

## CURRICULUM VITAE

**Name:** Bermans J. Iskandar, M.D.

**Title and Affiliation:** Professor, Departments of Pediatrics and Neurological Surgery  
Director, Pediatric Neurosurgery  
Department of Neurological Surgery  
University of Wisconsin School of Medicine and Public Health

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### **Education:**

1982-1985 Bachelors of Arts (*Summa cum laude* in Cell and Molecular Biology)  
California State University at Northridge, Los Angeles, CA

1985-1989 Doctor of Medicine  
University of Pennsylvania School of Medicine, Philadelphia, PA

### **Postdoctoral Training:**

1989-1990 Surgery Intern, Department of General Surgery  
Boston University Medical Center, Boston, MA

1990-1996 Neurosurgery Resident, Division of Neurosurgery  
Duke University Medical Center, Durham, NC

1993-1995 Research Associate, Department of Neurobiology, Duke University Medical Center,  
Project title: Signaling Pathways in Central Nervous System Regeneration, Mentor: J. H. Pate Skene, Ph.D.

1996-1997 Pediatric Neurosurgery Fellow, Division of Pediatric Neurosurgery  
The Children's Hospital, Birmingham, AL

**Faculty Academic Appointments:**

|           |  |
|-----------|--|
| 1997-2003 | Assistant Professor, Departments of Neurosurgery and Pediatrics, University of Wisconsin School of Medicine and Public Health, Madison, WI             |
| 2003-2007 | Associate Professor, Departments of Neurosurgery and Pediatrics, University of Wisconsin School of Medicine and Public Health, Madison, WI             |
| 2007-2010 | Associate Professor with Tenure, Departments of Neurosurgery and Pediatrics, University of Wisconsin School of Medicine and Public Health, Madison, WI |
| 2009-     | Adjunct Professor, Neuroscience Training Program, University of Wisconsin-Madison, Madison, WI   |
| 2010-     | Professor with Tenure, Departments of Neurosurgery and Pediatrics, University of Wisconsin School of Medicine and Public Health, Madison, WI           |
| 2015-     | Adjunct Professor, Interdepartmental Graduate Program in Nutritional Sciences, University of Wisconsin-Madison, Madison, WI                            |
| 2015-     | Adjunct Professor, Comparative Biomedical Sciences Program, School of Veterinary Medicine, University of Wisconsin-Madison, Madison, WI                |

**Hospital Appointments:**

|       |  |
|-------|--|
| 1997- | Staff surgeon, Meriter Hospital, Madison, WI   |
| 1997- | Staff surgeon, William S. Middleton Veteran's Administration Hospital, Madison, WI                           |
| 1997- | Staff surgeon, St. Mary's Hospital, Madison, WI  |
| 1997- | Attending Neurosurgeon, UW Hospital and Clinics  |
| 2006- | Attending Neurosurgeon, Director of Pediatric Neurosurgery, American Family Children's Hospital, Madison, WI |
| 2015- | Staff surgeon, Aurora Health Care, Green Bay, WI   |

**Major Administrative Leadership Positions at UW:**

|       |   |
|-------|---|
| 1997- | Director of Pediatric Neurosurgery, University of Wisconsin Hospital and Clinics, Madison, WI   |
| 1997- | Director, Central Nervous System (CNS) Regeneration Laboratory, Department of Neurological Surgery, University of Wisconsin School of Medicine and Public Health, Madison, WI |
| 1999- | Co-director, Multidisciplinary Brachial Plexus Clinic, American Family Children's Hospital, Madison, WI   |
| 2006- | Director of Pediatric Neurosurgery, American Family Children's Hospital, Madison, WI  |

**Professional Service:***Department of Neurological Surgery, University of Wisconsin-Madison*

|           |  |
|-----------|--|
| 2004-2012 | Member, Mentoring Committee for David Niemann              |
| 2005      | Chair, Search Committee for Pediatric Neurosurgery Faculty |

|              |  |
|--------------|--|
| 2007-2013    | Member, Mentoring committee for Karl Sillay  |
| 2008-2012    | Member, Mentoring Committee for Mustafa Baskaya  |
| 2008-2014    | Chair, Mentoring Committee for Joshua Medow  |
| 2008-present | Member, Executive Committee  |
| 2009-2012    | Co-Founder and Member, The John Sandin Creativity and Research Award                         |
| 2010-2012    | Member, Mentoring Committee for Rao Adibhatla  |
| 2010-2015    | Member, Mentoring Committee for Amgad Hanna  |
| 2011-2017    | Chair, Mentoring Committee for Nathaniel Brooks  |
| 2012-2013    | Search Committee Member, Endovascular Neurosurgery   |
| 2012-2014    | Search Committee Member, Functional Neurosurgery   |
| 2012-        | Member, Resident Candidate Selection Committee   |
| 2012-present | Member, Finance Committee  |
| 2013-        | Member, Department Clinical Competency Committee   |
| 2015-17      | Chair, Search Committee for Pediatric Neurosurgery Faculty                                   |
| 2018-2022    | Member, Mentoring Committee for Reid Alisch  |
| 2019-2022    | Member, Mentoring Committee for Kip Ludwig (Neurological Surgery and Biomedical Engineering) |
| 2020-present | Chair, Mentoring Committee for Mahua Dey   |

*University of Wisconsin School of Medicine and Public Health*

|              |   |
|--------------|---|
| 2000         | Member, Pediatric Plastic Surgeon Recruitment Committee                         |
| 2001         | Member, Orthopedics and Rehabilitation Chair Search Committee                   |
| 2004         | Member, Ophthalmology Staff Position Search Committee                           |
| 2004-2005    | Member, Department of Pediatrics Chair Search Committee                         |
| 2006-2008    | Member, Mentoring committee for Mark Kiehn (Plastic Surgery)                    |
| 2011-2012    | Member, Chief of Pediatric Surgery Search Committee                             |
| 2011-2012    | Member, Brandon Rocque, MS Thesis Committee (Clinical Investigation)            |
| 2011-2018    | Member, Mentoring committee for Samuel Poore (Plastic Surgery)                  |
| 2012-2016    | Member, Mentoring committee for Ahmed Afifi (Plastic Surgery)                   |
| 2012-2017    | Member, Mentoring committee for Yanjun Chen (Ophthalmology and Visual Sciences) |
| 2013         | Member, Department of Ophthalmology and Visual Sciences Chair Search Committee  |
| 2013-2014    | Member, Casey Madura, MPH Thesis Committee (Clinical Investigation)             |
| 2014         | Member, Mentoring committee for Lucy Zawadski (Neurology)                       |
| 2014-2015    | Member, Chair of Neurology Search Committee                                     |
| 2014-2017    | Member, Mentoring committee for Jesus Iruetagoiena (Maternal Fetal Medicine)    |
| 2014-2017    | Member, Tenure Track Promotions Committee                                       |
| 2014-present | Member, Traumatic Brain Injury Prevention Initiative Committee                  |
| 2016-2017    | Member, Chair of Surgery Search and Screen Committee                            |
| 2016-2017    | Member, Pediatric Cardiothoracic Surgeon Search Committee                       |
| 2017-2019    | Member, Mentoring committee for Neha Patel (Hematology and Oncology)            |
| 2017-2023    | Member, Mentoring committee for Catharine Garland (Plastic Surgery)             |
| 2020-2021    | Member, Chair of Neuroscience Search Committee                                  |

*University of Wisconsin Hospital and Clinics*

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|--------------|---|
| 1999         | Member, Pediatric ICU staff recruitment Committee             |
| 1999-2000    | Member, WISCR-IT (Computerized Records) Development Committee |
| 2000         | Member, Medical Board Nominating Committee                    |
| 2001-present | Member, Pediatric Trauma Management Committee                 |
| 2002         | Member, Web GX Evaluation Committee                           |
| 2002-2004    | Member, Medical Board   |
| 2005-2008    | Member, UWMF Finance Committee                                |
| 2010-2012    | Member, ITS Governance Committee                              |
| 2012-present | Member, Clinical Systems Advisory Committee                   |

*American Family Children's Hospital*

|              |  |
|--------------|--|
| 2003-2005    | Member, Clinics Committee  |
| 2003-2005    | Member, Inpatient Units Committee  |
| 2003-2005    | Member, Surgical Services Committee  |
| 2003-2005    | Member, Diagnostic Pavilion Committee  |
| 2006-present | Member, Clinical Practice Council  |
| 2006-present | Member, Steering Committee member  |
| 2010-present | Member, Surgeon's Advisory Committee   |
| 2011-present | Member, Pediatric Surgeons Staff Committee                                       |
| 2012-present | Member, Pediatric Trauma Management Committee                                    |
| 2013-present | Member, Surgical Site Infection Reduction Committee                              |
| 2013-present | Member, Surgical Clinical Ops Committee  |
| 2015-present | Member, Quality Coordinating Council Committee                                   |
| 2015-present | Coordinator, Pediatric neurosurgery inpatient service quality improvement effort |
| 2015-present | Coordinator, Pediatric neurosurgery outpatient clinic quality improvement effort |
| 2015-present | Coordinator, Pediatric Neurosurgery OR efficiency effort                         |
| 2015-present | Member, Clinical Practice Council  |

