

Jeremy Shaw Wetzel, M.D.

EDUCATION:

- 2013-2020 **Neurological Surgery Residency**
Emory University School of Medicine
Department of Neurological Surgery
- 2009-2013 **Doctor of Medicine (M.D.)**
University of Texas at Houston Medical School, Houston, TX
USLME Step 1: 265 (99)
USMLE Step 2 CK: 264 (99)
- 2005-2008 **Bachelor of Arts in Biology, High Honors**
University of Texas at Austin, Austin, TX

HONORS AND AWARDS:

- Residency:
2017 Resident Research Presentation Award, GNS 2017 Fall Meeting
- Medical School:
2013 *Recipient*, Distinguished student in the Neurosciences Award
2012 *Inductee*, Alpha Omega Alpha, Delta Chapter of Texas
2010 *Recipient*, NIH/NINDS Medical Student Summer Research Award

RESEARCH ACTIVITIES:

- Residency:
2013-2021 Translational research, large animal studies, Mentor: Nicholas M. Boulis, M.D.
– *Peripheral nerve regeneration, sheep model, portion of NIH R01 grant.*
– Investigation of “nanofiber multi tube nerve guidance conduit” for peripheral nerve regeneration.
– *ALS, pig model.*
– Cervical spinal Cord Injection of AAV capsid vector with gene that works to selectively silence the production of SOD1 mRNA. Pre-clinical dosage, safety and biodistribution study. (Voyager Therapeutics).
– *Development of a Procine Model of Spinal Cord Glioma.*
– *Gene therapy for Fredrich’s Ataxia, nonhuman primate model.*
– Using frameless stereotactic targeting of the cerebellar dentate nucleus for vector-mediated delivery of the Frataxin gene. (Agilis/PTC Therapeutics)
- Medical School:
2010-2013 *Thromboelastography (TEG) as a novel modality to help guide therapy in acute ischemic stroke.*
University of Texas Medical School at Houston, Department of Neurology, Stroke Team
Mentor: James C. Grotta, M.D.
- Undergraduate:*
2006-2008 *Microdialysis in vivo (Rats) to observe affects of ethanol on [DA] in nucleus accumbens*

University of Texas at Austin, Pharmacology/Toxicology
Mentor: Rueben Gonzales Ph.D.; Elaina Howard, Ph.D.

PUBLICATIONS:

Federici T, Hardcastle N, Texakalidis P, Tora M, S, **Wetzel J**, Riley J, P, Boulis N, M: A Stereotactic Device for Intraparenchymal Spinal Cord Injections: Latest Developments for Practical Clinical Use. *Stereotact Funct Neurosurg* 2021. doi: 10.1159/000512504

Tora MS, Texakalidis P, Stewart N, **Wetzel J**, Rindler RS, Hardcastle N, Nagar PP, Krasnopeyev A, Roach C, James R, Bruce JN, Canoll P, Federici T Oshinski JN, Boulis NM. Lentiviral Vector Induced Modeling of High-Grade Spinal Cord Glioma in Minipigs. *Sci Rep* 10, 5291 (2020). doi:10.1038/s41598-020-62167-9

Wetzel JS, Waldman AD, Texakalidis P, Buster B, Eshraghi SR, Wheelus J, Reisner A, Chern JJ. Survival and failure trends of cerebrospinal fluid shunts with distal slit valves: comparative study and literature review. *J Neurosurg Pediatr*. 2019 Dec 13;;1-8. doi: 10.3171/2019.9.PEDS18579. [Epub ahead of print] PubMed PMID: 31835242.

Wetzel JS, Hardcastle N, Tora MS, Federici T, Frey S, Novek J, Arulanandam T, Johnson M, Pielemeier R, Boulis NM. Frameless Stereotactic Targeting of the Cerebellar Dentate Nucleus in Nonhuman Primates: Translatable Model for the Surgical Delivery of Gene Therapy. *Stereotact Funct Neurosurg*. 2019;97(5-6):293-302. doi: 10.1159/000504858. Epub 2020 Jan 8. PubMed PMID: 31914453.

MS Tora, N Hardcastle, P Texakalidis, **J Wetzel**, JJ Chern. Elbow flexion in neonatal brachial plexus palsy: a meta-analysis of graft versus transfer. *Childs Nerv Syst*. 2019 Jun;35(6):929-935. doi: 10.1007/s00381-019-04133-z.

P Texakalidis, MS Tora, **JS Wetzel**, JJ Chern. Endoscopic third ventriculostomy versus shunt for pediatric hydrocephalus: a systematic literature review and meta-analysis. *Childs Nerv Syst*. 2019 May 25. doi: 10.1007/s00381-019-04203-2.

P Texakalidis, D Xenos, MS Tora, **JS Wetzel**, NM Boulis. Comparative Safety and Efficacy of Percutaneous Approaches for the Treatment of Trigeminal Neuralgia: a Systematic Review and Metaanalysis. *Clin Neurol Neurosurg*. 2019 Jul;182:112-122. doi: 10.1016/j.clineuro.2019.05.011.

P Texakalidis, MS Tora, J Lamanna, **JS Wetzel**, NM Boulis. Double Fascicular Nerve Transfer to Musculocutaneous Branches for Restoration of Elbow Flexion in Brachial Plexus Injury. *Cureus* 11 (4), 2019. doi: 10.7759/cureus.4517

P Texakalidis, MS Tora, JJ Lamanna, **J Wetzel**, NM Boulis. Combined Radial to Axillary and Spinal Accessory (SA) to Suprascapular Nerve (SSN) Transfers May Confer Superior Shoulder Abduction Compared to Single SA to SSN Transfer. *World Neurosurg*. 2019.doi:10.1016/j.wneu.2019.03.075.

