duchenne muscular dystrophy and West syndrome: Expanding the spectrum of the DMD neuropsychiatric phenotype. *Neuromuscular Disorders*. 2021;31(5):462-465.

2020

13. Do C, Dumont ELP, Salas M, Castano A, Mujahed H, Maldonado L, ..., Nagy PL, et al. Allele-specific DNA methylation is increased in cancers and its dense mapping in normal plus neoplastic cells increases the yield of disease-associated regulatory SNPs. *Genome Biology*. 2020;21:1-39.
14. Fagerberg CR, Taylor A, Distelmaier F, Schröder HD, Kibæk M, ..., Nagy PL, et al. Choline transporter-like 1 deficiency causes a new type of childhood-onset neurodegeneration. *Brain*. 2020;143(1):94-111.
15. Nagy PL, Olasz J, Neparáczki E, Rouse N, Kapuria K, Cano S, Chen H, et al. Determination of the phylogenetic origins of the Árpád Dynasty based on Y chromosome sequencing of Béla the Third. *European Journal of Human Genetics*. 2020;1-9.
16. Paganini J, Nagy PL, Rouse N, Gouret P, Chiaroni J, Picard C, et al. Blood group typing from whole-genome sequencing data. *PLOS ONE*. 2020;15(11):e0242168.

2019

17. Coughlin CR, Swanson MA, Spector E, Meeks NJL, Kronquist KE, ..., Nagy PL, et al. The genotypic spectrum of ALDH7A1 mutations resulting in pyridoxine dependent epilepsy: A common epileptic encephalopathy. *Journal of Inherited Metabolic Disease*. 2019;42(2):353-361.
18. Saylam E, Moore SA, Aravindhan A, Marton H, Nagy PL, Gokden M, et al. A novel noncoding FKRP mutation in early onset limb-girdle muscular dystrophy. *Neurology: Genetics*. 2019;6(1):e388.
19. Brimble E, Lee-Messer C, Nagy PL, Propst J, Ruzhnikov MRZ. Clinical Transcriptome Sequencing Confirms Activation of a Cryptic Splice Site in Suspected SYNGAP1-Related Disorder. *Molecular Syndromology*. 2019;9(6):295-299.

2018

20. Liu J, Amar F, Corona C, So RWL, Andrews SJ, Nagy PL, Shelanski ML, et al. Brain-Derived Neurotrophic Factor Elevates Activating Transcription Factor 4 (ATF4) in Neurons and Promotes ATF4-Dependent Induction of Sesn2. *Frontiers in Molecular Neuroscience*. 2018;11:62.

21. Fyfe JC, Hemker SL, Frampton A, Raj K, Nagy PL, Gibbon KJ, Giger U. Inherited selective cobalamin malabsorption in Komondor dogs associated with a CUBN splice site variant. *BMC Veterinary Research*. 2018;14:1-10.
22. Nagy PL, Worman HJ. Next-generation sequencing and mutational analysis: implications for genes encoding LINC complex proteins. In: *The LINC Complex: Methods and Protocols*. 2018:321-336.

2017

23. Vardarajan BN, Tosto G, Lefort R, Yu L, Bennett DA, De Jager PL, ..., Nagy PL, et al. Ultra-rare mutations in SRCAP segregate in Caribbean Hispanic families with Alzheimer disease. *Neurology: Genetics*. 2017;3(5):e178.