*University of Wisconsin-Madison*

|              |   |
|--------------|---|
| 2007         | Member, Dana Foundation UW Internal Competition Committee                                       |
| 2008         | Member, Dana Foundation UW Internal Competition Committee                                       |
| 2009-2011    | Advisor, ICTR Graduate Student major  |
| 2012-2014    | Member, Angela Andrea Navarrete Opazo, PhD Dissertation Committee (Neuroscience)                |
| 2013-2016    | Member, Daryl Field PhD Dissertation Committee (Comparative Biomedical Sciences)                |
| 2014-2017    | Member, Kendra Braegelmann PhD Dissertation committee (Comparative Biomedical Sciences Program) |
| 2015-2018    | Member, Ziyad Aloqalaa PhD Thesis Committee (Biomedical Engineering)                            |
| 2016-2018    | Member, Daryl Fields PhD Thesis committee (Comparative Biomedical Sciences)                     |
| 2016-2018    | Member, Xuan Zhang PhD Thesis committee (Electrical and Computer Engineering)                   |
| 2016-present | Research mentor, Undergraduate Research Scholars (URS) Program                                  |
| 2016-present | Trainer, Comparative Biomedical Sciences graduate program, University of Wisconsin-Madison      |

|              |   |
|--------------|---|
| 2016-present | Trainer, Interdepartmental Graduate Program in Nutritional Sciences, University of Wisconsin-Madison, Madison, WI |
| 2017-2021    | Member, Anil Chokkalla, PhD Thesis Committee (Cell and Molecular Pathology)                                       |
| 2017-2022    | Member, PhD Thesis committee for Zhe Yang (Engineering)   |
| 2017-present | Member, PhD Thesis committee for Chenxiao Guan (Engineering)  |
| 2017-2019    | Member, Josh Medow PhD Dissertation Committee (Clinical Investigation/Informatics)                                |
| 2018-2019    | Co-Chair, MS Thesis committee for Laura Borth (CBMS)  |
| 2018-2022    | Elected Member, Biological Sciences Divisional Committee  |
| 2021-2022    | Member, PhD Thesis committee for Dominic Schomberg (Animal Sciences)  |
| 2020-present | Member, PhD Thesis committee for Truman Jeffrey Do (Cellular and Molecular Biology)                               |

### Peer Review Groups/Grant Study Sections

|           |  |
|-----------|--|
| 2003      | Grant Reviewer, Prince Salman Center for Disability Research   |
| 2004-2005 | Abstract Reviewer, AANS/CNS Pediatric Section  |
| 2005      | Abstract Reviewer, CNS Pediatric Neurosurgery  |
| 2007      | Grant Reviewer, UW Dana Foundation   |
| 2008      | Grant Reviewer, University of Wisconsin Institute for Clinical and Translational Research  |
| 2011      | Reviewer, Wings for Life   |
| 2012      | Grant Reviewer, UW Brain Research Foundation   |
| 2012      | Grant Reviewer, Dean of the American University of Beirut School of Medicine multi-investigator grants                                       |
| 2013      | Grant Reviewer, UW Brain Research Foundation   |
| 2013      | Abstract Reviewer, AANS  |
| 2013      | Reviewer, Autism Dean Innovation Grant, American University of Beirut  |
| 2014-2015 | Grant Reviewer, ICTR Pilot Award Program   |
| 2015      | Reviewer, Seattle Children's Pediatric Early Research Career Awards  |
| 2015      | Reviewer, Missouri Spinal Cord Injury/Disease Research Program   |
| 2016      | Grant Reviewer, UW Shapiro Award   |
| 2018      | Grant reviewer, NIH Study Section NIH NSD-K Review   |
| 2019      | Grant Reviewer, ICTR Translational Basic and Clinical Pilot Study Section  |
| 2022      | Grant Reviewer, NINDS Special Emphasis Panel P01 Review, National Institutes of Health   |
| 2023      | Member, PRMRP Hydrocephalus peer review panel for the Department of Defense (DOD) Congressionally Directed Medical Research Programs (CDMRP) |

### Journal Editorial Service

Practical Reviews in Neurosurgery (past Editorial Board Member)  
 Child's Nervous System (Ad hoc Editor, Editorial Board Member)  
 Pan-Arab Journal of Neurosurgery (Editorial Board)  
 The ISPN Guide on Pediatric Neurosurgery (Editorial Board)

## Congenital Section: The ISPN Guide on Pediatric Neurosurgery (co-Editor)

Manuscript Reviews (ad hoc)

|              |   |
|--------------|---|
| 2003         | Journal of Genetic Counseling                     |
| 2004-present | Child's Nervous System                            |
| 2004         | Journal of Neuropath Exp Neurol                   |
| 2004         | Annals of Neurology                               |
| 2005-2011    | Clinical Anatomy                                  |
| 2006         | Clinical Neurology and Neurosurgery               |
| 2006         | Archives of PM&R                                  |
| 2008         | Journal of Nutritional Biology                    |
| 2009         | The Scientific World                              |
| 2009         | Neuropediatrics                                   |
| 2009-present | Neurosurgery                                      |
| 2010-2011    | Pan Arab Journal of Neurosurgery                  |
| 2008-2021    | Pediatric Neurosurgery                            |
| 2010-        | Pediatrics  |
| 2011         | Stem Cells and Development                        |
| 2011         | Neurosurgical Focus                               |
| 2011-2012    | American Journal of Clinical Nutrition            |
| 2013         | Birth Defects Research Part A                     |
| 2013         | Journal of Surgical Research                      |
| 2014         | Journal of Biological Chemistry                   |
| 2015         | Neurosurgery Watch                                |
| 2015-2016    | Journal of Neurotrauma                            |
| 2015-2017    | BDRA  |
| 2016         | British Journal of Nutrition                      |
| 2016         | Epigenomics                                       |
| 2017         | Neurosurgical Review                              |
| 2018-present | Operative Neurosurgery                            |
| 2019-present | World Neurosurgery                                |
| 2020         | Journal of Neurology, Neurosurgery and Psychiatry |

***Professional Service for Professional Organizations***National/International*American Association of Neurological Surgeons / Congress of Neurological Surgeons*

|           |  |
|-----------|--|
| 2008-2009 | Member, Traveling Fellowship Committee, AANS/CNS Section on Pediatric Neurosurgery |
| 2009-2012 | Chair, Traveling Fellowship Committee, AANS/CNS Section on Pediatric Neurosurgery  |
| 2010      | Mentor, AANS Resident Mentor Program   |

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|--------------|--|
| 2010-2013    | Member-at-Large, Executive Committee, AANS/CNS Section on Pediatric Neurosurgery                         |
| 2013-2015    | Co-Chair, National Meetings Committee, AANS/CNS Section on Pediatric Neurosurgery                        |
| 2014-2016    | Member, CNS Education Committee  |
| 2015-2017    | Treasurer, National Meetings Committee AANS/CNS Section of Pediatric Neurosurgery                        |
| 2016-        | Member, Neurosurgery Research & Education Foundation (NREF) Post-Residency Clinical Fellowship Committee |
| 2017-2019    | Secretary, Executive Committee, AANS/CNS Section on Pediatric Neurosurgery                               |
| 2019-2021    | Chair-elect, Executive Committee, AANS/CNS Section on Pediatric Neurosurgery                             |
| 2021-2023    | Chair, Executive Committee, AANS/CNS Section on Pediatric Neurosurgery                                   |
| 2023-Present | Past-Chair, Executive Committee, AANS/CNS Section on Pediatric Neurosurgery                              |
| 2021-2023    | Ex-Officio Member, AANS Advisory Council   |

*American Board of Pediatric Neurological Surgery*

|              |                                |
|--------------|--------------------------------|
| 2013-present | Member, Board of Directors     |
| 2014-2018    | Chair, Credentialing Committee |
| 2018-2020    | Secretary/Treasurer            |
| 2018-2020    | Chair, Finance Committee       |
| 2020-2021    | Vice-Chair                     |
| 2022-Present | Chair                          |

*American College of Surgeons*

|           |            |
|-----------|------------|
| 2003-2011 | ACS Fellow |
|-----------|------------|

*American Society of Pediatric Neurosurgeons (ASPN)*

|           |                                |
|-----------|--------------------------------|
| 2006-2008 | Chair, Credentialing Committee |
| 2009-2011 | Chair, Bylaws Committee        |

*American Syringomyelia and Chiari Alliance Project (ASAP)*

|              |                                |
|--------------|--------------------------------|
| 2004-2006    | Member, Research Committee     |
| 2009-present | Member, Medical Advisory Board |

*Chiari and Syringomyelia Foundation (CSF)*

|         |  |
|---------|--|
| 2007-?? | Member, Medical Advisory Board Executive Committee |
|---------|--|

|              |   |
|--------------|---|
| 2008-2016    | Member, Scientific Educational and Advisory Board |
| 2008         | Chair, Website Committee                          |
| 2008         | Member, Marcy Speer Endowment Committee           |
| 2016-present | Member, Senior Advisory Panel                     |

*Foundation for the Encouragement of Education in Lebanon (FEEL)*

|         |  |
|---------|--|
| 1987-89 | Founding member and co-chairman, Boston chapter. |
|---------|--|

*International Society for Pediatric Neurosurgery*

|      |                              |
|------|------------------------------|
| 2017 | Member, Scientific Committee |
|------|------------------------------|

*Park Reeves Syringomyelia Registry*

|       |                       |
|-------|-----------------------|
| 2011- | Advisory Board Member |
|-------|-----------------------|

*Special Olympics of Philadelphia*

|      |   |
|------|---|
| 1988 | Chairman, Ceremonies and Scheduling Committee |
|------|---|

*Think First Injury Prevention Program*

|              |                               |
|--------------|-------------------------------|
| 2003-present | Sponsor, Madison Chapter      |
| 2004-2007    | Sponsor, Lebanon Chapter      |
| 2005-2007    | Member, Efficacy Subcommittee |

*World Association of Lebanese Neurosurgeons (WALN)*

|           |                                      |
|-----------|--------------------------------------|
| 2004      | Member, Scientific Program Committee |
| 2004-2008 | Chair, Education Committee           |
| 2010      | Member, Scientific Program Committee |
| 2010-     | Member, International Advisory Board |

*Madison Scientific, Inc. (Delaware)*

|              |   |
|--------------|---|
| 2021-Present | Co-Founder, Board Member, and Treasurer |
| 2022-Present | Chief Medical Officer                   |

