Alica M. Goldman, M.D., Ph.D.

- **Associate Professor of Neurology-Neurophysiology**
  Baylor College of Medicine

CONTACT INFORMATION

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SPECIALITY

- Clinical Neurophysiology
- Epilepsy
- Seizure Disorders

CERTIFICATION

- American Board of Psychiatry and Neurology, Neurology

EDUCATION

- M.D./Ph.D., Jesenius Medical Faculty, Comenius University, Martin, Slovakia
- Internship, Internal Medicine, The University of Texas, Health Science Center at Houston, Texas
- Residency, Neurology, The University of Texas, Health Science Center at Houston, Texas
- Fellowship, EEG / Epilepsy, The University of Texas, Health Science Center at Houston, Texas

CLINIC APPOINTMENTS

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CLINIC LOCATION

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CLINICAL INTERESTS

Genetics of epilepsy

GRANTS (NIH FUNDING)

- Goldman AM (Principal Investigator). SUDEP research alliance: clinical network core; application 2 of 7.

National Institute of Neurological Disorders and Stroke U01 grant (RFA-NS-14-004); $415,855 awarded in direct costs, Sept. 30, 2014–July 31, 2019.

- Goldman AM (Principal Investigator). Copy Number Variants of Neuro-Cardiac Ion Channel Genes and the Risk of SUDEP. National Institute of Neurological Disorders and Stroke R01 grant (PA-10-067); $1,038,751 awarded in direct costs, Feb. 1, 2011–July 31, 2015.
- Goldman AM (Principal Investigator). Ion Channelopathies Co-Expressed in Heart and Brain. National Institute of Neurological Disorders and Stroke K08 grant; $866,700 awarded in direct costs, Aug. 1, 2004–July 31, 2011.

CURRENT COMMITTEE MEMBERSHIPS

- **Baylor College of Medicine (BCM)**
  Faculty-at-large representative, Faculty Senate, 2015 - present

JOURNAL PUBLICATIONS

1. Ayyoubi AH, Fazli Besheli B, Quach MM, Gavvala JR, Goldman AM, Swamy CP, et al. Benchmarking signal quality and spatiotemporal distribution of interictal spikes in prolonged human iEEG recordings using CorTec wireless brain interchange. Sci Rep. 2024;14(1):2652. PMID: 38332136.
2. Brunklaus A, George AL, Jr, Lal D, Heinzen EL, Goldman AM. Prophecy or empiricism? Clinical value of predicting versus determining genetic variant functions. Epilepsia. 2023;64(11):2909-13. PMID: 37562820.
3. Goldman AM, Thio KLL. SLC35A2-related epilepsy: Global neuronal consequences of a focal disruption in glycosylation. Neurology. 2023;100(5):225-6. PMID: 36307216.
4. Goldman AM. Oncogenic pathways provide clue to the etiology of human mesial temporal lobe epilepsy. JAMA Neurol. 2023;80(6):546-7. PMID: 37126324.
5. Goldman AM. Can a mouse help us unravel the mysteries of CDKL5-related epilepsy? Epilepsy Curr. 2022;22(6):375-7. PMID: 36426191.
6. Goldman AM. When seizures trigger "extreme (cardiac) makeover". Epilepsy Curr. 2022;22(3):181-3. DOI: 10.1177/15357597221085892.
7. Van Loo KMJ, Carvill GL, Becker AJ, Conboy K, Goldman AM, Kobow K, et al. Epigenetic genes and epilepsy - Emerging mechanisms and clinical applications. Nat Rev Neurol. 2022;18(9):530-43. PMID: 35859062.
8. Goldman AM. Peri-ictal brainstem-driven posturing and its meaning. Neurology. 2021;96(3):89-90. PMID: 33268564.
9. Kyle JE, Stratton KG, Zink EM, Kim YM, Bloodsworth KJ, Monroe ME, et al. A resource of lipidomics and metabolomics data from individuals with undiagnosed diseases. Sci Data. 2021;8(1):114. PMID: 33883556.
10. Massey CA, Thompson SJ, Ostrom RW, Drabek J, Sveinsson OA, Tomson T, et al. X-linked serotonin 2C receptor is associated with a non-canonical pathway for sudden unexpected death in epilepsy. Brain Commun. 2021;3(3):. PMID: 34396109.
11. Torrealba-Acosta G, Butt H, Edmondson EA, Willaert R, Viswanathan A, Goldman AM. A neurostimulation-triggered trigeminal neuralgia-like pain: Risk factors and management. Neurol Clin Pract. 2021;11(5):e760-e762. PMID: 34840901.
12. Goldman AM. What does a defect in N-glycosylation mean for neuronal migration and function? Neurol Genet. 2020;6(4):e490. PMID: 32754647.
13. Kobow K, Reid CA, van Vliet EA, Becker AJ, Carvill GL, Goldman AM, et al. Epigenetics explained: A topic "primer" for the epilepsy community by the ILAE Genetics/Epigenetics Task Force. Epileptic Disord. 2020;22(2):127-41. PMID: 32301721.
14. Mattioli F, Hayot G, Drouot N, Isidor B, Courraud J, Hinckelmann MV, et al. De novo frameshift variants in the neuronal splicing factor NOVA2 result in a common c-terminal extension and cause a severe form of neurodevelopmental disorder. Am J Hum Genet. 2020;106(4):438-52. PMID: 32197073.
15. Nair DR, Laxer KD, Weber PB, Murro AM, Park YD, Barkley GL, et al. Nine-year prospective efficacy and safety of brain-responsive neurostimulation for focal epilepsy. Neurology. 2020;95(9):e1244-e1256. PMID: 32690786.
16. Assia Batzir N, Bhagwat PK, Eble TN, Liu P, Eng CM, Elsea SH, et al. De novo missense variant in the GTPase effector domain (GED) of DNM1L leads to static encephalopathy and seizures. Cold Spring Harb Mol Case Stud. 2019;5(3):. PMID: 30850373.
17. Marafi D, Suter B, Schultz R, Glaze D, Pavlik VN, Goldman AM. Spectrum and time course of epilepsy and the associated cognitive decline in MECP2 duplication syndrome. Neurology. 2019;92(2):e108-14. PMID: 30552298.
18. Montier L, Haneef Z, Gavvala J, Yoshor D, North R, Verla T, et al. A somatic mutation in MEN1 gene detected in periventricular nodular heterotopia tissue obtained from depth electrodes. Epilepsia. 2019;60(10):e104-e109. PMID: 31489630.
19. Mueller SG, Bateman LM, Nei M, Goldman AM, Laxer KD. Brainstem atrophy in focal epilepsy destabilizes brainstem-brain interactions: Preliminary findings. Neuroimage Clin. 2019;23:101888. PMID: 31203171.

