

## CURRICULUM VITAE

July 2013

**Name:** Shabbar F. Danish, MD

**Home Address:**

**Contact:** shabbar.danish@rutgers.edu

**Place of Birth:** Norwich, New York

**Date of Birth:** 3/11/75

**Office Address:** Rutgers-RWJ Medical School  
Division of Neurosurgery  
125 Paterson St., CAB Suite 2100  
New Brunswick, NJ 08901-1977

**Present Title:** Assistant Professor  
Division of Neurosurgery  
Director, Stereotactic and Functional Neurosurgery  
Medical Director, RWJ Gamma Knife Center

**Citizenship:** USA

**Undergraduate Education:**

B.A., Rutgers University  
New Brunswick, NJ (1997)

M.D., Rutgers-RWJMS  
New Brunswick, NJ (5/01)

**Postgraduate Training:**

General Surgery Residency  
University of Pennsylvania  
Philadelphia, PA (6/01-6/02)

Neurosurgery Residency  
University of Pennsylvania  
Philadelphia, PA (7/02-6/08)

**Fellowship:** Research Fellow, Bioengineering  
University of Pennsylvania  
Philadelphia, PA (7/05-6/06)

Research Fellow, Neurophysiology  
Hospital Nacional de Paraplejicos  
Toledo, Spain (1/07-3/07)

Fellowship, Movement disorder and Epilepsy Surgery  
University of Pennsylvania  
Director: Gordon Baltuch, MD, PhD

7/05-6/06

Fellowship, Gamma Knife Radiosurgery  
University of Pennsylvania  
Director: John Y.K. Lee, MD  
Philadelphia, PA (8/08-12/08)

**Academic Appointments:**

Assistant Professor  
Division of Neurosurgery  
UMDNJ-RWJMS  
New Brunswick, N. J. (7/08 – Present)

**Hospital Appointments:**

Robert Wood Johnson University Hospital  
New Brunswick, N.J.  
Active Staff (9/08 – Present)

**Licensure:**

PA State: MD422833  
NJ State 25Ma083500900  
CDS – NJ D09242900  
DEA: BD7450290

**Board Certification:**

Completed May 2013

**Professional Organizations:**

American Association of Neurosurgeons  
Active member (Present)

Congress of Neurologic Surgeons  
Active member (Present)

ASSFN  
Active member (Present)

New Jersey Neurosurgery Society  
Member (Present)

**Honors and Awards:**

NJ Healthcare Association Innovator of the Year: *Development of the Robert Wood Johnson Brain Tumor Laser Ablation Program (2012)*  
NJ Healthcare Association Innovator of the Year: *Development of a MultiDisciplinary Movement Disorder Assessment and Care Clinic (2011)*  
AANS Gildenburg Resident Research Award in Stereotactic & Functional Neurosurgery (AANS meeting, April 2008)  
Bioengineering Design Award (School of Engineering, University of PA 2007)  
PAN Philadelphia Resident Research Award (2005)  
NIH Resident Research Award: Neural Interface Workshop, Bethesda, MD (2005)  
Alpha Omega Alpha (2001)  
NJPA-Pfizer Medical Student Best Paper Award (2000)  
Rothstein Foundation Scholarship for Research in Neuroscience (1997)

Henry Rutgers Scholar (1997)  
Mary S. Tyler Scholar (1995)  
Golden Key National Honor Society (1994)  
Phi Eta Sigma Honor Society (1994)  
Esther Seldner Award (1994)  
Rutgers Merit Scholar (1993)  
National Merit Scholar (1993)

**Grant Support:**

New Jersey Brain Injury Foundation  
“Continuous Monitoring of Hemodynamic Autoregulatory Factors after Traumatic Brain Injury.”  
Co-PI: William Craelius, PhD  
\$539,000 (7/13-7/16)

Integra Foundation Scientific Grant  
“Pre-fixation head measurements as predictors of optimal CRW stereotactic frame configuration and settings prior to frame mounting.”  
\$20,000 (1/12-1/13)

Robert Wood Johnson Foundation Pilot Grant  
“Refinement of a high fidelity recording system and quantitative visual activity map for online, semi-automated, objective, functional localization of target brain structures during DBS surgery for movement disorders”  
\$25,000 (1/11-1/12)

Robert Wood Johnson Foundation Pilot Grant  
“Development of a high fidelity recording system and quantitative visual activity map for online, semi-automated, objective, functional localization of target brain structures during DBS surgery for movement disorders”  
\$25,000 (7/09-7/10)

Center for Comprehensive Neuroscience Pilot Grant Award  
“Development of a high fidelity recording system and quantitative visual activity map for online, semi-automated, objective, functional localization of target brain structures during DBS surgery for movement disorders”  
\$65,000 (2007)

Parkinson’s Disease Research & Education Center Grant Award  
“Microdialysis in Parkinson’s disease” \$8,000 (2006)