**Board Certification:**

|              |  |
|--------------|--|
| 1990         | Diplomate, National Board of Medical Examiners   |
| 2001-Present | Diplomate, American Board of Neurological Surgery, re-certified 2011<br>(Continuous Certification – Current) |



2001-Present           Diplomate, American Board of Pediatric Neurological Surgery, re-certified  
2011, 2021

### **Professional Honors and Recognitions:**

#### Professional Honors

1985                   Phi Kappa Phi Honor Society  
1995                   Alpha Omega Alpha Medical Honor Society  
2010                   Children Matter Award, American Family Children’s Hospital [there were  
multiple AFCH “star award”]  
2016-18               University of Wisconsin School of Medicine and Public Health Block  
Grant Retention and Equity program  
2016                   Ambulatory Patient Experience and Quality Excellence Award, University of  
Wisconsin Medical Foundation  
2016                   Fast Tracker Award, Ambulatory Patient Experience and Quality  
Excellence Award, UW Health  
2019                   UW Health Clinic Practice Excellence Award, UW Health  
2019                   Lincoln F. Ramirez, MD, PhD Award for Restorative Neurosciences,  
Department of Neurological Surgery,  
University of Wisconsin School of Medicine and Public Health,  
2021                   Keynote address, Hydrocephalus Society  
2022-23               Inductee, Gold Humanism Honor Society  
2022-23               Recipient, Leonard Tow Humanism in Medicine Award

#### Visiting Professorships and Guest Lecturer

2012                   Shapiro Guest Lecturer - University of Wisconsin School of Medicine and  
Public Health  
2012                   Keynote Speaker. Conquer Chiari. Chicago, IL.  
2014                   Visiting Professor, Nemours/Alfred I. DuPont Hospital for Children,  
Philadelphia, PA  
2014                   Visiting Professor, Department of Neurology, Mayo Clinic, Jacksonville,  
FL  
2015                   Van Wagenen Lecturer, 2015 AANS Annual Scientific Meeting  
2016                   Visiting Professor, Mayo Clinic, Rochester MN  
2017                   Joan Venes Visiting Professor, University of Michigan Health System  
Department of Neurosurgery, Ann Arbor, MI  
2020                   Guest Lecturer. Web Symposium of Neuroendoscopy of the Brazilian  
Society for Pediatric Neurosurgery – SBN Ped  
2020                   Virtual Visiting Professor, Department of Neurosurgery, The University of  
Texas at Austin, Dell Medical School, Austin, TX  
2020                   Special Lecture (Virtual). Brazilian Society of Pediatric Neurosurgery

Mentored Awards

|           |   |
|-----------|---|
| 2000      | Mayfield award of the American Association of Neurological Surgery/Congress of Neurological Surgeons (AANS/CNS) Spine section (Ketan Bulsara) |
| 2002      | Hydrocephalus Association Award (Joshua Medow)  |
| 2002      | University Bookstore Academic Excellence Award (Aaron Nelson)   |
| 2003      | University of Wisconsin, Shapiro Summer Research Award (Jason Sansone)  |
| 2003-2004 | AANS/CNS Section on Pediatric Neurological Surgery, Kenneth Shulman Award (Joshua Medow)  |
| 2006      | Pennsylvania Neurosurgical Society Resident Basic Research Award (Elias Rizk)   |
| 2006      | AANS/CNS Section on Pediatric Neurological Surgery, Kenneth Shulman Award (Elias Rizk)  |
| 2007      | Pennsylvania Neurosurgical Society Resident Clinical Research Award (Elias Rizk)  |
| 2008      | University of Wisconsin Hilldale Award (Krista Stewart)   |
| 2008      | American Academy of Neurological Surgeons Resident Research (Elias Rizk)  |
| 2008      | Pediatric Neurosurgery Traveling Fellowship (Elias Rizk)  |
| 2009      | CNS/Codman Fellowship Award (Nirav Patel)   |
| 2010      | University of Wisconsin Hilldale Award (Tyler Wanke)  |
| 2010      | American Academy of Neurological Surgeons Neurosurgery Research and Education Foundation Fellowship (NREF) Award (Nirav Patel)                |
| 2010      | American Academy of Neurological Surgeons Medical Student Summer Research Fellowship (Krista Stewart)   |
| 2010      | Neurosurgery Research and Education Foundation Fellowship (NREF) award (Nirav Patel)  |
| 2012      | Shapiro Summer Research Award (Thomas Cassini)  |
| 2016-2017 | Neurosurgery Research and Education Foundation fellowship (Kim Hamilton)  |
| 2017      | University of Wisconsin Hilldale Award (Felissa Hong)   |
| 2017      | Best poster award for graduate students, Research Day (Fall 2017), UW Department of Neurological Surgery                                      |
| 2018      | Hilldale fellowship (mentor for Kyle Zielinski)   |

Teaching Awards

|      |   |
|------|---|
| 2006 | Best Faculty Teaching Award, Department of Neurological Surgery   |
| 2007 | Citation for Medical Student Teaching, Department of Neurological Surgery, University of Wisconsin School of Medicine and Public Health |
| 2008 | Citation for Medical Student Teaching, Department of Neurological Surgery, University of Wisconsin School of Medicine and Public Health |

|      |   |
|------|---|
| 2011 | Dean's Research Mentorship Award (Inaugural), University of Wisconsin School of Medicine and Public Health                              |
| 2016 | Best Faculty Teaching Award, Department of Neurological Surgery   |
| 2018 | Citation for Medical Student Teaching, Department of Neurological Surgery, University of Wisconsin School of Medicine and Public Health |

### Research Awards

|           |  |
|-----------|--|
| 2001      | Honorable Mention (Engineering Expo): Electrosurgical drill for endoscopic craniostomosis  |
| 2003-2005 | Howard Hughes Medical Investigator, University of Wisconsin Pilot Project  |
| 2004      | Burroughs Wellcome Fund (BWF) Clinical Scientist Awards in Translational Research (Winner of University of Wisconsin internal competition) |
| 2006      | Federation of American Societies for Experimental Biology (FASEB), abstract chosen for oral presentation and \$500 award                   |
| 2012      | National Institutes of Health Director's Pioneer Award - Finalist  |
| 2012      | Brain Research Foundation - University of Wisconsin internal competition winner  |
| 2016      | Best poster award for graduate students, Research Day, University of Wisconsin Department of Neurological Surgery                          |
| 2016      | Best poster award for undergraduate students, Research Day, University of Wisconsin Department of Neurological Surgery                     |

### Patents (active, pending, and expired)

1. US Patent No. 8,876,744 B2 (Issued November 4, 2014): Systems and Methods for Controlling Cerebrospinal Fluid in a Subject's Ventricular System
2. Published U.S. Patent No. US 10,709,879 B2 (July 14, 2020): Cerebrospinal-Fluid Shunt Valve System
3. P01334US: Electrosurgical drill for endoscopic craniostomosis (expired)
4. Activation of axon repair by defined gene combinations CAP23/GAP43 (expired)
5. 5-methyltetrahydrofolic acid as therapy for tissue injury. Patent 61/075, 650 (expired)
6. Nitrous Oxide Epigenetic Switch (expired)

### **Extramural Funding & Grants**

#### *Current Grants*

Agency: Theodore W. Batterman Family Foundation Fellowship  
 Cost: \$75,000/yr (2018-2023)  
 Project Title: Hydrocephalus Research  
 Role: PI

Agency: American Syringomyelia and Chiari Alliance  
 Title: DNA methylation in familial Chiari I malformation  
 Cost: \$99,999 (05/1/2021-6/01/2023)  
 Role: PI

Agency: The John Sandin Creativity and Research Award (to Mark Kraemer), UW  
 Department of Neurological Surgery  
 Title: Developing real-time survey methods to study headaches in hydrocephalic  
 patients  
 Cost: \$15,000 (07/01/21-06/30/2023)  
 Role: Mentor

Agency: ICTR Pilot Award  
 Title: DNA Methylation in Spina Bifida  
 Cost: \$50,000 (09/01/2022-08/31/2023)  
 Role: PI

### ***Past Funded Grants***

Agency: American College of Surgeons Faculty Research Fellowship  
 Title: Gene Expression in CNS Regeneration  
 Role: PI  
 Effort: 10%  
 Project Period: 07/01/2000-06/30/2002

Agency: CreFF award from UW-GCRC supported by NIH-M01 RR03186  
 Title: Randomized, placebo-controlled, double-blind, parallel group study to  
 determine the efficacy and safety of intravenous folic acid in pediatric  
 patients following severe traumatic brain injury: A pilot study.  
 Role: PI  
 Effort: 10%  
 Project Period: 08/28/2002-03/09/2009

Agency: Kohl for Kids  
 Title: Think First Injury Prevention Program-Madison chapter  
 Role: Chapter Sponsor  
 Total Costs: \$50,000

Agency: Howard Hughes Medical Investigator UW Pilot Project  
 Title: Folate antagonists in the injured adult CNS

Role: PI  
 Effort: 25%  
 Total Costs: \$50,000  
 Project Period: 2003-2005

Agency: American Syringomyelia Alliance Project  
 Title: Spatial and Temporal CSF flow patterns in Chiari I malformation and the development of syringomyelia.