Wetzel JS, Heaner DP, Gabel BC, Tubbs RS, Chern JJ. Clinical evaluation and surveillance imaging of children with myelomeningocele and shunted hydrocephalus: a follow-up study. *J Neurosurg Pediatr*. 2018 Oct 1:1-6. doi: 10.3171/2018

Wetzel J, Bray D, Wrubel D. Chronic encapsulated intraventricular hematoma in a pediatric patient: case report. *J Neurosurg Pediatr*. 2018 May 4:1-6.

Mahmood Z, Malcolm JG, **Wetzel JS**, Ahmad FU Unusual cause of encephalopathy after brain surgery. *BMJ Case Rep.* 2017 Dec 1, 2017

McDonald MM, **Wetzel J**, Fraser S, Elliott A, Bowry R, Kawano-Castillo JF, Cai C, Sangha N, Messier J, Hassler A, Archeval-Lao J. Thrombelastography does not predict clinical response to rtPA for acute ischemic stroke. *Journal of Thrombosis and Thrombolysis.* 2015 Sep 25:1-6.

Huang RS, McDonald MM, **Wetzel JS**, Kawano-Castillo J, Parker S, Archeval-Lao J, Cai C, Rahbar MH, Nguyen AN1, Baba SJ, Grotta JC. Clot Strength as Measured by Thrombelastography Correlates with Platelet Reactivity in Stroke Patients. *Ann Clin Lab Sci.* 2015 Spring;45(3):301-7.

Huang RS, McDonald MM, **Wetzel JS**, Kawano-Castillo J, **Parker S**, Archeval-Lao J, Cai C, Rahbar MH, Nguyen AN, Baba SJ, Grotta JC. Clot Strength as Measured by Thrombelastography Correlates with Platelet Reactivity in Stroke Patients. *Ann Clin Lab Sci.* 2015 Spring;45(3):301-7.

Kawano-Castillo J, Ward E, Elliott A, **Wetzel J**, Hassler A, McDonald M, Parker SA, Archeval-Lao J, Tremont C, Cai C, Pivalizza E, Rahbar MH, Grotta JC. Thrombelastography detects possible coagulation disturbance in patients with intracerebral hemorrhage with hematoma enlargement. *Stroke.* 2014 Mar;45(3):683-8.

McDonald MM, Archeval-Lao JM, Cai C, Peng H, Sangha N, Parker SA, **Wetzel J**, Riney SA, Cherches MF, Guthrie GJ, Roper TC, Kawano-Castillo JF, Pandurengan R, Rahbar MH, Grotta JC. Iodinated contrast does not alter clotting dynamics in acute ischemic stroke as measured by thromboelastography. *Stroke.* 2014 Feb;45(2):462-6.

Andrea Elliott MD, **Jeremy Wetzel BA**, Tiffany Roper BA, Evan Pivalizza MBChB, James McCarthy MD, Cristina Wallace MD, Mary Jane Hess BSN, Hui Peng PhD, Mohammad H Rahbar PhD, Navdeep Sangha MD, James C Grotta MD. Thromboelastography in Patients with Acute Ischemic Stroke. *International Journal of Stroke.* Feb 2015; 1 (2): 194-201.

Howard EC, Schier CJ, **Wetzel JS**, Gonzales RA. The dopamine response in the nucleus accumbens core-shell border differs from that in the core and shell during operant ethanol self-administration. *Alcoholism: Clinical and Experimental Research.* 2009 Aug; 33(8): 1355-65

Howard EC, Schier CJ, **Wetzel JS**, Duvauchelle CL, Gonzales RA. The shell of the nucleus accumbens has a higher dopamine response compared with the core after non-contingent intravenous ethanol administration. *Neuroscience.* 2008 June 26;154(3):1042-53.

ORAL PRESENTATIONS AND POSTERS:

Residency:

- 2018 **Oral. "Survival and Failure Trends of CSF Shunts with Distal Slit Valves: Comparative Study and Literature Review"** Georgia Neurosurgical Society Annual Fall Meeting 2018, Lake Oconee, Georgia.
- 2017 **Oral. "The Utility of Routine Surveillance Imaging in Children with Spina Bifida Aperta and Shunted Hydrocephalus"**. Georgia Neurosurgical Society Annual Fall Meeting 2017, Lake Oconee, Georgia.
- 2016 **Poster. "The Management of Minor Traumatic Intracranial Hemorrhage"**. Southern Neurosurgical Society 67th Annual Meeting, San Antonio, Texas, March 2016.

Medical School:

- 2011 *Poster*: “Thromboelastography, Clot Subtype, and Response to Therapy in Acute Ischemic Stroke”. Eric Ward, Amanda Hassler, Jessica Messier, Tiffany Roper, **Jeremy Wetzel**, Hui Peng, Navdeep Sangha, James Grotta. 18th Annual Neuroscience Research Center Composium, UT Houston Medical School, Houston, Texas.
- 2011 *Poster*: “Thromboelastography in Acute Ischemic Stroke”. **Jeremy S. Wetzel**, Andrea M. Elliott, Cristina M. Wallace, Son Duong, Evan G. Pivalizza, Nusrat Harun, Mary Jane Hess, James C. Grotta. AHA/ASA International Stroke Conference 2011, Los Angeles, California.

Undergraduate:

- 2008 *Oral Presentation*: “Dopamine Increases in the Core and Shell of the Nucleus Accumbens during Ethanol Self-Administration in Rats”. Jeremy Wetzel. National Conference on Undergraduate Research, Salisbury University, Salisbury, MD.

PERSONAL INTEREST:

Reading, running, cooking, wildlife photography, SCUBA, riding my motorcycle

REFERENCES:

Available upon request