



October 2020 News

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THANK YOU TO THE NORTH AMERICAN NEUROMODULATION SOCIETY

We wish to acknowledge the support that we receive from NANS, which goes a long way towards making it possible for us to maintain and improve WIKISTIM and keep it available as a free resource.

WIKISTIM DEVELOPMENT NEWS

In the past month, we added hundreds of citations to our peripheral nerve stimulation (PNS) section, expanding it beyond our previous narrow focus on field stimulation. We also added a feature to the SEARCH pages that allows users to sort the search results. At this time, one must hit SEARCH again after choosing a display preference. We have also added a timer indicator for pages that might take longer than a few seconds to load. We are always happy when we can enhance the WIKISTIM user experience!

EVENTS OF INTEREST

The inability to hold in-person educational conferences has inspired professional associations and non-profit educational groups in our field to create excellent Webinars. Next Tuesday, October 6, NANS is hosting a webinar on "Caring for Patients with Neuromodulation during COVID." This session will start at 5pm EDT and is open to all who [register](#) by 4:30 EDT the day of the event.

When the announcement of such events arrives after our newsletter has gone out, we will send out a short notice to WIKISTIM registrants. Thus, you might have noticed our recent email announcing a NANS webinar and one last month for Neurovations. Please rest assured that we send out such notices ourselves because we do not release our email lists. In each case, the events were free, and we were pleased to note that many WIKISTIM subscribers open the emails and click on the links.

FROM ONE MONTH TO THE NEXT

Here we are in October—entering our fourth season of a pandemic that has brought an immense loss of life and economic devastation in some sectors. Never in our lifetime has so much of vital and widespread importance rested on health care providers, researchers, and health policy-makers. Never have we seen politics have such a clear impact in these areas as the narrative of the pandemic has been shaped and reshaped to further goals beyond the survival of at-risk populations.

While the body politic has been busy in this arena, researchers continue to try to shed light on perplexing aspects of SARS-CoV-2, such as how best to treat those who become infected, why

transmission appears to occur without a clear pattern, and why some patients have mild cases while others die. Skipping over changes in the treatment paradigm, which happen on a regular basis, we'd like to point out an interesting article on transmission: "[This Overlooked Variable Is the Key to the Pandemic It's not R.](#)" The variable is k , which is used to determine the pattern in which a virus spreads (individually or in clusters). This article notes that Vitamin D levels (among other factors considered) do not explain variations in transmission. Other interesting [research](#), however, finds that low levels of Vitamin D might contribute to a poor outcome after infection. Finally, researchers who have joined those attempting to reveal a propensity of a patient to a severe case after infection report an increased risk of severe respiratory infection among infected patients with a specific genetic cluster inherited from the Neanderthals. The full text of this article, published in early-view in *Nature*, is available through [open access](#).

As always, we thank those of you on the front lines of health care in these trying times and hope that all of the members of the WIKISTIM community are and remain safe and healthy.

OCTOBER 2020 STATISTICS

Membership

In September, the number of our subscribers grew to 1343. Thank you for helping to spread the word!

Number of citations in each section

- DBS 5708, with 2 completed WIKISTIM abstracts
- DRG 142, with 9 completed WIKISTIM abstracts
- GES 501
- PNS 419
- SCS 2574 with 132 completed or partially completed WIKISTIM abstracts
- SNS 1036

CITATIONS ADDED FROM SEARCH ON September 25, 2020

Please note that we always provide full-text links to articles published in the journal *Neuromodulation*: some of these are free and others are not. All links that point to free full-text articles are labeled as such. Also, please see below for the list of citations that received the most-clicks last month.

DBS

1. Baniasadi M, Proverbio D, Gonçalves J, Hertel F, Husch A. FastField: an open-source toolbox for efficient approximation of deep brain stimulation electric fields. *Neuroimage* 2020 223:117330 [PubMed Free Full Text](#)
2. Bello EM 2nd, Agnesi F, Xiao Y, Dao J, Johnson MD. Frequency-dependent spike-pattern changes in motor cortex during thalamic deep brain stimulation. *J Neurophysiol* 2020 epub [PubMed](#)
3. Benady A, Zadik S, Eimerl D, Heymann S, Bergman H, Israel Z, Raz A. Sedative drugs modulate the neuronal activity in the subthalamic nucleus of parkinsonian patients. *Sci Rep* 2020 10(1):14536 [PubMed Free Full Text](#)
4. Bhusal B, Nguyen BT, Sanpitak PP, Vu J, Elahi B, Rosenow J, Nolt MJ, Lopez-Rosado R, Pilitsis J, DiMarzio M, Golestanirad L. Effect of device configuration and patient's body composition on the RF heating and nonsusceptibility artifact of deep brain stimulation implants during MRI at 1.5T and 3T. *J Magn Reson Imaging* 2020 epub [PubMed](#)
5. Bočková M, Lamoš M, Klimeš P, Jurák P, Halánek J, Goldemundová S, Baláž M, Rektor I. Suboptimal response to STN-DBS in Parkinson's disease can be identified via reaction times in a motor cognitive paradigm. *J Neural Transm (Vienna)* 2020 epub [PubMed](#)
6. Bower KL, McIntyre CC. Deep brain stimulation of terminating axons. *Brain Stimul* 2020 epub