Role: PI  
 Total Costs: \$50,000  
 Project Period: 10/01/2003-9/30/2004

Agency: Theodore W Batterman Family Foundation  
 Title: The Folate Pathway in CNS Repair  
 Role: PI  
 Total Costs: \$15,000  
 Project Period: 02/01/2006-01/31/2007

Agency: Med School Research Committee  
 Title: The Folate Pathway in CNS Repair  
 Role: PI  
 Total Costs: \$15,000  
 Project Period: 2/01/2006-1/31/2007

Agency: NIH 1R01HD047516-01  
 Title: Folic acid enhances repair in the adult CNS  
 Role: PI  
 Effort: 25%  
 Total Costs: \$878,672  
 Project Period: 2006-2012

Agency: NIH 3R01HD047516-04S1 ARRA Supplement  
 Title: Folic acid enhances repair in the adult CNS  
 Role: PI  
 Effort: 20% in conjunction with 1R01HD047516-01  
 Total Costs: \$281,108  
 Project Period: 9/2009-9/2011

Agency: 1R15NS071455-01 NIH R15  
 Title: Clinical Utility of MR based Hydrodynamic Parameters in Chiari Malformation  
 Role: Collaborator, PI: Frank Loth, Ph.D.  
 Effort: 0%  
 Total Costs: \$486,116  
 Project Period: 5/2010-4/2012

Agency: UW Graduate School Fall Competition  
 Title: Transgenerational effects of folate on CNS repair  
 Role: PI  
 Total Costs: \$34,939  
 Project Period: 07/12/2012-06/30/2013

Agency: Theodore W Batterman Family Foundation  
 Title: Wisconsin Hydrocephalus Overshunting Project  
 Role: PI  
 Effort: .24 Calendar  
 Total Costs: \$408,000  
 Project Period: 1/1/2013-12/31/2016

Agency: March of Dimes Gene Discovery and Translational Research Grant  
 Title: Epigenetic inheritance of a therapeutic trait  
 Role: PI  
 Effort: 1.2 Calendar  
 Total Costs: \$275,000  
 Project Period: 06/01/2014-11/30/2017

Agency: University of Wisconsin Institute for Clinical and Translational Research  
 Title: The Role of TET Proteins in Folate-enhanced Axon Regeneration after Spinal Cord Injury  
 Project Period: 7/1/17-6/30/18  
 Role: Co-PI  
 Total Costs: \$50,000

Agency: Theodore W. Batterman Family Foundation  
 Cost: \$423,128  
 Title: Wisconsin Hydrocephalus Overshunting Project  
 Project Period: 1/1/17-12/31/19  
 Project Aim: The main goal of this project is to develop a smart shunt system.  
 Role: PI

Agency: Washington University (Prime: PCORI)  
 Cost: \$1,000/patient  
 Title: Posterior Fossa Decompression with or without Duraplasty for Chiari type I Malformation with Syringomyelia  
 Project Period: 12/01/2015-12/31/2019  
 Project Aim: Local site for this multi-center randomized prospective study  
 Role: Site PI

Agency: University of Wisconsin Fall Competition (WARF)  
 Cost: \$73,989

Title: Molecular targets of transgenerational epigenetic inheritance for a beneficial axon regeneration trait in response to folate treatment  
 Project Period: 7/1/18-6/30/19  
 Project Aim: The goal of this basic science project is to determine the epigenetic underpinnings of the transgenerational effects of folate in the central nervous system  
 Role: PI  
 Agency: 2020 WARF Accelerator Grant  
 Cost: \$124,500  
 Title: A Smart Shunt Valve to Treat Hydrocephalus  
 Project Period: 2020-2021  
 Role: PI

Agency: Phase I SBIR: National Science Foundation  
 Cost: \$255,977  
 Project Title: SBIR Phase I: Smart Shunt Valve to Treat Hydrocephalus  
 Project Period: 12/01/2020-05/31/2022  
 Role: co-Founder, Treasurer and Consultant (PI: Tyler Wanke, CEO of Madison Scientific, Inc.)

Agency: Discovery to Product (D2P): State Economic Engagement and Development (SEED) Research Program  
 Cost: \$105,000  
 Project Title: Benchtop Testing of Cerebrospinal Fluid Shunt Valves  
 Project Period: 07/01/2021 – 10/31/2022, with no cost extension until February 2023  
 Role: Lead PI

Agency: NIH R21HD103111  
 Cost: \$416,875  
 Project Title: Evaluating Human Pluripotent Stem Cell-Derived Neural Rosette Arrays as a Neural Tube Defect Risk Screening Platform  
 Project Period: 4/01/2021-3/31/2023  
 Role: Co-I (PI: Randolph Ashton)

### ***Completed Training Grants and Mentored Trainee Grants***

Agency: NREF - American Association of Neurological Surgeons  
 Title: Folic Acid Increases Spinal Cord Regeneration Across Multiple Generations  
 Role: Mentor for Nirav Patel  
 Total Costs: \$40,000  
 Project Period: 7/2010-6/2011

Agency: NREF – American Association of Neurological Surgeons  
 Title: The Folate and Methylation Pathway in Regeneration and Recovery of the Injured Peripheral Nervous System  
 Role: Mentor for Kimberly Hamilton  
 Effort: .12 Calendar  
 Total Costs: \$40,000  
 Project Period: 07/01/2016-12/31/2017

### **Clinical Trials:**

#### ***Current Clinical Trials***

Agency: American Syringomyelia Alliance Project  
 Title: Outcomes in Patients Undergoing Surgical Intervention for Chiari Type I Malformation with Syringomyelia Multi-Center Chiari Clinical Trial  
 Role: PI  
 Effort: .6 Calendar  
 Total Costs: \$203,704  
 Project Period: 05/01/2007-04/30/2018

Agency: Washington University  
 Title: Park Reeves Syringomyelia Registry and Data Use Agreement  
 Role on Project: Local PI  
 Effort: 1%  
 Total Costs: \$28,000  
 Project Period: 05/18/2011-12/31/2099

Agency: Patient Centered Outcomes Research Institute (PCORI) Park-Reeves Registry, Washington University  
 Title: Cluster RCT for PFDD vs PFD for Chiari I malformation + syringomyelia  
 Role on Project: Local PI  
 Effort: 1%  
 Project Period: 2016-2023

#### ***Past Clinical Trials (we need to add dates on all of these)***

Agency: Multi-center trial based in Vancouver, Canada  
 Title: Endoscopic Shunt Insertion Trial  
 Role: Local PI

Agency: Multi-center trial based in Utah  
 Title: Shunt Infection Trial  
 Role: Local PI

Title: Folic acid in Pediatric Head Injury: A randomized controlled trial



Role: PI  
Agency: American Syringomyelia and Chiari Alliance Project  
Title: Chiari/Syringomyelia surgery multi-center trial  
Role: Study PI

**Invited Speaking Engagements, Presentations, Symposia & Workshops:**

***Invited Speaking Engagements and Presentations***

***International***

- 1998: The current management of pediatric brain tumors  
Neurology and Neurosurgery Grand Rounds  
American University of Beirut  
Beirut, Lebanon
- 1998: Spina Bifida Occulta  
Neurology and Neurosurgery Grand rounds  
American University of Beirut  
Beirut, Lebanon
- 1999: Ventricle size and CT scan reports  
World Association of Lebanese Neurosurgeons Second Homecoming Meeting  
Beirut, Lebanon
- 1999: Shunt Deaths in the 1990s  
World Association of Lebanese Neurosurgeons Second Homecoming Meeting  
Beirut, Lebanon
- 2000: New Observations in Syringomyelia  
Pan Arab Neurosurgical Society  
Sharm El Sheikh, Egypt
- 2001: Pediatric Brain Tumors  
Middle East Medical Assembly  
Beirut, Lebanon
- 2003: The folic acid effect is not limited to the embryonic CNS: Recent data from the injured adult CNS  
3<sup>rd</sup> International Neural Tube Defects Conference  
Charleston, SC
- 2004: Hydrocephalus: To shunt or not to shunt

- World Association of Lebanese Neurosurgeons  
Beirut, Lebanon
- 2005: The role of DNA methylation in CNS regeneration  
4<sup>th</sup> International Neural Tube Defects Conference  
Indian Wells, CA
- 2006: Folate, DNA Methylation, and CNS Repair  
World Association of Lebanese Neurosurgeons  
Beirut, Lebanon
- 2007: The Role of the Folate Pathway in CNS Regeneration and Repair  
5<sup>th</sup> International Neural Tube Defects Conference  
Monterey, CA
- 2009: Folate and CNS Repair  
World Association of Lebanese Neurosurgeons  
Beirut, Lebanon
- 2009: Epigenetics  
World Association of Lebanese Neurosurgeons  
Beirut, Lebanon
- 2009: Endoscopy for Hydrocephalus  
World Association of Lebanese Neurosurgeons  
Beirut, Lebanon
- 2009: Management of Tethered Cord Syndrome in adults  
World Congress of Neurological Surgery Annual Meeting  
Boston. MA
- 2009: Myelomeningocele Closures  
World Congress of Neurological Surgery Annual Meeting  
Boston. MA
- 2009: The role of the folate pathway in repair to the injured Central Nervous System  
6<sup>th</sup> International Neural Tube Defects Conference  
Burlington, VT
- 2010: Pediatric Neuroendoscopy  
4<sup>th</sup> World Congress for Endoscopic Surgery of the Brain  
Skull Base and Spine  
Pittsburgh, PA
- 2011: Folate Promotes Endogenous Axonal Regeneration by Epigenetic Mechanisms