2016

24. Oberg JA, Glade Bender JL, Sulis ML, Pendrick D, Sireci AN, Hsiao SJ, ..., Nagy PL, et al. Implementation of next generation sequencing into pediatric hematology-oncology practice: moving beyond actionable alterations. *Genome Medicine*. 2016;8:1-19.
25. Murphy J, Factor-Litvak P, Goetz R, Lomen-Hoerth C, Nagy PL, Hupf J, et al. Cognitive-behavioral screening reveals prevalent impairment in a large multicenter ALS cohort. *Neurology*. 2016;86(9):813-820.
26. Wang Y, Lichter-Konecki U, Anyane-Yeboah K, Shaw JE, Lu JT, Östlund C, ..., Nagy PL, et al. A mutation abolishing the ZMPSTE24 cleavage site in prelamin A causes a progeroid disorder. *Journal of Cell Science*. 2016;129(10):1975-1980.
27. Shan CM, Wang J, Xu K, Chen H, Yue JX, Andrews S, Moresco JJ, ..., Nagy PL, et al. A histone H3K9M mutation traps histone methyltransferase Ctr4 to prevent heterochromatin spreading. *eLife*. 2016;5:e17903.
28. Varma H, Faust PL, Iglesias AD, Lagana SM, Wou K, Hirano M, ..., Nagy PL, et al. Whole exome sequencing identifies a homozygous POLG2 missense variant in an infant with fulminant hepatic failure and mitochondrial DNA depletion. *European Journal of Medical Genetics*. 2016;59(10):540-545.
29. Dela Cruz FS, Diolaiti D, Turk AT, Rainey AR, Ambesi-Impiombato A, ..., Nagy PL, et al. A case study of an integrative genomic and experimental therapeutic approach for rare tumors: identification of vulnerabilities in a pediatric poorly differentiated carcinoma. *Genome Medicine*. 2016;8:1-17.

2015

30. Mitumoto H, Nagy PL, Gennings C, Murphy J, Andrews H, Goetz R, et al. Phenotypic and molecular analyses of primary lateral sclerosis. *Neurology: Genetics*. 2015;1(1):e3.
31. Mercier S, Küry S, Salort-Campana E, Magot A, Agbim U, Besnard T, ..., Nagy PL, et al. Expanding the clinical spectrum of hereditary fibrosing poikiloderma with tendon contractures, myopathy and pulmonary fibrosis due to FAM111B mutations. *Orphanet Journal of Rare Diseases*. 2015;10:1-16.
32. Tannenbaum-Dvir S, Bender JLG, Church AJ, Janeway KA, Harris MH, ..., Nagy PL, et al. Characterization of a novel fusion gene EML4-NTRK3 in a case of recurrent congenital fibrosarcoma. *Molecular Case Studies*. 2015;1(1):a000471.
33. Pantazatos SP, Andrews SJ, Dunning-Broadbent J, Pang J, Huang Y, ..., Nagy PL, et al. Isoform-level brain expression profiling of the spermidine/spermine N1-Acetyltransferase1 (SAT1) gene in major depression and suicide. *Neurobiology of Disease*. 2015;79:123-134.
34. Del Portillo A, Lagana SM, Yao Y, Uehara T, Jhala N, Ganguly T, Nagy P, et al. Evaluation of mutational testing of preneoplastic Barrett's mucosa by next-generation sequencing of formalin-fixed, paraffin-embedded endoscopic samples for detection of high-grade dysplasia and adenocarcinoma. *The Journal of Molecular Diagnostics*. 2015;17(4):412-419.

35. Nagy PL, Mansukhani M. The role of clinical genomic testing in diagnosis and discovery of pathogenic mutations. *Expert Review of Molecular Diagnostics*. 2015;15(9):1101-1105.

2014

36. Re DB, Le Verche V, Yu C, Amoroso MW, Politi KA, Phani S, Ikiz B, ..., Nagy PL, et al. Necroptosis drives motor neuron death in models of both sporadic and familial ALS. *Neuron*. 2014;81(5):1001-1008.
37. Baleriola J, Walker CA, Jean YY, Crary JF, Troy CM, Nagy PL, Hengst U. Axonally synthesized ATF4 transmits a neurodegenerative signal across brain regions. *Cell*. 2014;158(5):1159-1172.
38. Zernant J, Xie Y, Ayuso C, Riveiro-Alvarez R, Lopez-Martinez MA, ..., Nagy PL, et al. Analysis of the ABCA4 genomic locus in Stargardt disease. *Human Molecular Genetics*. 2014;23(25):6797-6806.
39. Goldman JS, Quinzii C, Dunning-Broadbent J, Waters C, Mitsumoto H, ..., Nagy PL, et al. Multiple system atrophy and amyotrophic lateral sclerosis in a family with hexanucleotide repeat expansions in C9orf72. *JAMA Neurology*. 2014;71(6):771-774.
40. Lee JH, Kahn A, Cheng R, Reitz C, Vardarajan B, Lantigua R, Medrano M, ..., Nagy PL, et al. Disease-related mutations among Caribbean Hispanics with familial dementia. *Molecular Genetics & Genomic Medicine*. 2014;2(5):430-437.
41. Agarwal NS, Northrop L, Anyane-Yeboah K, Aggarwal VS, Nagy PL, et al. Tetratricopeptide repeat domain 7A (TTC7A) mutation in a newborn with multiple intestinal atresia and combined immunodeficiency. *Journal of Clinical Immunology*. 2014;34:607-610.
42. Kallgren SP, Andrews S, Tadeo X, Hou H, Moresco JJ, Tu PC, Yates JR III, ..., Nagy PL, et al. The proper splicing of RNAi factors is critical for pericentric heterochromatin assembly in fission yeast. *PLOS Genetics*. 2014;10(5):e1004334.
43. Wang J, Tadeo X, Hou H, Andrews S, Moresco JJ, Yates JR III, Nagy PL, et al. Tls1 regulates splicing of shelterin components to control telomeric heterochromatin assembly and telomere length. *Nucleic Acids Research*. 2014;42(18):11419-11432.

