

Thomas R Geisbush

Education

Chicago Medical School (CMS)

Rosalind Franklin University of Science and Medicine (RFUMS): North Chicago, IL 2019
Medical Doctorate

Harvard Extension School: Cambridge, MA 2013
Health Careers Post Baccalaureate Diploma

University of California, Irvine: Irvine, CA 2010
Bachelors of Arts in Psychology/International Studies

Training

Transitional Year Internship - Kaweah Delta Health Care District 2019 - 2020
Postgraduate Year II, Diagnostic Radiology – Stanford Health Care 2020 – 2021

Committee Positions

General Medical Education Subcommittee for Resident Learning Environment 2019
Resident Representative

Honors, Awards, and Certificates

Isidore and Sarah Eisenstadt Memorial Endowed Scholarship 2017
Rosalind Franklin University Scholarship Award 2016
Summer Research Fellowship, Chicago Medical School 2016
Practical Machine Learning, Johns Hopkins University on Coursera 2015
<https://www.coursera.org/account/accomplishments/certificate/XC96RRGA98>
Community Health Fellow, Beth Israel Deaconess Medical Center 2013
Research Education Scholar, UCI Research Education Advancement Program 2010

Research Experience

West Lab - Chicago Medical School, North Chicago, IL 2015 - 2016
Medical Student

- Performed in vivo extracellular recordings of neuronal firing patterns on murine models
- Focused on alterations to corticostriatal drive with administration of novel antidepressants

Rosen and Galaburda Lab - Beth Israel Deaconess Medical Center, Boston, MA 2014 - 2015
Research Assistant II

- Investigated genetic determinants of both dyslexia and repetitive traumatic brain injury
- Performed surgery protocols for knockdown of dyslexia associated homologs in rat models
- Prepared histological specimens for further analysis using stereology

Boston Children's Hospital - Boston, MA 2012 - 2014
Affiliated Non-Clinical Staff

- Collected electrical impedance and ultrasound data for clinical study of Duchenne muscular dystrophy

Neuromuscular Division - Beth Israel Deaconess Medical Center, Boston, MA 2012 - 2014
Clinical Research Assistant II

- Coordinated clinical trial investigating the use of botulinum toxin in the treatment of sialorrhea
- Investigated the use of quantitative ultrasound and electrical impedance myography to quantify muscle integrity in neuromuscular disease

- Focused on the utilization of signal detection theory to explore speech perception
- Utilized functional magnetic resonance imaging (fMRI) in consonant-vowel discrimination tasks

Publications

Geisbush TR, Yeom K, Yedavalli V. The Atypical “Diving” Lesion: Congenital Imperforate Submandibular Duct Neurographics. 2020 Apr 1;10 (2), 88 – 91 doi: <https://doi.org/10.3174/ng.1900033>

Geisbush TR, Marks MP, Heit JJ. Cerebral foreign body reaction due to hydrophilic polymer embolization following aneurysm treatment by pipeline flow diversion device Interv Neuroradiol. 2019 Aug;25(4):447-453. doi: 10.1177/1591019919830767.

Geisbush TR, Dymon Z, Gabriel MS, Yedavalli V. A Multimodal and Pathological Analysis of a Renal Cell Carcinoma Metastasis to the Thyroid Gland. J Radiol Case Rep. 2019 Apr 30;13(4):1-9. doi: 10.3941/jrcr.v13i4.3497.

Chakroborty Shreaya, **Geisbush Thomas R.**, Dale Elena, Pehrson Alan L., Sánchez Connie, West Anthony R. Impact of Vortioxetine on Synaptic Integration in Prefrontal-Subcortical Circuits: Comparisons with Escitalopram. Frontiers in Pharmacology. Vol 8 2017 DOI=10.3389/fphar.2017.00764

Pushpa Narayanaswami, **Thomas Geisbush**, Andrew Tarulli, Elizabeth Raynor, Shiva Gautam, Daniel Tarsy, Gary Gronseth. Drooling in Parkinson’s disease: A randomized controlled trial of incobotulinum toxin A and meta-analysis of Botulinum toxins. Parkinsonism and Related Disorders. Vol 30 73 - 77, Sept 2016
DOI:<https://doi.org/10.1016/j.parkreldis.2016.07.001>

Pushpa Narayanaswami, **Thomas Geisbush**, Lyell Jones, Michael D Weiss, Tahseen Mozzafar, Gary Gronseth, Seward B Rutkove Critically Re-evaluating a Common Technique: Accuracy, Reliability and Confirmation Bias of EMG, Neurology. 2016 Jan 19;86(3):218-23.