- 8<sup>th</sup> International Conference on Homocysteine Metabolism  
Lisboa, Portugal
- 2011: Folic Acid Exerts Direct Effects on Spinal Cord Neurons to Enhance Axonal Regrowth after Injury: *in vitro*  
7<sup>th</sup> International Conference on Neural Tube Defects  
Austin, TX
- 2012: Transgenerational Epigenetic Enhancement of CNS Axon Regeneration through Folate Supplementation  
The American Society of Pediatric Neurosurgeons 35<sup>th</sup> Annual Meeting  
San Juan, Puerto Rico
- 2012: Parameters of Folate-mediated Tissue Regeneration and Fairy Tale Heroines  
FASEB Summer Research Conference  
Crete, Greece
- 2013: Vein of Galen Malformation: Case Report. In, Great Saves and Great Complications  
The World Association of Lebanese Neurosurgeons  
Beirut, Lebanon
- 2013: Intraventricular Neuroendoscopy: A Personal Experience  
The World Association of Lebanese Neurosurgeons  
Beirut, Lebanon
- 2013: Transgenerational Epigenetic Inheritance of a Therapeutic Trait Methyl Supplementation  
8<sup>th</sup> International Conference on Neural Tube Defects  
Austin, TX
- 2014: Spina bifida. Present challenges and future prospects  
The American Society of Pediatric Neurosurgeons 37<sup>th</sup> Annual Meeting  
Guanacaste, Costa Rica
- 2016: Keynote Speaker  
Inauguration of Fadlo R. Khuri, M.D. as the 16th President of the American University of Beirut, Academic Symposium and Inauguration Program  
American University of Beirut  
Beirut, Lebanon
- 2017: Introductory Comments on Neurosurgical Implications of Spina Bifida  
10<sup>th</sup> International Conference on Neural Tube Defects  
Austin, TX

- 2017: Hydrocephalus: The Major Cause of Cognitive and Life-Threatening Problems in NTDs  
10th International Conference on Neural Tube Defects  
Austin, TX
- 2017: Overdrainage-Related Ventricular Tissue is a Significant Cause of Proximal Shunt Obstruction  
International Society of Pediatric Neurosurgery  
Denver, CO
- 2020: Special Lecture: VP Shunt Malfunction  
Brazilian Society of Pediatric Neurosurgery
- 2020: Shunt malfunction and endoscopy  
Web Symposium of Neuroendoscopy of the Brazilian Society for Pediatric Neurosurgery – SBN
- 2021: Keynote Speaker  
Lebanese American University Hooding Ceremony  
Virtual graduation ceremony
- 2021: Transgenerational disruption of DNA methylation marks by ancestral folate supplementation is associated with enhanced axonal regeneration.  
Epigenetic inheritance impact on biology and society symposium  
Zurich (virtual)
- 2021: Keynote address: Chronic Overdrainage in Shunted Pediatric Hydrocephalus: Human and Experimental Observations  
13<sup>th</sup> Meeting of the Hydrocephalus Society (virtual)
- 2022: Monthly conferences  
Solidarity Bridge  
Bolivia (virtual).

### National

- 1997: The Chiari Zero malformation  
AANS/Congress of Neurological Surgeons (CNS) Pediatric Section Annual Meeting  
New Orleans, LA
- 1997: Split Cord Malformations in Myelomeningocele Patients  
AANS/CNS Pediatric Section Annual Meeting  
New Orleans, LA

- 2000: Spina Bifida in Modern Times: Nature vs. Nurture  
Educational Teleconference Network
- 2000: Spinal cord pulsations as a determinant of pathological pressure within a syrinx  
AANS/CNS Pediatric Section Annual Meeting
- 2001: Folic acid supplementation enhances CNS regeneration  
69<sup>th</sup> AANS Annual Meeting  
Toronto, Ontario
- 2001: Idiopathic Sryingomyelia  
51<sup>st</sup> CNS Annual Meeting  
San Diego, CA
- 2001: Cranial Shape Problems and Positional Molding  
National Association of Pediatric Nurse Practitioners Meeting
- 2001: Folic Acid in CNS Regeneration  
AANS/CNS Pediatric Section Annual Meeting  
Toronto, ON
- 2002: Endoscopic Resection of Colloid Cysts  
52<sup>nd</sup> CNS Annual Meeting  
Philadelphia, PA
- 2002: CSF Flow Studies in Patients with Chiari I Malformation  
Hydrodynamics Conference  
Pittsburgh, PA
- 2002: Folate antagonists in CNS Regeneration  
American College of Surgeons  
San Francisco, CA
- 2002: Folic acid enhances repair mechanisms in the CNS  
American Academy of Neurological Surgeons  
Phoenix, AZ
- 2003: CSF flow dynamics in the foramen magnum of children with Chiari I malformations  
American Syringomyelia and Chiari Alliance Project Annual Meeting (ASAP)  
New York City, NY
- 2004: Chiari Flow Studies  
27<sup>th</sup> Annual Meeting of the American Society of Pediatric Neurosurgeons (ASPN)  
Guanacaste, Costa Rica

- 2004: Folic acid in CNS Repair  
34<sup>th</sup> Annual Society for Neuroscience Meeting  
San Diego, CA
- 2005: The Sodium Potassium ATPase Pump is essential in CNS regeneration  
AANS/CNS Pediatric Neurosurgery Annual Meeting  
Orlando, FL
- 2005: The role of DNA methylation in CNS regeneration  
1<sup>st</sup> Annual Neural Tube Defects Meeting
- 2005: The role of DNA methylation in CNS regeneration  
American Academy of Neurological Surgery  
San Francisco, CA, 2005.
- 2006: American Syringomyelia Alliance Project  
Research web-based presentation
- 2006: The Folate Pathway, DNA Methylation, and CNS Repair  
Federation of American Societies for Experimental Biology Meeting (FASEB)  
Palm Springs, CA
- 2006: Non-quantitative CSF flow imaging in Chiari I malformation  
American Syringomyelia Alliance Project Annual Meeting  
Denver, CO
- 2007: Multi-Center Chiari Trial Update  
American Syringomyelia Alliance Project Annual Meeting  
Seattle, WA
- 2007: Understanding the Folate Pathway in CNS Repair  
American Academy of Neurological Surgery  
Las Vegas, NV
- 2007: The methyltransferases in CNS Regeneration after Injury  
AANS/CNS Pediatric Section Annual Meeting  
Miami, FL
- 2007: Nitrous Oxide Inhibits Neuronal Elongation in Culture  
AANS/CNS Pediatric Section Annual Meeting  
Miami, FL
- 2007: The Association of Faint Midline Lumbar Cutaneous Hemangioma with Occult Spinal  
Dysraphism  
AANS/CNS Pediatric Section

Miami, FL

- 2008: Folate and the CNS  
Society of Neurological Surgeons  
Madison, WI
- 2008: American Syringomyelia Alliance Project  
Phone Seminar
- 2009: Chiari Malformations Breakfast Seminar  
AANS/CNS Annual Meeting  
San Diego, CA
- 2009: Hydrocephalus Breakfast Seminar  
AANS/CNS Annual Meeting  
San Diego, CA
- 2009: Syringomyelia: Definitions, Concepts and Treatment  
American Syringomyelia Alliance Project Annual Meeting  
Madison, WI
- 2009: The Role of Folate Pathway in Repair of the Injured Central Nervous System  
Neural Tube Defects Annual Meeting  
Burlington, VT
- 2009: Surgical Management of Chiari and Syringomyelia  
CNS Annual Meeting  
New Orleans, LA
- 2009: Folic Acid Supplementation Enhances CNS Regeneration in Vitro  
The American Academy of Neurological Surgery  
Palm Beach, FL
- 2009: Epigenetic regulation of CNS regeneration and repair  
Duke University  
Durham, NC
- 2009: Supplementing methyl donor groups in the rat diet increases neural regeneration after  
spinal cord injury  
AANS/CNS Pediatric Section Annual Meeting  
Boston, MA
- 2009: Trends in Surgical Management of Chiari I/Syringomyelia in North America  
AANS/CNS Pediatric Section Annual Meeting  
Boston, MA

- 2010: Evaluation of the Child with a CSF Shunt  
AANS Annual Meeting  
Philadelphia, PA
- 2010: Chiari Malformations and Syringomyelia: Basic Definitions and Concepts  
American Syringomyelia and Chiari Alliance Project Annual Meeting  
Austin, TX
- 2010: ASAP Sponsored Research: Outcomes and Study Update  
American Syringomyelia and Chiari Alliance Project Annual Meeting  
Austin, TX
- 2010: Occult Spinal Dysraphism and the Tethered Cord Syndrome  
American Syringomyelia and Chiari Alliance Project Annual Meeting  
Austin, TX
- 2010: Folate Supplementation  
FASEB Summer Research Conference: Folic Acid, Vitamin B12, and One Carbon  
Metabolism”  
Carefree, AZ
- 2010: Chiari Controversies  
Conquer Chiari Research Conference (moderator)  
Chicago, IL
- 2010: Congenital Scientific Session  
AANS/CNS Section on Pediatric Neurosurgery Annual Meeting (moderator)  
Cleveland, OH
- 2011: Pediatric Neurosurgery Board Review  
AANS/CNS Webinar
- 2011: Participant  
CSF Think Tank Meeting  
Denver, CO
- 2011: Participant  
Syringomyelia Research Consortium Investigator Meeting  
Dallas, TX
- 2011: Folate Mediated Repair of the Central Nervous System through Epigenic Pathways  
Trauma and Neurocritical Care Symposium  
West Palm Beach, FL