NIH grant award (#T 32 NS043126-03) \$45,000 (2005)

Parkinson’s Disease Research & Education Center Grant Award  
“Characterization of Basal Ganglia Active Patterns in Parkinson’s Disease”  
\$10,000 (2005)

Medtronic Neurological Research Fellowship \$15,000 (2004)

**PUBLICATIONS, PEER-REVIEWED**

*Volumetric trends associated with MRI-guided laser-induced thermal therapy (LITT) for intracranial tumors.* Patel NV, Jethwa PR, Barrese JC, Hargreaves EL, **Danish SF**. Lasers Surg Med. 2013 Aug; 45(6): 362-9

*Deep Brain stimulation lead fixation after Stimloc failure.* Patel NV, Barrese J, Ditota RJ, Hargreaves EL, **Danish SF**. J Clin Neurosci. 2012 Sep 22

*Magnetic resonance thermometry-guided laser induced thermal therapy for intracranial neoplasms: initial experience.* Jethwa PR, Barrese JC, Gowda A, Shetty A., **Danish SF**. Neurosurgery. 2012 Sep; 71: 133-45

*Implications for programming strategy of the location of the active contact in subthalamic nucleus deep brain stimulation.* Connolly PJ, Halpern CH, Baltuch GH, **Danish SF**, Jaggi, JL. J Clin Neurosci. 2012 Jul; 19(7): 1029-31

*Depth-time interpolation of feature trends extracted from mobile microelectrode data with kernel functions.* Stephen Wong, Eric L. Hargreaves, Gordon H Baltuch, Jurg L Jaggi, and **Shabbar F. Danish**. Stereotact Funct Neurosurg. 2012 Jan 19;90 (1): 51-58.

*The Effect of Intraventricular Trajectory on Brain Shift in Deep Brain Stimulation.* Kramer DR, Halpern CH, **Danish SF**, Jaggi JL, Baltuch GH. Stereotact Funct Neurosurg. 2011 Dec 22;90(1):20-24.

*Deep Brain Stimulation: Anatomical, physiological, and computational mechanisms.* Moyer JT, **Danish SF**, Finkel LH. Network. 2011;22(1-4):186-207.

*Treatment of a supratentorial primitive neuroectodermal tumor using magnetic resonance guided laser induced thermal therapy.* Jethwa PR, Lee JH, Assina R, Keller IA, **Danish SF**. J Neurosurg Pediatr. 2011 Nov;8(5):468-75.

*Treatment of steroid refractory Gamma Knife related radiation necrosis with bevacizumab: Case report and review of the literature.* Sanborn MR, **Danish SF**, Rosenfeld MR, O'Rourke D, Lee JY. Clin Neurol Neurosurg. 2011 Nov;113(9):798-802.

*Pattern Recognition Approaches for Identifying Subcortical Targets of Deep Brain Surgery.* W. Artchaovallitwongse, Young-SeonJeong, Myon-KeeJeong, **Shabbar F. Danish**, and Stephen Wong. IEEE Intelligent Systems, June 2011.

*Intracerebral microdialysis during deep brain stimulation surgery.* Kilpatrick M, Church E, **Danish S**, Stiefel M, Jaggi J, Halpern C, Kerr M, Maloney E, Robinson M, Lucki I, Krizman-Grenda E, Baltuch G. J Neurosci Methods. 2010 Jun 30; 190 (1): 106-11.

*Choosing the best operation for chronic subdural hematoma: a decision analysis.* Lega, BC, **Danish SF**, Malhotra NR, Sonnad SS, Stein SC. J Neurosurg. 2009 Oct 30.

*Subcutaneous heparin for prophylaxis of venous thromboembolism in deep brain stimulation surgery: evidence from a decision analysis.* Bauman JA, Church E, Halpern CH, **Danish SF**, Zaghloul KA, Jaggi JL, Stein SC, Baltuch GH. Neurosurgery 2009 Aug; 65(2): 276-80.

*Quality of life after hemicraniectomy for traumatic brain injury in adults. A review of the literature.* **Danish SF**, Barone D, Lega BC, Stein SC. Neurosurg Focus 2009 Jun; 26(6): E2

*Functional localization and visualization of the subthalamic nucleus from microelectrode recordings acquired during DBS surgery with unsupervised machine learning.* Wong S, Baltuch GH, Jaggi JL, **Danish SF**. J Neural Eng. 2009 Apr; 6(2): 026006

*Thalamic deep brain stimulation for midbrain tremor secondary to idiopathic cystic degeneration of the brainstem.* Sanborn MR, **Danish SF**, Ranalli NJ, Grady MS, Jaggi JL, Baltuch GH. Stereotact Funct Neurosurg 2009; 87(2): 128-33.