2013

44. Paliwal A, Temkin AM, Kerkel K, Yale A, Yotova I, Drost N, Lax S, ..., Nagy PL, et al. Comparative anatomy of chromosomal domains with imprinted and non-imprinted allele-specific DNA methylation. *PLOS Genetics*. 2013;9(8):e1003622.
45. Huey ED, Nagy PL, Rodriguez-Murillo L, Manoochehri M, Goldman J, et al. C9ORF72 repeat expansions not detected in a group of patients with schizophrenia. *Neurobiology of Aging*. 2013;34(4):1309.e9-1309.e10.

2012

46. Dialynas G, Flannery KM, Zirbel LN, Nagy PL, Mathews KD, Moore SA, et al. LMNA variants cause cytoplasmic distribution of nuclear pore proteins in Drosophila and human muscle. *Human Molecular Genetics*. 2012;21(7):1544-1556.
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2011

48. Lu JT, Muchir A, Nagy PL, Worman HJ. LMNA cardiomyopathy: cell biology and genetics meet clinical medicine. *Disease Models & Mechanisms*. 2011;4(5):562-568.

2010

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2009

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2008

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2004

54. George TI, Ma L, Nagy PL, Natkunam Y, Warnke RA, Dorfman RF, et al. TNFRSF6 (Fas Antigen) Mutations in Patients with Sinus Histiocytosis with Massive Lymphadenopathy (Rosai-Dorfman Disease). *Blood*. 2004;104(11):2389.
55. Nagy PL, Schrijver I, Zehnder JL. Molecular diagnosis of hypercoagulable states. *Laboratory Medicine*. 2004;35(4):214-221.

2003

56. Nagy PL, Cleary ML, Brown PO, Lieb JD. Genomewide demarcation of RNA polymerase II transcription units revealed by physical fractionation of chromatin. *Proceedings of the National Academy of Sciences*. 2003;100(11):6364-6369.

2002

57. Nagy PL, Griesenbeck J, Kornberg RD, Cleary ML. A trithorax-group complex purified from *Saccharomyces cerevisiae* is required for methylation of histone H3. *Proceedings of the National Academy of Sciences*. 2002;99(1):90-94.
58. Firestein R, Nagy PL, Daly M, Huie P, Conti M, Cleary ML. Male infertility, impaired spermatogenesis, and azoospermia in mice deficient for the pseudophosphatase Sbf1. *The Journal of Clinical Investigation*. 2002;109(9):1165-1172.

1997

59. Chen S, Nagy PL, Zalkin H. Role of NRF-1 in bidirectional transcription of the human GPAT-AIRC purine biosynthesis locus. *Nucleic Acids Research*. 1997;25(9):1809-1816.

1995

60. Weng M, Nagy PL, Zalkin H. Identification of the *Bacillus subtilis* pur operon repressor. *Proceedings of the National Academy of Sciences*. 1995;92(16):7455-7459.

61. Nagy PL, Marolewski A, Benkovic SJ, Zalkin H. Formyltetrahydrofolate hydrolase, a regulatory enzyme that functions to balance pools of tetrahydrofolate and one-carbon tetrahydrofolate adducts in *Escherichia coli*. *Journal of Bacteriology*. 1995;177(5):1292-1298.

1994

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1993

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