- 2011: Controversial Topics 2: Choice of Treatment for Syringomyelia Associated with Chiari I Malformation and Enlarged Central Canal  
American Syringomyelia and Chiari Alliance Project Annual Meeting  
Denver, CO
- 2011: Outcomes in Patients Undergoing Surgical Intervention for Chiari Type 1 Malformation with Syringomyelia  
American Syringomyelia and Chiari Alliance Project Annual Meeting  
Denver, CO
- 2011: Epigenetic Pathways Modulate Repair of the injured Central Nervous System  
American Academy of Neurological Surgeons Annual Meeting  
Scottsdale, AZ
- 2012: The Chiari Malformations in Humans  
American College of Veterinary Internal Medicine (ACVIM) 2012 Forum  
New Orleans, LA
- 2012: Neuroendoscopy in the Treatment of Human Hydrocephalus and Other Anomalies.  
Neurology Keynote Speaker  
The American College of Veterinary Internal Medicine (ACVIM)  
New Orleans, LA
- 2012: ASAP Sponsored Research: Outcomes and Study Update  
American Syringomyelia and Chiari Alliance Project Annual Meeting  
Washington, DC
- 2012: Syringomyelia  
American Syringomyelia and Chiari Alliance Project Annual Meeting  
Washington DC
- 2012: Central Nervous System Repair. Keynote Speaker  
Conquer Chiari  
Chicago, IL
- 2013: Chiari 0  
American Syringomyelia and Chiari Alliance Project Annual Meeting  
Los Angeles, CA
- 2013: ASAP Chiari and Syringomyelia Research Update  
American Syringomyelia and Chiari Alliance Project Annual Meeting  
Los Angeles, CA
- 2013: Surgery for obstructive non-tumoral posterior fossa problems  
42<sup>nd</sup> Annual Meeting of the AANS/CNS Section on Pediatric Neurological Surgery

Toronto, Ontario

- 2014: General Overview of Surgical Aspects of Pediatric Chiari with Focus on Chiari I and Syringomyelia  
American Syringomyelia and Chiari Alliance Project Annual Meeting  
Princeton, NJ
- 2014: ASAP Chiari and Syringomyelia Research Update  
American Syringomyelia and Chiari Alliance Project Annual Meeting  
Princeton, NJ
- 2014: Hydrocephalus, Shunts and Shunt Problems in Children  
American Syringomyelia and Chiari Alliance Project Annual Meeting  
Ann Arbor, MI
- 2014: Folate, Epigenetics, and Central Nervous System Repair. Translational Science Research Seminar Series  
Nemours/Alfred I duPont Hospital for Children  
Wilmington, DE (Visiting Professor)
- 2014: Neuroendoscopy  
Grand Rounds, Jefferson University Department of Neurosurgery  
Wilmington, DE (Visiting Professor)
- 2015: The Wisconsin Hydrocephalus Survey: shunt-dependent hydrocephalus management style among members of the American Society of Pediatric Neurosurgeons  
7<sup>th</sup> Meeting of the International Society for Hydrocephalus and CSF Disorders  
Banff, Canada
- 2015: The role of Tet1 in folate-enhanced spinal cord axon regeneration  
9<sup>th</sup> International Conference on Neural Tube Defects  
Austin, TX
- 2015: Multifocal glioblastoma: a pediatric case and literature review  
Society of Neuro-Oncology Meeting  
San Antonio, TX
- 2015: CNS axon regeneration, folate, and epigenetics  
16<sup>th</sup> International Symposium on Neural Regeneration (ISNR)  
Asilomar, Pacific Grove, CA
- 2015: CNS axon regeneration, folate, and epigenetics  
16<sup>th</sup> International Symposium on Neural Regeneration (ISNR)  
Asilomar, Pacific Grove, CA (invited lecture).

- 2015: Outcome and Surgical Technique for Wide Arterial Sparing Encephalo-Duro-Synangiosis (WASEDS) for Moyamoya Disease  
44<sup>th</sup> Annual Meeting of the AANS/CNS Section on Pediatric Neurological Surgery  
Seattle, WA
- 2016: Update on ASAP Chiari Syringomyelia Prospective Multi-Center Outcomes Study  
ASAP  
San Francisco, CA
- 2016: Pathophysiological Understanding and Management Style Among Senior North-American Pediatric Neurosurgeons  
78<sup>th</sup> Annual Meeting. American Academy of Neurological Surgery  
Jackson Hole, WY
- 2016: Educating our patients and ourselves through research: A hydrocephalus journey  
Mayo Clinic Neurosurgery Core Curriculum Conference  
Rochester, MN (Visiting Professor)
- 2016: Epigenetics  
Mayo Clinic  
Rochester, MN (Visiting Professor)
- 2016: is a Significant Cause of Proximal Shunt Obstruction  
84<sup>rd</sup> AANS Annual Scientific Meeting  
Chicago, IL
- 2016: Outcomes in Children Undergoing Surgical Intervention for Chiari I Malformation with Syringomyelia: A Prospective, Multi-center, Pilot Study  
45<sup>th</sup> Annual Meeting of the AANS/CNS Section on Pediatric Neurological Surgery  
Orlando, FL
- 2017: Proximal shunt obstruction. Introduction. Proximal shunt malfunction symposium  
American Society of Pediatric Neurosurgeons  
Maui, HI
- 2017: Chronic Overdrainage: A Critical Cause of Proximal Ventricular Obstruction  
IHIWG  
American Society of Neuroradiology (ASNR) 55th Annual Meeting and Foundation of the ASNR Symposium  
Long Beach, CA
- 2017: Educating our Patients and Ourselves through Research. A Hydrocephalus Journey  
University of Michigan Medical School, Department of Neurosurgery  
Ann Arbor, MI (Joan Venes Visiting Professor)

- 2017: Parameters of Folate-Mediated Epigenetic Tissue Regeneration and Fairytale Heroines  
University of Michigan Medical School, Department of Neurosurgery  
Ann Arbor, MI (Joan Venes Visiting Professor)
- 2017: The Franc D. Ingraham Award for Distinguished Service and Achievement. WJ Oakes.  
Introduction
- 2017: Epigenetics: The answer to everything  
XXIX Conference of the American Syringomyelia and Chiari Alliance Project  
Long Island, NY
- 2017: Sixty years later, what Pediatric Neurosurgeons know (and wish they knew) about  
shunted hydrocephalus  
Chiari and Syringomyelia Foundation (National Broadcast)  
Madison, WI
- 2017: Introduction of Frank D. Ingraham Award for Distinguished Service and  
Achievement Recipient: W. Jerry Oakes, M.D., F.A.A.N.S. (L)  
46<sup>th</sup> Annual Meeting of the AANS/CNS Section on Pediatric Neurological Surgery  
Houston, TX
- 2019: Outcomes in Children Undergoing Posterior Fossa Decompression and Duraplasty with  
and without Tonsillar Reduction for Chiari Type 1 Malformation and Syringomyelia: A  
Pilot Prospective Multi-Center Cohort Study  
American Syringomyelia and Chiari Alliance Project  
Philadelphia, PA
- 2020: Bermans Iskandar, Tyler Wanke, Logan Brock, Victor Simoes  
CSF Shunt Valve System: Wisconsin Smart Valve  
Kellogg Medical Technology Class Presentation  
Chicago, IL
- 2020: Ventricular-peritoneal shunt overdrainage is driven by gravity and cerebrospinal fluid  
pulsations: computer simulation and benchtop testing  
43<sup>rd</sup> Annual ASPN Meeting  
Nassau, Bahamas
- 2020: Educating our Patients and Ourselves through Research: A Hydrocephalus Journey.  
Virtual Visiting Professor  
The University of Texas at Austin, Dell Medical School, Department of Neurosurgery  
Austin, TX
- 2020: Clinical Indications for Ventriculostomy Tubes and Insights Into Causes of Failure: New  
Neurosurgical Observations. Virtual. American Society of Neuroradiology (ASNR)

- 2020: Hsu DA, Armstrong SA, Koueik J, Kraemer M, Yang Z, Meah J, Luzzio C, Iskandar BJ. Bringing to a halt 60 years of VP shunt obstruction by understanding the peculiar relationship between overdrainage and underdrainage  
Chiari and Syringomyelia Foundation 2020 Virtual Research Colloquium
- 2020: Koueik J, Broman AT, Iskandar BJ  
Likelihood of CSF shunt independence among chronically shunted patients  
49<sup>th</sup> Annual AANS/CNS Section on Pediatric Neurological Surgery Virtual Meeting
- 2020: The Tethered Spinal Cord: What is it? What do we do about it?  
American Syringomyelia and Chiari Alliance Project  
Virtual
- 2021: The Myelomeningocele. The anomaly that defined pediatric neurosurgery  
Educational Lecture Series – AANS/CNS Section on Pediatric Neurosurgery (Invited Lecture)  
Salt Lake City, UT
- 2021: Epigenetically-Mediated Neural Regeneration and Fairytale Heroines  
Inaugural Timothy George Memorial Lecture and Visiting Professor, UT Austin  
Austin, TX
- 2022: Pediatric Brain Tumors. AANS Community (co-organizer)  
2022 Annual AANS Scientific Meeting  
Philadelphia, PA
- 2022: Hydrocephalus. AANS Community (co-organizer and co-moderator)  
2022 Annual AANS Scientific Meeting  
Philadelphia, PA
- 2023: Epigenetically-Mediated Neural Regeneration and Fairytale Heroines  
Leo M. Davidoff Department of Neurological Surgery Grand Rounds  
Montefiore Medical Center, the University Hospital for Albert Einstein College of Medicine  
Virtual Presentation
- 2023: Chebel R, Guan C, Hu Y, Luzzio C, **Iskandar BJ** and Medow J. Brain Compliance Estimation Based on ICP Waveforms through In Vitro Study  
2023 AANS Annual Meeting  
Los Angeles, California
- 2023: Chebel R, Koueik J, Yang Z, Rubin T, Sivan V, Broman A, Medow J, Luzzio C, Hsu D and **Iskandar BJ**. Ventriculoperitoneal Shunt Exhibits Chronic Overdrainage due to Gravity and Cerebrospinal Fluid Pulsations: Benchtop Model