*Cognition following bilateral deep brain stimulation surgery of the subthalamic nucleus for Parkinson's disease.* Halpern CH, Rick JH, **Danish SF**, Grossman M, Baltuch GH. *Int J Geriatr Psychiatry*. 2009 May; 24(5): 443-51

*Torticollis manifest after a minor fall with associated underlying bony anomalies and a hypoplastic vertebral artery.* Samdani AF, Williams RC, **Danish S**, Betz, R. *J Pediatr Orthop B*. 2009 Sep; 18(): 271-4.

*Deep brain stimulation in the treatment of obesity.* Halpern CH, Wolf JA, Bale TL, Stunkard AJ, **Danish SF**, Grossman M, Jaggi JL, Grady MS, Baltuch GH. *J Neurosurg* 2008 Oct; 109(4): 625-34.

*Determination of subthalamic nucleus location by quantitative analysis of the despiked background neural activity along the microelectrode track for deep brain stimulation surgery.* **Danish SF**, Baltuch GH, Jaggi JL, Wong S. *J Clin Neurophysiol*. 2008 Apr; 25(2): 98-103.

*Iatrogenic paraplegia in two morbidly obese patients with ankylosing spondylitis undergoing total hip arthroplasty.* **Danish SF**, Wilden JA, Schuster J. *J Neurosurg Spine*. 2008 Jan; 8(1): 80-3.

*Brain Shift During Deep Brain Stimulation Surgery for Parkinson's Disease.* Casey Halpern, **Shabbar F. Danish**, Gordon H. Baltuch, and Jurg L. Jaggi. *Stereotact Funct Neurosurg* 2008; 86: 37-43.

*Cervical Arthroplasty.* **Danish SF**, Marcotte PJ. *J Neurosurg Spine*. 2007 Sep; 7(3): 375-376.

*High-frequency oscillations in the human non-parkinsonian subthalamic nucleus.* **Shabbar F. Danish**, Jason T. Moyer, Leif H. Finkel, Gordon H. Baltuch, Jurg L. Jaggi, Alberto Priori, and Guglielmo Foffani. *Brain Res Bull*. 2007 Sep 14; 74 (1-3): 84-90

*Stimulation Induced Dyskinesias Inform Basal Ganglia Models and the Mechanisms of Deep Brain Stimulation.* Jason T. Moyer, and **Shabbar F. Danish**. *J Neurosci*. 2007 Feb 21; 27(8): 1799-1800

*Implementation of dual simultaneous microelectrode recording systems during deep brain stimulation surgery for Parkinson's disease.* Jason T. Moyer, **Shabbar F. Danish**, Jeffrey G. Keating, Leif H. Finkel, Gordon H. Baltuch, and Jurg L. Jaggi. *Neurosurgery*. 2007 Feb; 60 (2 Suppl 1): E177-E178.

*Discrimination of capsular stage brain abscesses from necrotic or cystic neoplasms using diffusion weighted MR imaging.* Djamil Fertikh, MD, Alain Cunqueiro, MD, **Shabbar Danish, MD**, Riyadh Alokaili, MD, Jaroslaw.Krejza, MD, PhD, and Elias R. Melhem, MD. *J Neurosurg*. 2007 Jan; 106(1): 76-81.

*The utility of signal frequency plotting for the prediction of subthalamic nucleus location during deep brain stimulation surgery for Parkinson's disease.* **Shabbar F. Danish**, Jason T. Moyer, Gordon H. Baltuch, Jurg L. Jaggi, and Leif Finkel. *Acta Neurochirurgica (Wien)*. 2006; vol. 148, no. 10. XVII.

*Conventional MR imaging is inadequate in delineating the relationship between the red nucleus and subthalamic nucleus in Parkinson's disease.* **Shabbar F. Danish**, Jurg L. Jaggi, Jason T. Moyer, Leif Finkel, and Gordon H. Baltuch. *Stereotact Funct Neurosurg*. 2006. Apr 19; 84 (1) 12-18.

*The use of allogeneic skin graft for the closure of large meningomyeloceles.* **Shabbar F. Danish**, Amer F. Samdani, Phillip B. Storm, and Leslie Sutton. *Neurosurgery*. 2006 Apr; 58 (4 Suppl 2): ONS-E376; discussion ONS-E376.

*Experience with acellular human dura and bovine collagen-matrix for duraplasty after posterior fossa decompression for Chiari malformations.* **Shabbar F. Danish**, Amer F. Samdani, Amgad Hanna, Phillip Storm, and Leslie Sutton. J Neurosurg. 2006 Jan; 104 (1 Suppl): 16-20.