20. Frasier CR, Zhang H, Offord J, Dang LT, Auerbach DS, Shi H, et al. Channelopathy as a SUDEP biomarker in Dravet syndrome patient-derived cardiac myocytes. Stem Cell Reports. 2018;11(3):626-34. PMID: 30146492.

21. Mueller SG, Nei M, Bateman LM, Knowlton R, Laxer KD, Friedman D, et al. Brainstem network disruption: A pathway to sudden unexplained death in epilepsy? Hum Brain Mapp. 2018;39(12):4820-30. PMID: 30096213.

22. Geller EB, Skarpaas TL, Gross RE, Goodman RR, Barkley GL, Bazil CW, et al. Brain-responsive neurostimulation in patients with medically intractable mesial temporal lobe epilepsy. Epilepsia. 2017;58(6):994-1004. PMID: 28398014.

23. Jobst BC, Kapur R, Barkley GL, Bazil CW, Berg MJ, Bergey GK, et al. Brain-responsive neurostimulation in patients with medically intractable seizures arising from eloquent and other neocortical areas. Epilepsia. 2017;58(6):1005-14. PMID: 28387951.

24. Lam AD, Deck G, Goldman A, Eskandar EN, Noebels J, Cole AJ. Silent hippocampal seizures and spikes identified by foramen ovale electrodes in Alzheimer's disease. Nat Med. 2017;23(6):678-80. PMID: 28459436.

25. Goldman AM, Behr ER, Semsarian C, Bagnall RD, Sisodiya S, Cooper PN. Sudden unexpected death in epilepsy genetics: Molecular diagnostics and prevention. Epilepsia. 2016;57 Suppl 1:17-25. PMID: 26749013.

26. Goldman AM, LaFrance WC, Jr, Benke T, Asato M, Drane D, et al. 2014 Epilepsy Benchmarks Area IV: Limit or prevent adverse consequence of seizures and their treatment across the lifespan. Epilepsy Curr. 2016;16(3):198-205. PMID: 27330453.

27. Bergey GK, Morrell MJ, Mizrahi EM, Goldman A, King-Stephens D, Nair D, et al. Long-term treatment with responsive brain stimulation in adults with refractory partial seizures. Neurology. 2015;84(8):810-7. PMID: 25616485.