McIllduff C, Yim S, Pacheck A, **Geisbush T**, Mijailovic A, Rutkove SB. An improved electrical impedance myography (EIM) tongue array for use in clinical trials Clin Neurophysiol. Jan 2016 Vol 127 Issue 1 932 - 935
DOI: <https://doi.org/10.1016/j.clinph.2015.06.021>

B. Sanchez, J. Li, **T. Geisbush**, R. Bragos, S.B. Rutkove Impedance alterations in healthy and diseased mice during electrically-induced muscle contraction. IEEE Transactions on Biomedical Engineering 2016 Aug;63(8):1602-12.
DOI: 10.1109/TBME.2014.2320132

Geisbush TR, Visyak N, Madabusi L, Rutkove SB, Darras BT. Inter-session reliability of electrical impedance myography in children in a clinical trial setting. Clin Neurophysiol. 2015 Sep;126(9):1790-6.
DOI: 10.1016/j.clinph.2014.11.017.

Irina Shklyar, **Tom R. Geisbush**, Aleksandar S. Mijailovic, Amy Pasternak, Basil T. Darras MD, Seward B. Rutkove MD, Craig M. Zaidman MD Quantitative muscle in Duchenne muscular dystrophy: a comparison of techniques. Muscle Nerve. 2015 Feb;51(2):207-13. DOI: 10.1002/mus.24296.

Stefan Schwartz, **Tom R. Geisbush**, Aleksander Mijailovic, Amy Pasternak, Basil T. Darras, Seward B. Rutkove Optimizing electrical impedance myography measurements by using a multifrequency ratio; a study in Duchenne muscular dystrophy. Clin Neurophysiol. 2015 Jan;126(1):202-8. DOI:10.1016/j.clinph.2014.05.007.

Wu JS, Li J, Greenman RL, Bennett D, **Geisbush T**, Rutkove SB. Assessment of aged mdx mice by electrical impedance myography and magnetic resonance imaging. *Muscle Nerve*. 2015 Oct;52(4):598-604.
DOI: 10.1002/mus.24573. Epub 2015 Jun 3.

Seward Rutkove, **Tom R. Geisbush**, Alex Mijailovic, Irina Shklyar, Nicole Visyak, Amy Pasternak, Jim S. Wu, Craig M. Zaidman, Basil T. Darras Cross-sectional evaluation of ultrasound and electrical impedance myography for the assessment of Duchenne muscular dystrophy in a clinical trial setting *Pediatr Neurol*. 2014 Jul;51(1):88-92.
DOI: 10.1016/j.pediatrneurol.2014.02.015.

Sanchez B, Li J, **Geisbush T**, Bragos R, Rutkove SB, A pilot spectroscopy study on time-varying bioimpedance during electrically-induced muscle contraction. *Conf Proc IEEE Eng Med Bio Soc*. 2014;2014:3739-42.
DOI:10.1109/EMBC.2014.6944436.

Li, J., **Geisbush, T.R.**, Rosen, G.D., Lachey, J., Mulivor, A., Rutkove, S.B. Electrical impedance myography for the in and ex vivo assessment of muscular dystrophy (mdx) mouse muscle. *Muscle & Nerve*. 2014 Jun;49(6):829-35.
DOI: 10.1002/mus.24086.

Kortman HG, Wilder SC., **Geisbush T.R.**, Narayanaswami P., Rutkove S.B. Age- and gender-associated differences in electrical impedance values of skeletal muscle. *Physiol Meas*. 2013 Dec;34(12):1611-22.
DOI: 10.1088/0967-3334/34/12/1611.

Posters and Presentations

Thomas R. Geisbush, Shreaya Chakroborty, Elena Dale, Alan Pehrson, Connie Sanchez, Anthony R. West. Impact of Vortioxetine on Synaptic Integration in Prefrontal-Subcortical Circuits: Comparisons with Escitalopram (221.08) Society for Neuroscience Conference 2016

Conferences Attended

Midwest Interventional Radiology Medical Student Symposium, Chicago, IL	2017, 2018
Society for Neuroscience Conference, San Diego Ca.	2016

Community Service

Volunteer, Community Care Connection	2016
➤ Provided blood pressure and blood glucose screenings to underserved communities in North Chicago	
Member of the Board of Directors, Found In Translation	2014 - 2016
➤ One of only four board members	
➤ Non-profit dedicated to training low income, multilingual women as medical interpreters	
➤ Duties included budgeting, fundraising, and raising awareness of the organization in Boston, MA	

Unique Experiences

EMT-B: Anaheim, CA	2010 - 2011
➤ Provided basic life support for patients on interfacility transports	
Georg-August University: Goettingen, Germany	2009
➤ Studied abroad in German immersion program for 9 months	