*Prophylaxis for Deep Venous Thrombosis in Craniotomy Patients: A Decision Analysis.* **Shabbar F. Danish**, Mark G. Burnett, Seema S. Sonnad, Eileen Maloney-Wilensky, Joseph Ong, and Sherman C. Stein. Neurosurgery. 2005 Jun; 56 (6): 1286-92; discussion 1292-4

*Cerebral Gumma mimicking Glioblastoma Multiforme.* Beau M. Ances, **Shabbar F. Danish**, Dennis L. Kolson, Kevin D. Judy, and David S. Liebeskind. Neurocrit Care. 2005; 2(3): 300-302.

*Cervical Meningioma presenting as Otagia.* **Shabbar F. Danish**, and Eric L. Zager. Neurosurgery. 56 (3): E 621, March 2005.

*Deep Venous Thrombosis in Craniotomy Patients: A Review.* **Shabbar F. Danish**, Mark G. Burnett, and Sherman C. Stein. Neurosurgery Focus 17 (4): E2, October 2004.

*Intramedullary low-grade astrocytomas: long-term outcome following radical surgery.* George I. Jallo, **Shabbar Danish**, Linda Velasquez, and Fred Epstein. Journal of Neuro-Oncology 53: 61-66, 2001.

*Pilot Study utilizing Magnetic Resonance Guided Laser Induced Thermal therapy (LITT) in the Management of Intracranial Ependymomas: Clinical and Radiographic Outcomes in Three Patients.* Pinakin R. Jethwa, Nitesh V. Patel, Jason H. Lee, James C. Barrese, Irwin Keller, and **Shabbar F. Danish**. (submitted, Neurosurgery)

*Importance of Initial Aggressive Treatment for Pineal Parenchymal Tumor of Intermediate Differentiation: A Case Report and Review of the Literature.* Madeera Kathpal, Roy Rhodes, Tina Mayer, **Shabbar Danish**, and Atif Khan. (in press, Practical Radiation Oncology)

## CHAPTERS:

*Microelectrode Recording During Deep Brain Stimulation for Parkinson's Disease.* **Shabbar F. Danish**, Jason T. Moyer, and Jurg L. Jaggi. In Deep Brain Stimulation for Parkinson's Disease: A Comprehensive Text. Eds. Gordon H. Baltuch and Matthew Stern. Taylor and Francis (Informa) NY, London, 2007.

*The History of Deep Brain Stimulation.* **Shabbar F. Danish** and Gordon H. Baltuch. In Deep Brain Stimulation for Parkinson's Disease: A Comprehensive Text. Eds. Gordon H. Baltuch and Matthew Stern. Taylor and Francis (Informa) NY, London, 2007.

*Deep Brain Stimulation: Anatomical, Physiological and Computational Mechanisms.* Jason T. Moyer, **Shabbar F. Danish**, and Leif H. Finkel. In Deep Brain Stimulation for Parkinson's Disease: A Comprehensive Text. Eds. Gordon H. Baltuch and Matthew Stern. Taylor and Francis (Informa) NY, London, 2007.

*Surgical technique for Leksell frame based deep brain stimulation of the subthalamic nucleus.* Uzma Samadani, **Shabbar F. Danish**, Jurg L. Jaggi, Santiago Figueroa, Gordon H. Baltuch. In Deep Brain Stimulation for Parkinson's Disease: A Comprehensive Text. Eds. Gordon H. Baltuch and Matthew Stern. Taylor and Francis (Informa) NY, London, 2007.

*Pathology and Pathophysiology of Aneurysmal Subarachnoid Hemorrhage.* Mark G. Burnett, **Shabbar F. Danish**, Guy M McKhann II, and Peter D. Le Roux. In: Management of Cerebral Aneurysms. Le Roux et al. Saunders. Philadelphia. 2004

## **PUBLICATIONS, NON PEER-REVIEWED**

*Deep Brain Stimulation as an Adjunctive Treatment for Parkinson's Disease.* Eric Hargreaves and **Shabbar F. Danish.** The Parkinson's Bulletin, Dec 2009

*Utility of Intraoperative MRI Guidance in the Surgical Management of Recurrent Neurocytoma.* Omar Hassan, Richard Lehman and **Shabbar F. Danish.** Robert Wood Johnson Neuroscience. Fall 2009.

## **INVITED LECTURES:**

*Deep Brain Stimulation for Psychiatric Disorders: Current Indications and Future Directions.* Grand Rounds, Dept of Psychiatry, Meridian Health System. Neptune, NJ. July 2013.

*Finding avenues into the brain and changing the definition of inoperable.* Regional AMSA Conference. Rutgers University, New Brunswick, NJ. February 2013.

*MRI-Guided Laser Interstitial Thermal therapy for Intracranial Neoplasms.* Neurosurgery Chapter: American College of Surgeons. Woodbridge, NJ November 2012

*Deep Brain Stimulation: Current Concepts and Future Trends.* Grand Rounds. Capital Health Neuroscience Center. Hopewell, NJ. September 2012

*MRI-Guided Laser Interstitial Thermal Therapy for Intracranial Neoplasms.* Grand Rounds, Dept. of Surgery. Robert Wood Johnson Medical School. New Brunswick, NJ. January, 2012.