28. Goldman AM. Mechanisms of sudden unexplained death in epilepsy. Curr Opin Neurol. 2015;28(2):166-74. PMID: 25734955.

29. King-Stephens D, Mirro E, Weber PB, Laxer KD, Van Ness PC, Salanova V, et al. Lateralization of mesial temporal lobe epilepsy with chronic ambulatory electrocorticography. Epilepsia. 2015;56(6):959-67. PMID: 25988840.

30. Goldman AM, Tuchman R. Commentary: Genetic testing in epilepsy: What do patients and families want to know? Epilepsia. 2014;55(11):1703-4. PMID: 25377513.

31. Heck CN, King-Stephens D, Massey AD, Nair DR, Jobst BC, Barkley GL, et al. Two-year seizure reduction in adults with medically intractable partial onset epilepsy treated with responsive neurostimulation: Final results of the RNS System Pivotal trial. Epilepsia. 2014;55(3):432-41. PMID: 24621228.

32. Klassen TL, Bomben VC, Patel A, Drabek J, Chen TT, Gu W, et al. High-resolution molecular genomic autopsy reveals complex sudden unexpected death in epilepsy risk profile. Epilepsia. 2014;55(2):e6-12. PMID: 24372310.

33. Chen TT, Klassen TL, Goldman AM, Marini C, Guerrini R, Noebels JL. Novel brain expression of ClC-1 chloride channels and enrichment of CLCN1 variants in epilepsy. Neurology. 2013;80(12):1078-85. PMID: 23408874.

34. Hirose S, Scheffer IE, Marini C, De Jonghe P, Andermann E, Goldman AM, et al. SCN1A testing for epilepsy: Application in clinical practice. Epilepsia. 2013;54(5):946-52. PMID: 23586701.

35. Klassen TL, Drabek J, Tomson T, Sveinsson O, von Dobeln U, Noebels JL, et al. Visual automated fluorescence electrophoresis provides simultaneous quality, quantity, and molecular weight spectra for genomic DNA from archived neonatal blood spots. J Mol Diagn. 2013;15(3):283-90. PMID: 23518217.

36. Klassen TL, von Ruden EL, Drabek J, Noebels JL, Goldman AM. Comparative analytical utility of DNA derived from alternative human specimens for molecular autopsy and diagnostics. J Mol Diagn. 2012;14(5):451-7. PMID: 22796560.

37. Klassen T, Davis C, Goldman A, Burgess D, Chen T, Wheeler D, et al. Exome sequencing of ion channel genes reveals complex profiles confounding personal risk assessment in epilepsy. Cell. 2011;145(7):1036-48. PMID: 21703448.

38. McGuire AL, Oliver JM, Slashinski MJ, Graves JL, Wang T, Kelly PA, et al. To share or not to share: a randomized trial of consent for data sharing in genome research. Genet Med. 2011;13(11):948-55. PMID: 21785360.

39. Dulay MF, Levin HS, York MK, Li X, Mizrahi EM, Goldsmith I, et al. Changes in individual and group spatial and verbal learning characteristics after anterior temporal lobectomy. Epilepsia. 2009;50(6):1385-95. PMID: 18657174.

40. Goldman AM, Glasscock E, Yoo J, Chen TT, Klassen TL, Noebels JL. Arrhythmia in heart and brain: KCNQ1 mutations link epilepsy and sudden unexplained death. Sci Transl Med. 2009;1(2):2ra6. PMID: 20368164.

41. McGuire AL, Hamilton JA, Lunstroth R, McCullough LB, Goldman A. DNA data sharing: Research participants' perspectives. Genet Med. 2008;10(1):46-53. PMID: 18197056.

42. Bi W, Yan J, Shi X, Yuva-Paylor LA, Antalffy BA, Goldman A, et al. Rai1 deficiency in mice causes learning impairment and motor dysfunction, whereas Rai1 heterozygous mice display minimal behavioral

phenotypes. Hum Mol Genet. 2007;16(15):1802-13. PMID: 17517686.

43. Goldman A, Noebels J. Invited comments on the Shostak and Ottman review. Epilepsia. 2006;47(10):1750-1; author reply 1755-6. PMID: 17054704.
44. Goldman AM, Potocki L, Walz K, Lynch JK, Glaze DG, Lupski JR, et al. Epilepsy and chromosomal rearrangements in Smith-Magenis Syndrome [del(17)(p11.2p11.2)]. J Child Neurol. 2006;21(2):93-8. PMID: 16566870.