2023 AANS Annual Meeting  
Los Angeles, California

Local/Regional

- 2007: Head Injury  
UW Hospital and Clinics, PICU nurses  
Madison, WI
- 1997: Shunts  
UW Hospital and Clinics, O.R. nurses  
Madison, WI
- 1997: Current trends in pediatric brain tumor management  
Neurosurgery Grand Rounds  
UW School of Medicine and Public Health/Teleconference with the Gunderson Clinic in  
LaCrosse, WI  
Madison, WI
- 1997: Hydrocephalus today  
Pediatrics Grand Rounds  
UW School of Medicine and Public Health
- 1997: Central nervous system regeneration  
Neurosurgery research conference  
UW School of Medicine and Public Health
- 1997: Spina bifida occulta  
Perinatal Conference  
Meriter Hospital/Park
- 1997: Management of pediatric head and spine injury  
“Update in Pediatrics” annual conference  
Wausau, WI
- 1997: Occult Spinal Dysraphism and the Tethered Spinal Cord  
Family practice conference  
Beaver Dam, WI
- 1997: Management of severe head injury: Conclusions and future directions  
Neurosurgery/PICU Head Injury Conference  
UW School of Medicine and Public Health
- 1998: Current Management of Hydrocephalus

- Pediatric conference  
Dubuque, IA
- 1998: What's special about the critical care of the head-injured child  
Pediatric Head Injury Management Conference. Part II  
UW Hospital and Clinics
- 1998: The clinical and molecular characteristics of pediatric brain tumors  
UW CME series  
Rockford, IL
- 1998: The Neurological Assessment  
Pediatric Basic Critical Care Course  
UW Children's Hospital
- 1998: Surgery of the brachial plexus, with emphasis on obstetric palsies  
Neurology Grand Rounds  
UW School of Medicine and Public Health
- 1998: The Chiari Malformations  
"Progress in Pediatrics" annual conference  
Madison, WI
- 1998: Neurological assessment of the pediatric patient  
UW Children's Hospital Basic Critical Care Course
- 1998: Shunts and shunt problems  
Weekly pediatric resident conference  
UW School of Medicine and Public Health
- 1998: Pediatric Head Trauma Management  
Dubuque, Iowa
- 1998: Hydrocephalus  
Department of Rehabilitation conference  
UW School of Medicine and Public Health
- 1998: Craniosynostosis  
Pediatric Grand Rounds  
UW School of Medicine and Public Health
- 1998: Obstetric Plexus palsies  
Pediatric Department  
Greenbay, WI

- 1998: Craniosynostosis  
Updates in Pediatrics  
Appleton, WI
- 1998: Shunts and Intracranial Pressure problems  
Medical student pilot neuroscience course  
UW School of Medicine and Public Health
- 1998: Hydrocephalus today: CME Wisconsin Radio Teleconference
- 1999: Current Trends in Myelomeningocele Treatment  
Neonatology Grand rounds  
Meriter Hospital
- 1999: Spina Bifida Management  
Urology Grand Rounds  
UW School of Medicine and Public Health
- 1999: Chiari Malformations and the Tethered Spinal Cord  
UW Hospital and Clinics OR nursing conference
- 1999: Management of Shunts and Shunt Infections  
Pediatric Residents Conference  
UW School of Medicine and Public Health
- 1999: Current Trends in the Management of Pediatric Head Injury  
Pediatric Trauma/Management Conference  
Kids First with Dr. C. Everett Koop  
Greenbay, WI
- 1999: New Trends in Pediatric Neurosurgery  
Anesthesia Grand Rounds  
UW School of Medicine and Public Health
- 1999: Craniosynostosis  
WI State Society of Neurosurgery
- 1999: Management of Brachial Plexus Lesions  
Neurosurgery residents conference  
UW School of Medicine and Public Health
- 1999: CNS Regeneration: Genetics vs. Environment  
Neurosurgery Grand Rounds/Research Conference  
UW School of Medicine and Public Health



- 1999: Pediatric Head Injury  
Fond-du-Lac Pediatrics Conference  
Fond du Lac, WI
- 1999: Spina Bifida: Nature vs. Nurture  
UW Pediatric Grand Rounds  
UW School of Medicine and Public Health
- 2000: Obstetric Plexus Palsies  
Perinatology/Neonatology Conference  
UW School of Medicine and Public Health
- 2000: Management of the Shunted Patient  
Pediatric Residents Conference  
UW School of Medicine and Public Health
- 2000: Caring for Children with Spina Bifida  
Surgical Care of Infants and Children: an update  
Monona Terrace, Madison, WI
- 2000: Pediatric Head and Spine Trauma  
Pediatric Critical Care course  
UW School of Medicine and Public Health
- 2000: The Role of Surgery in Pediatric Brain Tumor Management  
Caring for Children with Brain Tumors conference  
American Family Children's Hospital, Madison, WI
- 2000: Modern Epilepsy Surgery  
Pediatric Grand Rounds  
UW School of Medicine and Public Health
- 2000: Managing Neonates with Spina Bifida  
Meriter Neonatology Conference  
Madison, WI
- 2000: Syringomyelia: I don't get it  
Neurosurgery Grand Rounds  
UW School of Medicine and Public Health
- 2000: Epilepsy  
Fond-Du-Lac Community meeting  
Fond du Lac, WI
- 2001: Neonatal hemorrhage

Meriter Neonatology/Perinatology Conference  
Madison, WI

- 2001: Hydrocephalus and shunts  
UW Department of Rehabilitation Resident Conference  
UW School of Medicine and Public Health
- 2001: Neuroanatomy for medical students  
UW medical student talk  
UW School of Medicine and Public Health
- 2001: Brain embryology, Part II  
UW Neurosurgery Residents' Conference  
UW School of Medicine and Public Health
- 2001: Pediatric neurosurgical critical care  
UW Pediatric Critical Care Course  
UW School of Medicine and Public Health
- 2001: Brain embryology, Part I  
UW Neurosurgery Residents' Conference  
UW School of Medicine and Public Health
- 2001: Intracranial Pressure and Hydrocephalus  
UW Neuroscience Pilot Course  
UW School of Medicine and Public Health
- 2001: The Role of Folic Acid in CNS Regeneration  
UW Neurosurgery Grand Rounds  
UW School of Medicine and Public Health
- 2001: The Management of Encephaloceles and Chiari Malformations  
UW Neonatology/Perinatology conference  
Madison, WI
- 2001: Surgery of the Brachial Plexus  
UW Plastic Surgery Grand Rounds  
UW School of Medicine and Public Health
- 2001: Cranial Shape Abnormalities  
Pediatric Grand Rounds  
Dubuque, IA
- 2001: Hydrocephalus  
UW Pediatric Residents Conference

UW School of Medicine and Public Health

- 2002: Hydrocephalus  
Pediatric Residents Conference  
UW School of Medicine and Public Health
- 2002: Brachial Plexus Surgery  
Mercy Medical Grand Rounds  
Oshkosh WI
- 2002: Research in Clinical Practice  
UW Neuroscience Society  
UW School of Medicine and Public Health
- 2002: Cranial Shape Anomalies  
Surgical Care of Infants and Children  
Madison WI
- 2002: Embryology of the Brain and Brain Malformations  
UW Neurosurgery Resident Conference  
UW School of Medicine and Public Health
- 2002: Embryology of the Brain and Brain Malformations  
UW Neurosurgery Resident Conference  
UW School of Medicine and Public Health
- 2002: Embryology of the Spine and Spinal Malformations  
UW Neurosurgery Residents Conference  
UW School of Medicine and Public Health
- 2002: Hydrocephalus  
UW Medical Student Neuroscience Course  
UW School of Medicine and Public Health
- 2002: Neurological Problems in Critical Care Nursing  
Critical Care Nursing (Regional) Conference  
Madison WI
- 2002: Hydrocephalus  
Pediatric Residents Conference  
UW School of Medicine and Public Health
- 2002: Hydrocephalus  
UW Medical Student Neuroscience Course  
UW School of Medicine and Public Health

- 2003: Brain Embryology  
Neurosurgery Residents Conference  
UW School of Medicine and Public Health
- 2003: Hydrocephalus  
UW Medical Student Neuroscience Course  
UW School of Medicine and Public Health
- 2003: Pediatric Head Trauma Management  
UW Trauma Conference  
UW Hospital and Clinics
- 2003: Care of the Pediatric Neurosurgical Patient  
Pediatric Intensive Care Conference  
UW School of Medicine and Public Health
- 2003: Hydrocephalus  
UW Medical Student Neuroscience Course  
UW School of Medicine and Public Health
- 2003: Brainstem Anatomy  
UW Medical Student Neuroanatomy Course  
UW School of Medicine and Public Health
- 2003: Flat Heads: When to Worry, What to Do  
AAP Regional conference
- 2003: Spine Embryology  
Neurosurgery Residents Conference  
UW School of Medicine and Public Health
- 2003: Hydrocephalus  
UW Medical Student Neuroscience Course  
UW School of Medicine and Public Health
- 2003: Surgery for Brachial Plexus Injuries  
UW Plastic Surgery Grand Rounds  
UW School of Medicine and Public Health
- 2004: Hydrocephalus  
UW Medical Student Neuroscience Course  
UW School of Medicine and Public Health
- 2003: Folic Acid in CNS Repair

- SCIRP meeting  
UW School of Veterinary Medicine  
Madison, WI
- 2003: Hydrocephalus  
Pediatric Resident Conference  
UW School of Medicine and Public Health
- 2003: Lumps, Bumps, and Holes: Windows to the Spine  
Pediatric Grand Rounds  
UW School of Medicine and Public Health
- 2004: The Folate Pathway in CNS Repair  
SCIRP meeting  
UW School of Veterinary Medicine  
Madison, WI
- 2004: Cranial Shape Anomalies  
UW Pediatric Residents Conference  
UW School of Medicine and Public Health
- 2004: Pediatric Head Injury  
Pediatric Critical Care Conference  
UW School of Medicine and Public Health
- 2004: Congenital Hydrocephalus  
Meriter Hospital Neonatology/Perinatology Conference  
Madison, WI
- 2004: Surgery for Hydrocephalus  
UW Anesthesia Grand Rounds  
UW School of Medicine and Public Health
- 2004: Spina Bifida  
Spina Bifida Family Network  
Madison, WI
- 2004: Hydrocephalus  
UW OR Nurses  
UW Hospital and Clinics
- 2004: Brachial Plexus Surgery  
Plastic Surgery Grand Rounds  
UW School of Medicine and Public Health