*MRI-Guided Laser Interstitial Thermal Therapy for Intracranial Neoplasms.* **Visiting Professor,** University of Pennsylvania School of Medicine. Dept. of Neurosurgery. Philadelphia, Pa. November 2011

*Deep Brain Stimulation for Psychiatric Disorders: Current Indications and Future Directions.* Grand Rounds, Dept of Psychiatry, Robert Wood Johnson Medical School. New Brunswick, NJ. June 2011.

*Quantitative conversion of neurophysiologic signals for target localization during surgery for Parkinson's Disease.* Department of Bioengineering, Translational Medicine Seminar. Rutgers University. February, 2011.

*Deep Brain Stimulation for Movement Disorders: Current Trends and Future Indications.* Neurology Update Symposium. Robert Wood Johnson Medical School. December, 2010.

*Surgical Management of Parkinson's Disease.* Living with Parkinson's disease Symposium. American Parkinson's Disease Association. Voorhees, NJ. November, 2010.

*Management of Intracranial Hemorrhage and Intracranial Hypertension.* Dept of Emergency Medicine, Robert Wood Johnson Medical School. New Brunswick, NJ. April 2010

*Surgery for Parkinson's Disease.* Grand Rounds. Dept of Surgery, Robert Wood Johnson Medical School. New Brunswick, NJ. Mar 2010

*Current Indications for Deep Brain Stimulation Surgery.* APDA Chapter Meeting. New Brunswick, NJ Nov 2009

*Current Indications and future directions for deep brain stimulation.* Grand Rounds, Dept of Psychiatry, Robert Wood Johnson Medical School. New Brunswick, NJ. Sept 2009

## ABSTRACT PRESENTATIONS:

2013 Oral Poster. *Anisotropic Smoothing Regularization (AnSR) in Thirion's Demons Registration Evaluates Brain MRI Tissue Changes Post-Laser Ablation*. Eileen Hwuang, **Shabbar Danish**, Mirabela Rusu, Rachel Spark, Robert Toth, and Anant Madabhushi. Engineering in Medicine and Biology Conference. Osaka, Japan. July 2013

2013 Plenary Session Talk. *Anterior cingulotomy performed via MRI-guided laser thermal ablation for chronic intractable malignant pain: Feasibility and initial experience*. Antonios Mammis and **Shabbar F. Danish**. AANS Annual Meeting. New Orleans, La. April 2013

2013 Plenary Session Talk. *The Utility of SPGR vs. Fast-SPGR imaging in the detection of brain metastasis from pre-gamma knife planning*. Jason Lee, Irwin Keller, Sandip Basak, Eric Hargreaves, and **Shabbar F. Danish**. American Society for Neuroradiology Annual Meeting. San Diego Ca. May 2013

2013 Oral Poster. *A supervised learning based fiducial driven registration scheme: applications for co-registration of laser ablated brain on MR imaging*. Tao Wan, b. Nicolas Bloch, **Shabbar Danish**, and Anant Madabhushi. International Symposium on Biomedical Imaging Meeting. San Francisco, Ca. April 2013.

2012 Oral Poster. *Quantitative evaluation of multi-parametric MR Imaging marker changes post-laser interstitial ablation therapy (LITT) for epilepsy*. Pallavi Tiwari, **Shabbar Danish**, Stephen Wong, and Anant Madabhushi. SPIE Medical Imaging Conference. Orlando, Fl. 2012

2012 Poster presentation. *Frameless stereotactic laser thermal ablation of the hippocampus in mesial temporal lobe epilepsy due to hippocampal sclerosis: report of two patients*. Nitesh Patel and **Shabbar F. Danish**. American Epilepsy Society Meeting. San Diego, Ca. Dec 2012

2012 Oral presentation. *Complication Avoidance during MRI guided Laser Interstitial Therapy*. Pinakin Jethwa and **Shabbar F. Danish**. 9<sup>th</sup> Annual IMRI Conference. Harvard Medical School. Sept 2012.

2012 Digital presentation. *Morphometric and mathematical analysis of head measurements for a Cosman-Roberts-Wells (CRW) stereotactic frame fixation protocol*. Nitesh Patel, Dmitry Petrov, Eric Hargreaves, and **Shabbar F. Danish**. AANS Annual Meeting, Miami, Fl. April 2012.

2012 Digital presentation. *Volumetric analysis of MR guided Laser Induced Thermal Therapy for brain tumor*. Nitesh Patel, James Barrese, and **Shabbar F. Danish**. AANS Annual Meeting, Miami, Fl. April 2012.