BOOK CHAPTERS and OTHER PUBLICATIONS

1. Goldman AM, Buchanan G, Aiba I, Noebels JL. SUDEP animal models. In: Pitkänen A, Buckmaster PS, Galanopoulou AS, Moshé SL, editors. Models of seizures and epilepsy. Academic Press; 2017. p. 1007-1018.
2. Goldman A, Maheshwari A. Genetics of clinical epilepsy practice. In: Haneef Z, Maheshwari A, editors. A concise manual of epilepsy. 2nd ed. CreateSpace Publishing; 2016. p. 144-155.
3. Goldman A. Basic mechanisms of SUDEP. In: Chapman D, Panelli R, Hanna J, Jeffs T, editors. Sudden unexpected death in epilepsy: continuing the global conversation. Camberwell, Australia: Epilepsy Australia, Epilepsy Bereaved & SUDEP Aware; 2011.

POSTER and PLATFORM PRESENTATIONS

1. Karimov A, Gavvala J, Goldman A, Haneef Z, Maheshwari A, Sheth S, et al. The utility of additional depth or subdural electrodes following stereotactic EEG evaluation. Presented at the American Clinical Neurophysiology Society (ACNS), Virtual 2021 Annual Meeting (Feb. 10-14, 2021).
2. Houck KM, Haneef Z, Nayak A, Gavvala J, Quach MM, Van Ness PC, et al. Functional involvement of periventricular nodular heterotopia. Abstract No 2.066, 2018, American Epilepsy Society Annual Meeting, www.aesnet.org.
3. Mueller SG, Nei M, Bateman L, Knowlton R, Laxer K, Friedman D, et al. Evidence for brainstem network disruption in focal epilepsy and sudden unexplained death in epilepsy: A first validation study. Abstract No 3.205, 2017, American Epilepsy Society Annual Meeting, www.aesnet.org.
4. Marafie D, Rosenfeld J, Van Ness P, Zohrevand P, Haneef Z, Chen D, et al. Clinical utility of genetic testing in adults with epilepsy: 4-year experience of the Baylor Genetic Epilepsy Clinic. Ann Neurol. 2017;80 suppl 2:S6.
5. Bateman L, Nei M, Goldman A, Mueller S. Center for SUDEP Research: Brainstem atrophy in SUDEP. Abstract No 3.199, 2016, American Epilepsy Society Annual Meeting, www.aesnet.org.
6. Marafie D, Rosenfeld J, Van Ness P, Zohrevand P, Haneef Z, Chen D, et al. Clinical utility of genetic testing in adults with epilepsy: Pilot experience of the Baylor genetic epilepsy clinic. Abstract No 1.337, 2016, American Epilepsy Society Annual Meeting, www.aesnet.org.
7. Marafie D, Schultz R, Glaze D, Suter B, Goldman A. Prevalence and character of severe epileptic encephalopathy in patients affected by MECP2 duplication syndrome. Ann Neurol. 2016;80 suppl 20:S65-6.
8. Marafie D, Schultz R, Glaze D, Goldman A, Suter B. Severe epileptic encephalopathy is a frequent neurological comorbidity of children affected by the MECP2 duplication syndrome. Neurology. 2016;86(Meeting Abstracts 1):S52.005. [Oral Presentation]
9. Marafie D, Suter B, Pacheco VH, Glaze D, Drabek J, Goldman A. MECP2 duplication is associated with severe epileptic encephalopathy in the presence of permissive genetic background. Abstract No 1.301, 2015, American Epilepsy Society Annual Meeting, www.aesnet.org.
10. Zohrevand P, Diaz M, Amador A, Goldman A. Treatment resistance correlates with ECG abnormalities in a pilot clinical surveillance of epilepsy patients. Abstract No 2.222, 2014, American Epilepsy Society Annual Meeting, www.aesnet.org.
11. Karas L, Goldsmith C, Ruppelt SC, Goldman A. Epidemiological pilot analysis of epilepsy patients in a community clinic aims to inform effective care. Neurology. 2014;82(Meeting Abstracts 1):P5.046.
12. King-Stephens D, Mirro E, Weber P, Laxer K, Van Ness P, Salanova V, et al. Lateralization of temporal lobe epilepsy with long-term ambulatory intracranial monitoring using the RNS system: Experience in 82 patients. Abstract No A.02, 2013, American Epilepsy Society Annual Meeting, www.aesnet.org.
13. Klassen TL, Tomson T, Sveinsson O, von Dobeln U, Drabek J, Noebels J, et al. STOP SUDEP Program: Application of visual automated fluorescence electrophoresis in the qualitative profiling of archived SUDEP samples. Abstract No 1.053, 2013, American Epilepsy Society Annual Meeting, www.aesnet.org.
14. Goldman A. Sudden unexplained death in epilepsy: Can genomics help? Presented at the American Neurological Association (ANA), 138th Annual Meeting in New Orleans, La. (Oct. 13-15, 2013). [Plenary Talk]
15. Goldman AM, Klassen TL, von Rueden EL, Drabek JM, Noebels JL. Universal DNA extraction protocol for the utilization of alternative tissue sources in downstream epilepsy genetic analysis. Abstract No 1.059, 2012, American Epilepsy Society Annual Meeting, www.aesnet.org.
16. Goldman AM, Richerson G, Parent JM, Bateman L, Nordli DR, Noebels JL. SUDEP research consortium: A new collaborative network to discover predictive genes, mechanisms and biomarkers of SUDEP. Epilepsy Curr.

