## Jeremy Shaw Wetzel, M.D.

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## WORK:

2023-present	Surgeon
EDUCATION:	Anderson Center for Hair
2013-2020	<b>Neurological Surgery Residency</b> 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:

Resident Research Presentation Award, GNS 2017 Fall Meeting
Recipient, Distinguished student in the Neurosciences Award
Inductee, Alpha Omega Alpha, Delta Chapter of Texas
Recipient, NIH/NINDS Medical Student Summer Research Award

## **RESEARCH ACTIVITIES:**

<ul> <li>Translational research, large animal studies, Mentor: Nicholas M. Boulis, M.D.</li> <li><i>Peripheral nerve regeneration, sheep model, portion of NIH R01 grant.</i></li> <li>Investigation of "nanofiber multi tube nerve guidance conduit" for peripheral nerve regeneration.</li> <li><i>ALS, pig model.</i></li> </ul>
<ul> <li>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 Therapuetics).</li> <li>Development of a Procine Model of Spinal Cord Glioma.</li> <li>Gene therapy for Fredrich's Ataxia, nonhuman primate model.</li> <li>Using frameless stereotactic targeting of the cerebellar dentate nucleus for</li> </ul>
vector-mediated delivery of the Frataxin gene. (Agilis PTC Therapeutics)
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

*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:**

Karl Johe, Nicholas Boulis, Charles Vite, Jeremy Wetzel, Faical Isbain, David Quach. <u>A One-Time Treatment</u> to Continuously and Permanently Deliver Lysosomal Enzymes to the CNS. *Molecular Genetics* Feb 2022. doi: 10.1016/j.ymgme.2021.11.157

Federici T, Hardcastle N, Texakalidis P, Tora M, S, **Wetzel J**, Riley J, P, Boulis N, M: <u>A Stereotactic Device for</u> <u>Intraparenchymal Spinal Cord Injections: Latest Developments for Practical Clinical Use</u>. 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. <u>Lentiviral Vector Induced Modeling</u> <u>of High-Grade Spinal Cord Glioma in Minipigs</u>. *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. <u>Survival and failure trends of cerebrospinal fluid shunts with distal slit valves: comparative study and literature review.</u> *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. <u>Frameless Stereotactic Targeting of the Cerebellar Dentate Nucleus in Nonhuman Primates:</u> <u>Translatable Model for the Surgical Delivery of Gene Therapy.</u> *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. <u>Elbow flexion in neonatal brachial plexus palsy: a</u> <u>meta-analysis of graft versus transfer</u>. *Childs Nerv Syst.* 2019 Jun;35(6):929-935. doi: 10.1007/ s00381-019-04133-z.

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

P Texakalidis, D Xenos, MS Tora, **JS Wetzel**, NM Boulis. <u>Comparative Safety and Efficacy of Percutaneous</u> <u>Approaches for the Treatment of Trigeminal Neuralgia: a Systematic Review and Metaanalysis</u>. *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. <u>Double Fascicular Nerve Transfer to</u> <u>Musculocutaneous Branches for Restoration of Elbow Flexion in Brachial Plexus Injury</u>. *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. <u>Clinical evaluation and surveillance imaging of children</u> <u>with myelomeningocele and shunted hydrocephalus: a follow-up study.</u> *J Neurosurg Pediatr.* 2018 Oct 1:1-6. doi: 10.3171/2018

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

Mahmooth Z, Malcolm JG, **Wetzel JS**, Ahmad FU <u>Unusual cause of encephalopathy after brain surgery</u>. *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. <u>Thrombelastography does not predict clinical response to rtPA for acute</u> <u>ischemic stroke</u>. *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. <u>Clot Strength as Measured by Thrombelastography Correlates with</u> <u>Platelet Reactivity in Stroke Patients</u>. *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. <u>Clot Strength as Measured by Thrombelastography Correlates with Platelet</u> <u>Reactivity in Stroke Patients.</u> *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. <u>Thrombelastography detects possible coagulation disturbance</u> 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. <u>Iodinated contrast does</u> <u>not alter clotting dynamics in acute ischemic stroke as measured by thromboelastography.</u> *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. <u>Thromboelastography in Patients with Acute Ischemic Stroke</u>. *International Journal of Stroke*. Feb 2015; 1 (2): 194-201.

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

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

#### **ORAL PRESENTATIONS AND POSTERS:**

Residency:

2018	<i>Oral.</i> "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	<i>Oral. "</i> <b>The Utility of Routine Surveillance Imaging in Children with Spina Bifida Aperta and Shunted Hydrocephalus".</b> Georgia Neurosurgical Society Annual Fall Meeting 2017, Lake Oconee, Georgia.
2016	Poster. <b>"The Management of Minor Traumatic Intracranial Hemorrhage".</b> Southern Neurosurgical Society 67th Annual Meeting, San Antonio, Texas, March 2016.
Medical School:	
2011	<i>Poster</i> : "Thromboelastography, Clot Subtype, and Response to Therapy in Acute Ischemic Stroke". Eric Ward, Amanda Hassler, Jessica Messier, Tiffany Roper, <b>Jeremy</b> <b>Wetzel</b> , Hui Peng, Navdeep Sangha, James Grotta. 18th Annual Neuroscience Research Center Composium, UT Houston Medical School, Houston, Texas.
2011	<i>Poster</i> : "Thromboelastography in Acute Ischemic Stroke". <b>Jeremy S. Wetzel</b> , 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	<i>Oral Presentation</i> : "Dopamine Increases in the Core and Shell of the Nucleus Accumbens during Ethanol Self-Administration in Rats". <u>Jeremy Wetzel</u> . National Conference on Undergraduate Research, Salisbury University, Salisbury, MD.

# PERSONAL INTEREST:

Reading, fitness, hiking/backpacking, cooking, motorcycle riding

# **REFERENCES:**

Available upon request