2012 Poster presentation. *Treatment of Clival Chordoma using Magnetic Resonance Guided Laser Interstitial Thermal Therapy (LITT): Case Report*. James Barrese, Pinakin Jethwa, and **Shabbar F. Danish**. American Skull Base Society Meeting, Las Vegas, NV. February 2012.

2011 Poster presentation. *Anesthetic Management during Laser Interstitial Thermal Therapy for Intracranial Neoplasms*. Margit Kaufman, **Shabbar F. Danish**, and Christine Hunter. 65<sup>th</sup> Post Graduate Assembly in Anesthesiology. New York. December 2011

2011 Poster presentation. *Magnetic Resonance Guided Laser Induced Thermal Therapy for Recurrent Anaplastic Ependymoma*. Rachid Assina, Dmitry Petrov, Jason Lee, Irwin Keller, and **Shabbar F. Danish**. CNS Annual Meeting, Washington DC, October, 2011.



2011 Oral Poster presentation. *Laser Interstitial Thermal Therapy Utilizing Continuous MRI Based Thermometry for Guidance During Ablation: Initial Experience with Intracranial Neoplasms.* Gaurav Gupta and **Shabbar F. Danish**. CNS Annual Meeting, Washing DC, October, 2011.

2011 Poster presentation. *Pre-fixation Head Measurements as Predictors of Required Cosman Roberts Wells (CRW) Stereotactic Frame Configuration and Settings Prior to Frame Mounting.* Dmitry Petrov, Nitesh Patel, **Shabbar F. Danish**, and Eric L. Hargreaves. Congress of Neurological Surgery Annual Meeting, Washington, DC. October, 2011.

2011 Oral Presentation. *Neurophysiological Recordings from the Subthalamic nucleus and Substantia nigra in Generalized Dystonia Secondary to Glutaric Aciduria Type I.* **Shabbar F. Danish**, Brad Lega, Jason Moyer, Jurg Jaggi, Gordon Baltuch, and Guglielmo Foffani. SENEC National Congress Meeting, Madrid, Spain. May 2011

2011 Poster presentation. *Differences in impedance reliability during intra-operative target trajectory recordings between microelectrode finishing processes.* Eric Hargreaves, Jason Moyer, Stephen Wong, and **Shabbar Danish**. Movement Disorder Society Meeting. Toronto, On. June, 2011.

2011 Poster presentation. *Short term MR imaging Characteristics and response to MR image-guided laser ablation therapy.* Jason Lee, Rachid Assina, Irwin Keller, and **Shabbar Danish**. ASNR Annual Meeting. Seattle, Wa. June, 2011.

2011 Poster presentation. *Waveform Analysis of Intra-operative Deep Brain Stimulation Devices.* Chintan Oza, Eric Hargreaves, Stephen Wong, Dimitriy Petrov, and **Shabbar Danish**. AANS Annual Meeting. April, 2011.

2011 Poster presentation. *Lower urinary tract dysfunction after deep brain stimulation in patients with Parkinson's disease.* Kelly Johnson, Eric Hargreaves, **Shabbar F. Danish**, and Hari Tunuguntla. Society for Urodynamics and Femal Urology. March, 2011. Scottsdale, Arizona.

2010 Poster presentation. *Output assessment of Medtronic external neurostimulator for intra-operative testing of therapeutic efficacy and adverse events during deep brain stimulation.* E.L. Hargreaves, S. Wong, D. N. Petrov, C. Pavlides, **SF Danish**. Society for Neuroscience Annual Meeting. Nov 2010. San Francisco, Ca

2010 Poster presentation. *Depth-time interpolation of feature trends extracted from mobile microelectrode data with kernel functions.* Stephen Wong, Eric L. Hargreaves, Gordon H. Baltuch, Jurg L Jaggi, and **Shabbar F. Danish**. Congress of Neurosurgeons Annual Meeting. Oct 2010. New Orleans, LA.

2009 Oral presentation. *Technical Consideration for Gamma Knife Radiosurgery in the Obese Patient: How to Avoid Trunnions.* **Shabbar F. Danish**, Clara Hilton, Matthew Sanborn, and John YK Lee. International Stereotactic Radiosurgery Society Meeting. June 2009. Seoul, South Korea.

2008 Poster presentation. *"Technical Aspects of In Vivo Microdialysis in Parkinson's Patients Undergoing Deep Brain Stimulation."* Michaux Kilpatrick, Shabbar F. Danish, Casey Halpern, Jurg Jaggi, and Gordon Baltuch. AANS Annual Meeting. Chicago, April 2008.

2008 Oral presentation. *Automated Visualization of Subthalamic Nucleus Border Location During Deep Brain stimulation Surgery.* Shabbar F. Danish, Jurg L. Jaggi, Gordon H. Baltuch, and Stephen Wong. AANS Annual Meeting. Chicago. April 2008.

