January 2017 News **PLEASE FORWARD TO YOUR COLLEAGUES** **www.wikistim.org**

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NANS ANNUAL MEETING

This year, March 24th will mark the first half-century of the use of spinal cord stimulation as a treatment for pain, and it is fitting that we will be able to contemplate the extraordinary growth of the field of neuromodulation at both the NANS annual meeting this month in Las Vegas and the INS annual meeting at the end of May in Edinburgh.

NANS has accepted our WIKISTIM update poster in both electronic and paper formats. The paper poster will be available to view all day on Friday January 20th, and we will be standing by to discuss WIKISTIM from 5 to 7 pm, during the wine and cheese reception. We hope to see many of you there and thank NANS for its continued support!

CURRENT STATUS

January numbers (see the appendix for the list of new citations.)

- 409 subscribers
- DBS citations 2808
- DRG citations 43
- GES citations 471
- PNS citations 48
- SCS citations 1986
- SNS citations 806

CITATIONS OF NEW PAPERS THAT REPORT PRIMARY DATA ADDED JANUARY 2017

DBS Epilepsy (adding to our comprehensive list)

1. Amorim BO, Covolan L, Ferreira E, Brito JG, Nunes DP, de Morais DG, Nobrega JN, Rodrigues AM, deAlmeida AC, Hamani C. Deep brain stimulation induces antiapoptotic and anti-inflammatory effects in epileptic rats. J Neuroinflammation 2015 epub 12:162 http://www.ncbi.nlm.nih.gov/pubmed/26337974
2. Chen YC, Zhu GY, Wang X, Shi L, Jiang Y, Zhang X, Zhang JG. Deep brain stimulation of the anterior nucleus of the thalamus reverses the gene expression of cytokines and their receptors as well as neuronal degeneration in epileptic rats. Brain Res 2016 epub http://www.ncbi.nlm.nih.gov/pubmed/28027874
3. Martín-López D, Jiménez-Jiménez D, Cabañés-Martínez L, Selway RP, Valentín A, Alarcón G. The role of thalamus versus cortex in epilepsy: evidence from human ictal centromedian recordings in patients assessed for deep brain stimulation. Int J Neural Syst 2016 epub

http://www.ncbi.nlm.nih.gov/pubmed/28030998

DBS OCD (adding to our comprehensive list)

1. Fayad SM, Guzick AG, Reid AM, Mason DM, Bertone A, Foote KD, Okun MS, Goodman WK, Ward HE. Six-nine year follow-up of deep brain stimulation for obsessive-compulsive disorder. PLoS One 2016 11(12):e0167875 http://www.ncbi.nlm.nih.gov/pubmed/27930748

DBS PD & Miscellaneous (we only list recent publications here even though we continue to add older citations to the database)

1. Baumgarten C, Zhao Y, Sauleau P, Malrain C, Jannin P, Haegelen C. Improvement of pyramidal tract side effect prediction using a data-driven method in subthalamic stimulation. IEEE Trans Biomed Eng 2016 epub http://www.ncbi.nlm.nih.gov/pubmed/27959795
2. Canessa A, Pozzi NG, Arnulfo G, Brumberg J, Reich MM, Pezzoli G, Ghilardi MF, Matthies C, Steigerwald F, Volkmann J, Isaias IU. Striatal dopaminergic innervation regulates subthalamic beta-oscillations and cortical-subcortical coupling during movements: preliminary evidence in subjects with Parkinson's disease. Front Hum Neurosci 2016 epub 10:611 http://www.ncbi.nlm.nih.gov/pubmed/27999534
3. Fagundes VC, Rieder CR, da Cruz AN, Beber BC, Portuguez MW. Deep brain stimulation frequency of the subthalamic nucleus affects phonemic and action fluency in Parkinson's disease Parkinsons Dis 2016 epub http://www.ncbi.nlm.nih.gov/pubmed/28050309
4. Geng X, Zhang J, Jiang Y, Ashkan K, Foltynie T, Limousin P, Zrinzo L, Green A, Aziz T, Brown P, Wang S. Comparison of oscillatory activity in subthalamic nucleus in Parkinson's disease and dystonia. Neurobiol Dis 2016 98:100-107 http://www.ncbi.nlm.nih.gov/pubmed/27940307
5. Golestanirad L, Iacono MI, Keil B, Angelone LM, Bonmassar G, Fox MD, Herrington T, Adalsteinsson E, LaPierre C, Mareyam A, Wald LL. Construction and modeling of a reconfigurable MRI coil for lowering SAR in patients with deep brain stimulation implants. Neuroimage 2016 147:577-588 http://www.ncbi.nlm.nih.gov/pubmed/28011252
6. Isler C, Albi A, Schaper FL, Temel Y, Duits A. Neuropsychological outcome in subthalamic nucleus stimulation surgeries with electrodes passing through the caudate nucleus. Stereotact Funct Neurosurg 2016 94(6):413-420 http://www.ncbi.nlm.nih.gov/pubmed/28006786
7. Kaszuba BC, Walling I, Gee LE, Shin DS, Pilitsis JG. Effects of subthalamic deep brain stimulation with duloxetine on mechanical and thermal thresholds in 6OHDA lesioned rats. Brain Res 2017 1655:233-241 http://www.ncbi.nlm.nih.gov/pubmed/27984022
8. Langevin JP, Skoch JM, Sherman SJ. Deep brain stimulation of a patient with psychogenic movement disorder. Surg Neurol Int 2016 7(Suppl 35):S824-S826 http://www.ncbi.nlm.nih.gov/pubmed/27990313
9. Lemaire JJ, Pereira B, Derost P, Vassal F, Ulla M, Morand D, Coll G, Gabrillargues J, Marques A, Debilly B, Coste J, Durif F. Subthalamus stimulation in Parkinson disease: accounting for the bilaterality of contacts. Surg Neurol Int 2016 7(Suppl 35):S837-S847 http://www.ncbi.nlm.nih.gov/pubmed/27990316
10. Machado AR, Zaidan HC, Paixão AP, Cavalheiro GL, Oliveira FH, Júnior JA, Naves K, Pereira AA, Pereira JM, Pouratian N, Zhuo X, O'Keeffe A, Sharim J, Bordelon Y, Yang L, Vieira MF, Andrade AO. Feature visualization and classification for the discrimination between individuals with Parkinson's disease under levodopa and DBS treatments. Biomed Eng Online 2016 15(1):169 http://www.ncbi.nlm.nih.gov/pubmed/28038673
11. Mandali A, Chakravarthy VS, Rajan R, Sarma S, Kishore A. Electrode position and current amplitude modulate impulsivity after subthalamic stimulation in Parkinsons disease—a computational study. Front Physiol 2016 epub 7:585 http://www.ncbi.nlm.nih.gov/pubmed/27965590