[PubMed Free Full Text](#)

7. Canessa A, Palmisano C, Isaias IU, Mazzoni A. Gait-related frequency modulation of beta oscillatory activity in the subthalamic nucleus of parkinsonian patients. *Brain Stimul* 2020 epub [PubMed Free Full Text](#)
8. Castaño-Candamil S, Piroth T, Reinacher P, Sajonz B, Coenen VA, Tangermann M. Identifying controllable cortical neural markers with machine learning for adaptive deep brain stimulation in Parkinson's disease. *Neuroimage Clin* 2020 28:102376 [PubMed Free Full Text](#)
9. Chiu SY, Nozile-Firth K, Klassen BT, Adams A, Lee K, Van Gompel JJ, Hassan A. Ataxia and tolerance after thalamic deep brain stimulation for essential tremor. *Parkinsonism Relat Disord* 2020 80:47-53 [PubMed](#)
10. Chiu SY, Tsuboi T, Hegland KW, Herndon NE, Shukla AW, Patterson A, Almeida L, Foote KD, Okun MS, Ramirez-Zamora A. Dysarthria and speech intelligibility following Parkinson's disease globus pallidus internus deep brain stimulation. *J Parkinsons Dis* 2020 epub [PubMed](#)
11. Coronel-Escamilla A, Gomez-Aguilar JF, Stamova I, Santamaria F. Fractional order controllers increase the robustness of closed-loop deep brain stimulation systems. *Chaos Solitons Fractals* 2020 140:110149 [PubMed](#)
12. Cukiert A, Cukiert CM, Burattini JA, Mariani PP. Seizure outcome during bilateral, continuous, thalamic centromedian nuclei deep brain stimulation in patients with generalized epilepsy: a prospective, open-label study. *Seizure* 2020 81:304-309 [PubMed](#)
13. Dalic LJ, Warren AEL, Young JC, Thevathasan W, Roten A, Bulluss KJ, Archer JS. Cortex leads the thalamic centromedian nucleus in generalized epileptic discharges in Lennox-Gastaut syndrome. *Epilepsia* 2020 epub [PubMed](#)
14. Järvenpää S, Lehtimäki K, Rainesalo S, Möttönen T, Peltola J. Improving the effectiveness of ANT DBS therapy for epilepsy with optimal current targeting. *Epilepsia Open* 2020 5(3):406-417 [PubMed Free Full Text](#)
15. Krauss P, Van Niftrik CHB, Muscas G, Scheffler P, Oertel MF, Stieglitz LH. How to avoid pneumocephalus in deep brain stimulation surgery? Analysis of potential risk factors in a series of 100 consecutive patients. *Acta Neurochir (Wien)* 2020 epub [PubMed](#)
16. Kromer JA, Khaledi-Nasab A, Tass PA. Impact of number of stimulation sites on long-lasting desynchronization effects of coordinated reset stimulation. *Chaos* 2020 30(8):083134 [PubMed Free Full Text](#)
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19. Li H, Liang S, Yu Y, Wang Y, Cheng Y, Yang H, Tong X. Effect of subthalamic nucleus deep brain stimulation (STN-DBS) on balance performance in Parkinson's disease. *PLOS One* 2020 15(9):e0238936 [PubMed Free Full Text](#)
20. Li Y, Buch S, He N, Zhang C, Zhang Y, Wang T, Li D, Haacke EM, Yan F. Imaging patients pre and post deep brain stimulation: localization of the electrodes and their targets. *Magn Reson Imaging* 2020 epub [PubMed](#)
21. Li Z, Guo Y, Bao X, Lei J, Shen Z, Wang X, Li L, Li Y, Wang R. Effects of subthalamic deep brain stimulation with different frequencies in a parkinsonian rat model. *Neuromodulation* 2020 epub [PubMed Full Text](#)
22. Liu Y, Wu L, Yang C, Xian W, Zheng Y, Zhang C, Hong G, Jiang L, Yang Z, Pei Z, Liu J, Chen L. The white matter hyperintensities within the cholinergic pathways and cognitive performance in patients with Parkinson's disease after bilateral STN DBS. *J Neurol Sci* 2020 418:117121 [PubMed](#)