2013;13 Suppl 1:326. [Investigators' Workshop]

17. Goldman AM. SUDEP Tissue Donation Program (STOP): Collaborative network in support of SUDEP registry, tissue repository and human translational research. Abstract No 1.030, 2012, American Epilepsy Society Annual Meeting, www.aesnet.org.
18. Klassen TL, Chen TT, Reed JG, Kole MJ, Goldman AM, Marini C, et al. Myotonia in brain: 'Skeletal' chloride channel ClC-1 linked to idiopathic generalized epilepsy with focal myotonia. Abstract No 3.312, 2012, American Epilepsy Society Annual Meeting, www.aesnet.org.
19. Klassen TL, Goldman A, Davis C, Chen T, Gibbs R, Noebels J. Channotyping epilepsy: Profiling personal variation in ion channel genes. Abstract No 1.090, 2012, American Epilepsy Society Annual Meeting, www.aesnet.org.
20. Goldman A, Klassen T, Gu W, Zhang F, Bomben V, Chen T, et al. High resolution copy number variation of ion channel genes in epilepsy. Abstract No 2.001, 2010, American Epilepsy Society Annual Meeting, www.aesnet.org.
21. Goldman A, Glasscock E, Yoo J, Chen T, Klassen T, Noebels J. Long QT mouse model links the dual phenotype of cardiac arrhythmias and epilepsy with sudden unexplained death in epilepsy. Abstract No 3.109, 2009, American Epilepsy Society Annual Meeting, www.aesnet.org.
22. Goldman A, Glasscock E, Yoo J, Chen T, Klassen T, Noebels J. Human KvLQT1 mutations in mice link the dual phenotype of cardiac arrhythmias and epilepsy with sudden unexplained death in epilepsy. Epilepsia. 2009;50(Suppl 10):7-8.
23. Dulay MF, Levin HS, York MK, Mizrahi EM, Goldsmith IL, Goldman A, et al. Predictors of individual visual memory decline after right anterior temporal lobe resection. Abstract No 1.303, 2008, American Epilepsy Society Annual Meeting, www.aesnet.org.
24. Dulay MF, Levin HS, Mizrahi EM, York MK, Li X, Goldsmith IL, et al. Growth curve analysis of changes in spatial and verbal learning characteristics after anterior temporal lobectomy. Abstract No 2.265, 2007, American Epilepsy Society Annual Meeting, www.aesnet.org.
25. Goldman AM, McGuire AL, Hilsenbeck SG, Noebels JL. Genomic research in the era of identifiable genetic information. Abstract No 3.343, 2007, American Epilepsy Society Annual Meeting, www.aesnet.org.
26. Goldman AM, Burgess DL, Gibbs RA, Chapman KE, Wilfong AA, Hrachovy RA, et al. The prevalence of inter-ictal cardiac arrhythmias and LQT gene variants in patients with idiopathic epilepsy. Abstract No 4.223, 2006, American Epilepsy Society Annual Meeting, www.aesnet.org.
27. Goldman AM, Burgess DL, Armstrong DD, Mori M, Noebels JL. Regional and developmental localization of ion-channel genes coexpressed in heart and brain. Abstract No 1.193, 2003, American Epilepsy Society Annual Meeting, www.aesnet.org.
28. Goldman AM, Burgess DL, Armstrong DD, Mori M, Noebels JL. Expression pattern of candidate epilepsy ion channel genes in mouse and human brains. Epilepsia. 2003;44(Suppl 8):170.
29. Goldman AM, Wheless JW, Venkataraman V, Kim HL, Papanicolaou AC. Magnetoencephalography mislocalizes interictal epileptogenic activity in mesial temporal epilepsy. Abstract No B.02, 2001, American Epilepsy Society Annual Meeting, www.aesnet.org.