12. Morishita T, Higuchi MA, Saita K, Tsuboi Y, Abe H, Inoue T. Changes in motor-related cortical activity following deep brain stimulation for Parkinson's disease detected by functional near infrared spectroscopy: a pilot study. Front Hum Neurosci 2016 epub 10:629 http://www.ncbi.nlm.nih.gov/pubmed/28018196
13. Oertel MF, Schüpbach WM, Ghika JA, Stieglitz LH, Fiechter M, Kaelin-Lang A, Raabe A, Pollo C. Combined thalamic and subthalamic deep brain stimulation for tremor-dominant Parkinson's disease. Acta Neurochir (Wien) 2016 epub http://www.ncbi.nlm.nih.gov/pubmed/27966027
14. Rabie A, Verhagen Metman L, Fakhry M, Eassa AY, Fouad W, Shakal A, Slavin KV. Improvement of advanced Parkinson's disease manifestations with deep brain stimulation of the subthalamic nucleus: a single institution experience. Brain Sci 2016 epub 6(4) http://www.ncbi.nlm.nih.gov/pubmed/27983589
15. Rabie A, Verhagen Metman L, Slavin KV. Using 'functional' target coordinates of the subthalamic nucleus to assess the indirect and direct methods of the preoperative planning: do the anatomical and functional targets coincide? Brain Sci 2016 epub 6(4) http://www.ncbi.nlm.nih.gov/pubmed/28009826
16. Servello D, Saleh C, Bona AR, Zekaj E, Zanaboni C, Porta M. Deep brain stimulation for Parkinson's disease prior to L-dopa treatment: a case report. Surg Neurol Int 2016 7(Suppl 35):S827-S829 http://www.ncbi.nlm.nih.gov/pubmed/27990314
17. Shah A, Coste J, Lemaire JJ, Schkommodau E, Taub E, Guzman R, Derost P, Hemm S. A novel assistive method for rigidity evaluation during deep brain stimulation surgery using acceleration sensors. J Neurosurg 2016 epub 1-11 http://www.ncbi.nlm.nih.gov/pubmed/27982769
18. So RQ, McConnell GC, Grill WM. Frequency-dependent, transient effects of subthalamic nucleus deep brain stimulation on methamphetamine-induced circling and neuronal activity in the hemiparkinsonian rat. Behav Brain Res 2016 320:119-127 http://www.ncbi.nlm.nih.gov/pubmed/27939691
19. Zaehle T, Wagenbreth C, Voges J, Heinze HJ, Galazky I. Effects of deep brain stimulation of the subthalamic nucleus on perceptual decision making. Neuroscience 2016 343:140-146 http://www.ncbi.nlm.nih.gov/pubmed/27956065
20. Zhang S, Zhou P, Jiang S, Wang W, Li P. Interleaving subthalamic nucleus deep brain stimulation to avoid side effects while achieving satisfactory motor benefits in Parkinson disease: a report of 12 cases. Medicine (Baltimore) 2016 95(49):e5575 http://www.ncbi.nlm.nih.gov/pubmed/27930569

DRG (updating our comprehensive list)

1. Deer TR, Levy RM, Kramer J, Poree L, Amirdelfan K, Grigsby E, Staats P, Burton AW, Burgher AH, Obray J, Scowcroft J, Golovac S, Kapural L, Paicius R, Kim C, Pope J, Yearwood T, Samuel S, McRoberts WP, Cassim H, Netherton M, Miller N, Schaufele M, Tavel E, Davis T, Davis K, Johnson L, Mekhail N. Dorsal root ganglion stimulation yielded higher treatment success rate for CRPS and causalgia at 3 and 12 months: randomized comparative trial. Pain 2016 epub http://www.ncbi.nlm.nih.gov/pubmed/28030470.