2008 Poster presentation. *"Coregistration of Subdural Grid Electrodes for Navigation during Epilepsy Surgery"* Patrick Connolly, Shabbar F. Danish, Kareem Zaghloul, Brian Litt, and Gordon H. Baltuch. AANS Annual Meeting. Chicago. April 2008

2007 Poster presentation. *Insights into Basal Ganglia Pathophysiology from Glutaric Aciduria Type I.* Shabbar F. Danish, Jason T. Moyer, Jurg L. Jaggi, Gordon H. Baltuch, Gregory G. Heuer, Kevin A. Strauss, D. Holmes Morton, and Guglielmo Foffani. Society for Neuroscience Annual Meeting. San Diego, Ca. Nov 3-7.

2007 Oral presentation. *Cerebrospinal fluid loss correlates with subcortical structure displacement during deep brain stimulation for Parkinson's disease.* Casey Halpern, Shabbar F. Danish, Gordon H. Baltuch, and Jurg L. Jaggi. Pennsylvania Neurosurgical Society Meeting. Hershey, Pa. July 21-22, 2007.

2007 Poster presentation. *The History of Deep Brain Stimulation.* Shabbar F. Danish, Casey Halpern, and Gordon H. Baltuch. AANS Annual Meeting, Washington DC. April 14-17, 2007.

2007 Oral presentation. *Cerebrospinal fluid loss correlates with subcortical structure displacement during deep brain stimulation for Parkinson's disease.* Casey Halpern, Shabbar F. Danish, Gordon H. Baltuch, and Jurg L. Jaggi. AANS Annual Meeting. Washington DC. April 14-19, 2007.

2006 Oral presentation. *Prediction of stimulating electrode location using neurophysiologically refined subthalamic nucleus border determination after deep brain stimulation surgery for Parkinson's disease.* Shabbar F. Danish, Gordon H. Baltuch, and Jurg L. Jaggi. Pennsylvania Neurosurgery Society Meeting. Hershey, Pa. July 14-15, 2006

2006 Platform presentation. *Determination of STN boundaries in the de-spiked microelectrode track in DBS surgery.* Shabbar F. Danish, Gordon H. Baltuch, Jurg L. Jaggi, and Stephen Wong. Neural Interface Meeting. Bethesda, Maryland. Aug 21-23, 2006.

2006 Poster presentation. *Determination of STN boundaries in the de-spiked microelectrode track in DBS surgery.* Shabbar F. Danish, Gordon H. Baltuch, Jurg L. Jaggi, and Stephen Wong. Neural Interface Meeting. Bethesda, Maryland. Aug 21-23, 2006.

2006 Poster presentation. *The relationship between 300-Hz oscillations and single-neuron firing in the subthalamic nucleus of patients with Parkinson's disease.* Shabbar F. Danish, Jason T. Moyer, Jurg L. Jaggi, Gordon H. Baltuch, Leif H. Finkel, Alberto Priori, and Guglielmo Foffani. Society for Neuroscience Annual Meeting. Atlanta, Georgia. Oct 15, 2006

2006 Oral presentation. *The utility of signal frequency plotting for the prediction of subthalamic nucleus location during deep brain stimulation surgery for Parkinson's disease.* Shabbar F. Danish, Jason T. Moyer, Leif Finkel, Gordon H. Baltuch, and Jurg L. Jaggi. ESSFN Annual Meeting. Montreaux, Switzerland. Oct.

2006 Poster presentation. *Accuracy of a Euclidean distance algorithm in predicting the stimulating electrode after subthalamic nucleus deep brain stimulation for Parkinson's disease.* Shabbar F. Danish, Gordon H. Baltuch, and Jurg L. Jaggi. Congress of Neurological Surgeons Annual Meeting. Chicago, IL. Oct.

2006 Oral presentation. *Prediction of stimulating electrode location using neurophysiologically refined subthalamic nucleus border determination after deep brain stimulation surgery for Parkinson's disease.* Shabbar F. Danish, Gordon H. Baltuch, and Jurg L. Jaggi. ASSFN Annual Meeting. Boston, Ma.

2006 Poster presentation. *Implementation of dual simultaneous microelectrode recording systems during deep brain stimulation surgery for Parkinson's disease.* Jason T. Moyer, Shabbar F. Danish, Jeffrey G. Keating, Leif H. Finkel, Jurg L. Jaggi, and Gordon H. Baltuch. ASSFN Annual Meeting. Boston, Ma

2005 Oral presentation. *A computerized algorithm for predication of subthalamic nucleus location along the microelectrode track during deep brain stimulation surgery for Parkinson's Disease.* Shabbar F. Danish, Jason T. Moyer, Jurg L. Jaggi, Gordon H. Baltuch, and Leif H. Finkel. PAN Philadelphia Conference, Philadelphia, Pa.