23. Liu Y, Zhang L, Chen W, Ling Y, Xu M, Li Y, Yang C, Liu J, Chen L, Jiang N. Subthalamic nucleus deep brain stimulation improves sleep in Parkinson's disease patients: a retrospective study and a meta-analysis. *Sleep Med* 2020 74:301-306 [PubMed](#)
24. Mangone G, Bekadar S, Cormier-Dequaire F, Tahiri K, Welaratne A, Czernecki V, Pineau F, Karachi C, Castrioto A, Durif F, Tranchant C, Devos D, Thobois S, Meissner WG, Navarro MS, Cornu P, Lesage S, Brice A, Welter ML, Corvol JC. Early cognitive decline after bilateral subthalamic deep brain stimulation in Parkinson's disease patients with GBA mutations. *Parkinsonism Relat Disord* 2020 76:56-62 [PubMed](#)
25. Morigaki R, Miyamoto R, Mure H, Fujita K, Matsuda T, Yamamoto Y, Nakataki M, Okahisa T, Matsumoto Y, Miyake K, Yamamoto N, Kaji R, Takagi Y, Goto S. Can pallidal deep brain stimulation rescue borderline dystonia? Possible coexistence of functional (psychogenic) and organic components. *Brain Sci* 2020 10(9):E636 [PubMed Free Full Text](#)
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29. Mure H, Toyoda N, Morigaki R, Fujita K, Takagi Y. Clinical outcome and intraoperative neurophysiology of the Lance-Adams syndrome treated with bilateral deep brain stimulation of the globus pallidus internus: a case report and review of the literature. *Stereotact Funct Neurosurg* 2020 epub 1-5 [PubMed](#)
30. Navratilova D, Krobot A, Otruba P, Nevrlý M, Krahulik D, Kolar P, Kolarova B, Kaiserova M, Mensikova K, Vastik M, Kurcova S, Kanovsky P. Deep brain stimulation effects on gait pattern in advanced Parkinson's disease patients. *Front Neurosci* 2020 14:814 [PubMed Free Full Text](#)
31. Neudorfer C, Germann J, Elias GJB, Gramer R, Boutet A, Lozano AM. A high-resolution in vivo magnetic resonance imaging atlas of the human hypothalamic region. *Sci Data* 2020 7(1):305 [PubMed Free Full Text](#)
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33. Palard-Novello X, Drapier S, Bonnet A, Girard A, Robert G, Houvenaghel JF, Sauleau P, Vérin M, Haegelen C, Le Jeune F. Deep brain stimulation of the internal globus pallidus does not affect the limbic circuit in patients with Parkinson's disease: a PET study. *J Neurol* 2020 epub [PubMed](#)
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DRG

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2. Lo Bianco G, Papa A, Gazzero G, Rispoli M, Tammaro D, Di Dato MT, Vernuccio F, Schatman M. Dorsal root ganglion stimulation for chronic postoperative pain following thoracic surgery: a pilot study. *Neuromodulation* 2020 epub [PubMed](#) [Full Text](#)
3. Smith GL, Petersen EA, Paul C, Goree JH. Transgrade dorsal root ganglion stimulation as a salvage technique for three different anatomical barriers: a case series. *Neuromodulation* 2020 epub [PubMed](#) [Full Text](#)

GES

1. Kim D, Gedney R, Allen S, Zlomke H, Winter E, Craver J, Pinnola AD, Lancaster W, Adams D. Does etiology of gastroparesis determine clinical outcomes in gastric electrical stimulation treatment of gastroparesis? Surg Endosc 2020 epub [PubMed](#)

PNS

1. Finch P, Drummond P. High-frequency peripheral nerve stimulation for craniofacial pain. Prog Neurol Surg 2020 35:1-11 [PubMed](#)
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3. Ishizaka S, Tsuda M, Urasaki E. Extraforaminal lumbar nerve root stimulation for neuropathic pain: a case report. A A Pract 2018 11(9):244-246 [PubMed](#)
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SCS

1. Adil SM, Charalambous LT, Spears CA, Kiyani M, Hodges SE, Yang Z, Lee HJ, Rahimpour S, Parente B, Greene KA, McClellan M, Lad SP. Impact of spinal cord stimulation on opioid dose reduction: a nationwide analysis. Neurosurgery 2020 nyaa353 [PubMed](#)
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SNS

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effectiveness, quality of life, patient-reported outcomes and safety in a French multicenter observational study. Eur Urol Focus 2020 epub [PubMed Free Full Text](#)

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Most clicked links from the September newsletter

1. Bahners BH, Florin E, Rohrhuber J, Krause H, Hirschmann J, van de Vijver R, Schnitzler A, Butz M. Deep brain stimulation does not modulate auditory-motor integration of speech in Parkinson's disease. Front Neurol 2020 epub 11:655 [PubMed Free Full Text](#)
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CONTACT

The Neuromodulation Foundation, Inc.

117 East 25th Street

Baltimore, MD 21218

wikistim@gmail.com
wikistim.org
neuromodfound.org