GES (updating our comprehensive list)

1. Alarcón Del Agua I, Socas-Macias M, Busetto L, Torres-Garcia A, Barranco-Moreno A, Garcia de Luna PP, Morales-Conde S. Post-implant analysis of epidemiologic and eating behavior data related to weight loss effectiveness in obese patients treated with gastric electrical stimulation. Obes Surg 2016 epub http://www.ncbi.nlm.nih.gov/pubmed/28013450

PNFS (updating our comprehensive list)

1. Zhou L, Chou H, Holder E. Abdominal wall type-I complex regional pain syndrome treated effectively with peripheral nerve field stimulation: a case report. J Surg Case Rep 2017 epub http://www.ncbi.nlm.nih.gov/pubmed/28044002

SCS (updating our comprehensive list)

1. Al-Kaisy A, Palmisani S, Smith TE, Pang D, Lam K, Burgoyne W, Houghton R, Hudson E, Lucas J. 10 kHz high-frequency spinal cord stimulation for chronic axial low back pain in patients with no history of spinal surgery: a preliminary, prospective, open label and proof-of-concept study. Neuromodulation 2016 epub http://www.ncbi.nlm.nih.gov/pubmed/28025843
2. Samaddar S, Vazquez K, Ponika D, Toruno P, Sahbani K, Begum S, Abouelela A, Mekhael W, Ahmed Z. Trans-spinal direct current stimulation modulates migration and proliferation of adult newly-born spinal cells in mice. J Appl Physiol (1985) 2016 epub http://www.ncbi.nlm.nih.gov/pubmed/27932680
3. Schoen NB, Chieng L, Madhavan K, Jermakowicz W, Vanni S. The use of intraoperative electromyogram during spinal cord stimulator placement surgery: a case series. World Neurosurg 2016 epub http://www.ncbi.nlm.nih.gov/pubmed/28034811
4. Shamji MF, Paul D, Shcharinsky A. Minimally-invasive placement of spinal cord stimulator paddle electrodes is associated with improved perioperative and long-term experience among neuropathic pain patients. Spine (Phila Pa 1976) 2016 epub http://www.ncbi.nlm.nih.gov/pubmed/27997509
5. Slangen R, Faber CG, Schaper NC, Joosten EA, van Dongen RT, Kessels AG, van Kleef M, Dirksen CD. A trial based economic evaluation comparing spinal cord stimulation with best medical treatment in painful diabetic peripheral neuropathy. J Pain 2016 epub http://www.ncbi.nlm.nih.gov/pubmed/27965045
6. Song W, Martin JH. Spinal cord direct current stimulation differentially modulates neuronal activity in the dorsal and ventral spinal cord. J Neurophysiol 2016 epub http://www.ncbi.nlm.nih.gov/pubmed/28031400

SNS (updating our comprehensive list)

1. Ansó M, Veiga-Gil L, De Carlos J, Hualde A, Pérez-Cajaraville J. Neuraxial analgesia in a pregnant woman with Fowler's syndrome and sacral neuromodulation. Int J Obstet Anesth 2016 epub http://www.ncbi.nlm.nih.gov/pubmed/28034599
2. Brunner M, Cui Z, Matzel KE. Sacral nerve stimulation for faecal incontinence in patients with sacral malformation. Int J Colorectal Dis 2016 epub http://www.ncbi.nlm.nih.gov/pubmed/28035463
3. Langlois LD, Le Long E, Meleine M, Antor M, Atmani K, Dechelotte P, Leroi AM, Gourcerol G. Acute sacral nerve stimulation reduces visceral mechanosensitivity in a cross-organ sensitization model. Neurogastroenterol Motil 2016 epub http://www.ncbi.nlm.nih.gov/pubmed/27997083
4. Li X, Liao L, Chen G, Wang Z, Deng H. Involvement of opioid receptors in inhibition of bladder overactivity induced by sacral neuromodulation in pigs: a possible action mechanism. Neurourol Urodyn 2016 epub http://www.ncbi.nlm.nih.gov/pubmed/27935110

FINANCIAL SUPPORT TO DATE FOR 2016/17

- B. Todd Sitzman, MD, MPH
- NEVRO
- Richard B. North, MD
- The NANS Foundation, now the Institute of Neuromodulation

Ongoing in-kind support:

- The International Neuromodulation Society (publicity and conference registration)
- The Neuromodulation Foundation (parent non-profit, overhead and development)
- The North American Neuromodulation Society (publicity and conference registration)

Disclosure

WIKISTIM includes citations for indications that are or might be considered off-label in the United States.

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