2005 Poster presentation. *Cervical spine compression in pediatric patients with the q22q11.2 deletion.* Suresh N. Magge, Donna McDonald-McGinn, Shabbar F. Danish, Denis Drummond, Elaine H. Zackai, Phillip Storm, Leslie Sutton. Annual Meeting of the Congress of Neurologic Surgeons. Oct. Orlando, Fla.

2005 Poster presentation. *Anatomic Variability in the Red Nucleus and Subthalamic Nucleus Relationship in Parkinson's Disease.* Shabbar F. Danish, Jurg L. Jaggi, Jason T. Moyer, Leif H. Finkel, and Gordon H. Baltuch. Neural Interface Meeting. Sept. 7-9. Bethesda, MD.

2005 Poster presentation. *The use of allogeneic skin graft for the closure of large meningocele.* Shabbar F. Danish, Amer F. Samdani, Phillip B. Storm, and Leslie Sutton. Congress of Neurologic Surgeons Annual Meeting. Oct. Boston, Ma

2005 Poster presentation. *Anatomic Variability of the Subthalamic Nucleus and Red Nucleus in Parkinson's Disease.* Shabbar F. Danish, Jurg Jaggi, and Gordon H. Baltuch. AANS Annual Meeting. Apr 16-21. New Orleans, La.

2005 Oral presentation. *Brain Tissue Oxygen Guided Management Reduces Mortality in Traumatic Brain Injury.* Michael F. Stiefel, MD PhD, Alex Spiotta, MD, Vicente H. Gracias, MD, Gregory G. Heuer, MD PhD, Shabbar F. Danish, MD, Suresh Magge, MD, Neil Malhotra, MD, Eric Jackson, MD, Kareem Zaghoul, MD PhD, Eileen Maloney-Wilensky, MSN, M. Sean Grady, MD, and Peter D. LeRoux, MD. Neurocritical Care Society Meeting. Scottsdale, Az.

2004 Oral presentation. *The Efficacy of Duragen as a Dural Substitute Following Chiari Decompression.* Shabbar F. Danish, Amer Samdani, Amgad Hanna, Michael F. Stiefel, Phillip Storm, and Leslie Sutton. Annual Meeting of the Congress of Neurosurgeons- Pediatric Section. Oct 8-11. San Francisco, Ca.

2004 Poster presentation. *Effectiveness of Adding Anticoagulation to Mechanical Prophylaxis for Preventing DVT in Craniotomy.* Seema S. Sonnad, Shabbar F. Danish, Marc G. Burnett, and Sherman C. Stein. Annual Meeting for the Society of Medical Decision Making. Oct. 17-20. Atlanta, Georgia.

2004 Poster presentation. *Deep Venous Thrombosis in Craniotomy Patients.* Shabbar F. Danish, Mark G. Burnett, and Sherman C. Stein. Philadelphia Neurosurgical Society, Annual Conference. July 17-18. Hershey, Pa.

2003 Images in Infectious Diseases. *Cerebellar Schistosomiasis.* Valerianna Amorosa, MD, Stanley Wei, BA, Daniel Kremens, MD, JD, Daniel Skovronsky MD, PhD, Shabbar Danish, MD, Kevin Judy, MD, Scott Kasner, MD, Emily Blumberg, MD. Presented at the 41<sup>st</sup> Annual Meeting of the Infectious Disease Society of America.

2003 Poster presentation. *DuraGen is an Effective Dural Substitute: Clinical Experience in 169 Patients.* Greg G. Heuer, Michael F. Stiefel, Eileen Maloney-Wilensky, Shabbar F. Danish, Carol Dolinskas, and Peter D. Leroux. AANS Annual Conference. San Diego, Ca.

2001 Oral presentation. *Long term outcome of patients treated with selective dorsal rhizotomy for spasticity.* Shabbar F. Danish, Susan Guzzardo, Linda Velasquez, and I.R. Abbott. AANS Annual Conference. Toronto, ON.

2001 Oral Presentation. *Long term outcome of patients treated with selective dorsal rhizotomy for spasticity.* Shabbar F. Danish, Susan Guzzardo, Linda Velasquez, and I.R. Abbott. Pediatric Neurosurgery Section Meeting, San Diego, Ca.

2000 Poster presentation. *Low grade astrocytomas of the spinal cord: Long term survival and quality of life.* George Jallo, Shabbar F. Danish, Linda Velasquez, and Fred J. Epstein. AANS Annual Conference. San Francisco, Ca.

1997 Poster presentation. *Biophysical Properties of the major cold shock protein, CspA, in E. coli.* Shabbar F. Danish, Wendy Feng, and G.T. Montelione. Howard Hughes Fellows Research Seminar. New Brunswick, NJ.

#### **PATENTS:**

*"Classification of Subcortical Structures."* Software algorithm designed for visual conversion of neurophysiology signals during DBS for Parkinson's disease. U.S. Serial No. 12/441, 973. Penn Reference No. UPN-5374