- 2004: Neuroanatomy of the Brainstem  
Pediatric Resident Conference  
UW School of Medicine and Public Health
  
- 2004: Spina Bifida Occulta  
Dean Pediatrics Conference  
Madison, WI
  
- 2004: Shunt Management  
Learning Science Center talk series  
Madison, WI
  
- 2004: Spinal Anomalies  
Seminars in Pediatrics  
Madison, WI
  
- 2005: Hydrocephalus  
UW Neurosurgery Grand Rounds  
UW School of Medicine and Public Health
  
- 2005: Neuroembryology  
UW Pediatric Resident Conference  
UW School of Medicine and Public Health
  
- 2005: Surgery for Pediatric Brain Tumors  
Caring for Children with Brain Tumors regional conference  
Madison, WI
  
- 2005: Spina Bifida Occulta  
UW regional pediatric conference  
St. Elizabeth Hospital, Appleton, WI
  
- 2006: Shunt Issues with Pseudotumor cerebri  
Department of Ophthalmology Grand Rounds  
UW School of Medicine and Public Health
  
- 2006: Pediatric Neurosurgery in Uganda  
UW Neurosurgery Grand Rounds  
UW School of Medicine and Public Health
  
- 2006: The Sodium Potassium ATPase Pump in CNS Regeneration  
UW Neurosurgery Research Seminar  
UW School of Medicine and Public Health
  
- 2006: CNS Regeneration: An Update  
Guest Lecturer: Dr. Vemuganti's Neuroscience Course

UW Madison

- 2007: More on the Folate Pathway and CNS Repair  
UW Neurosurgery Grand Rounds  
UW School of Medicine and Public Health
- 2007: The Folate Pathway and CNS Repair  
UW Neurology Grand Rounds  
UW School of Medicine and Public Health
- 2007: Review in CNS Regeneration & Article Review  
Neuroscience NTP 675  
UW Course
- 2007: The Role of the Folate Pathway in CNS Regeneration and Repair  
Neurosurgery Research Day  
UW School of Medicine and Public Health
- 2007: Cervical Spinal Cord Injury in Neonates  
UW Perinatology Conference  
UW School of Medicine and Public Health
- 2007: Hydrocephalus: Care Perspectives  
Appleton Perinatology Conference  
Appleton, WI
- 2007: Lumps Bumps and Holes: Window to the Spine  
Appleton Perinatology Conference  
Appleton, WI
- 2007: Pediatric Neurosurgery: The Specialty  
American Family Children's Hospital
- 2008: Brachial Plexus Surgery  
UW Plastic Surgery Grand Rounds  
UW School of Medicine and Public Health
- 2009: Going Beyond Survival: How we Improve Quality of Life in Children and Adults with Spina Bifida  
UW Pediatric Grand Rounds  
UW School of Medicine and Public Health
- 2009: Brachial Plexus Injuries  
UW Plastic Surgery Grand Rounds  
UW School of Medicine and Public Health

- 2010: The Key Neurosurgical Problems in Spina Bifida: Hydrocephalus and Shunts  
Current Treatments and Innovations in Spina Bifida  
Madison, WI.
- 2010: General Prevention and Treatment of Spina Bifida: Clinical and Basic Science Research.  
Current Treatments and Innovations in Spina Bifida  
Madison, WI
- 2011: Going Beyond Survival: Improving Quality of Life in Spina Bifida  
UW School of Nursing  
Madison, WI
- 2011: Pediatric Brain Tumors  
UW Neurology Resident's Conference  
Madison, WI
- 2011: Folate-Mediated Repair of the Central Nervous System through Epigenetic Pathways.  
Neuroscience Training Program Undergraduate Neurobiology Seminar course (Neuro  
500)  
UW Madison
- 2011: Intracranial Neuroendoscopy  
UW Neuroanatomy Skull base and Neuroendoscopy Course  
Madison, WI
- 2011: Epigenetic pathways modulate repair of the injured CNS: The biphasic curve  
UW Neurosurgery Research Day  
Madison, WI
- 2012: Research in Medicine  
Shapiro Guest Lecture  
Madison, WI
- 2012: Folate-Mediated Repair of the CNS through the Folate Pathway  
Seminar in Nutritional Sciences  
UW Madison
- 2012: Hydrocephalus and VP shunts and nursing considerations  
UW Neurosurgery Nursing  
Madison, WI
- 2012: Review of CNS Regeneration  
UW NTP 675 course  
Madison, WI



- 2012: Hydrocephalus and VP shunts and nursing considerations  
UW Neurosurgery Nursing  
UW School of Medicine and Public Health
- 2012: Disclosure of unanticipated outcomes  
UW-SMPH Core Day Skills Lecture  
UW School of Medicine and Public Health
- 2012: Folate-mediated repair of the CNS through epigenetic pathways  
Seminar in Nutritional Sciences  
Madison, WI
- 2012: Pediatric Brain Tumors  
UW Neurology Resident's Conference  
UW School of Medicine and Public Health
- 2012: Folate, Epigenetics, and CNS Repair  
UW Neurosurgery Grand Rounds  
UW School of Medicine and Public Health
- 2012: Folate, Epigenetics, and Central Nervous System Repair. Seminar in Neuromotor Control  
UW Veterinary School  
Madison, WI
- 2013: Brachial Plexus Surgery  
UW Plastic Surgery Grand Rounds  
UW School of Medicine and Public Health
- 2013: Review of Modern Hydrocephalus and Shunt Care  
Hamilton Middle School  
Madison, WI
- 2013: Pediatric and Neonatal Brain Tumors  
Meriter Hospital Perinatology/Neonatology Conference  
Madison, WI
- 2013: Folate, Epigenetics, and CNS Repair  
First Annual UWSMPH Functional Recovery Symposium  
Madison, WI
- 2013: Brachial Plexus Injury in Infants  
Peripheral Nerve Symposium  
UW Department of Neurological Surgery

- 2014: Intracranial pressure monitoring  
NICU Nurses Conference  
American Family Children's Hospital
- 2014: Surgery for brachial plexus palsy  
UW Neuroradiology Fellows Conference  
UW School of Medicine and Public Health
- 2014: Chiari I: Syndrome or malformation  
UW Neuroscience Radiology Conference  
UW School of Medicine and Public Health
- 2014: Modern treatment of hydrocephalus  
Pediatric Nurses Conference  
American Family Children's Hospital
- 2014: Spina Bifida/Tethered Cord pathophysiology, diagnosis, and treatment  
Urology Grand Rounds  
UW School of Medicine and Public Health
- 2015: Research on Nerve Regeneration  
Peripheral Nerve Symposium  
UW School of Medicine and Public Health
- 2015: Healing of the Injured CNS Axonal Regeneration, Folate Biology, and Epigenetic  
Pathways Epigenetics Theme Joint Group Meeting  
UW Madison
- 2015: Nerve Regeneration and Epigenetics – new leads  
UW School of Medicine and Public Health  
Department of Neurological Surgery  
2015 Research Day  
Madison, WI,
- 2016: Craniofacial Disorders  
Neuroradiology Fellows' Conference,  
UW School of Medicine and Public Health
- 2016: CSF Shunt Malfunction – Part I: Pathophysiology: Hypothesis, mathematical modeling,  
and clinical syndromes  
UW Neurosurgery Grand Rounds  
UW School of Medicine and Public Health
- 2016: Pediatric Neurosurgery: The Specialty. Invited lecture  
American Medical Student Association

Madison, WI

- 2016: CNS Shunts for Severe IVH-Update  
UW School of Medicine and Public Health Perinatal Conference  
Madison, WI
- 2016: Epigenetic Plasticity. Invited lecture  
UW School of Medicine and Public Health Neuroscience Group  
Madison, WI
- 2016: CSF Shunt Malfunction – Part II: Smart shunt valve design and prototype  
UW Neurosurgery Grand Rounds  
Madison, WI
- 2016: Hydrocephalus Treatment and Research  
Pediatric Conference  
Aurora, Greenbay, WI
- 2016: Brachial Plexus Review. Invited lecture  
UW School of Medicine and Public Health Perinatal Conference  
Madison, WI
- 2016: Lesional Epilepsy: How do the data apply to children?  
Department of Neurology Epilepsy Case Conference  
UW School of Medicine and Public Health  
Madison, WI
- 2016: Methylation cycle agonists promote spinal axon regeneration in the injured adult central nervous system. (Poster presentation)  
152 Biology Undergraduate Research Symposium  
University of Wisconsin-Madison  
Madison, WI
- 2016: The inheritance of spinal axon regeneration trait in F3 progeny rats in response to ancestral folic acid is not gender-specific. (Poster presentation)  
152 Biology Undergraduate Research Symposium  
University of Wisconsin-Madison  
Madison, WI
- 2016: Ten Eleven Translocase 1 (TET1) expression increases with escalating doses of folic acid in spinal cord-injured rats. (Poster presentation)  
152 Biology Undergraduate Research Symposium  
University of Wisconsin-Madison  
Madison, WI.

- 2016: The congenital tethered spinal cord: how to spot it, evaluate it, and treat it  
UW Urology Grand Rounds  
UW School of Medicine and Public Health
- 2016: Beneficial transgenerational responses to ancestral folate supplementation  
UW-Madison Epigenetics Group Mini-Symposium  
Madison, WI
- 2016: Paradigm Shift in research on CSF shunt obstructions: The Wisconsin hydrocephalus project, Department of Neurological Surgery Research Day  
Madison, WI
- 2017: Molecular Mechanisms of Brain Damage  
UW NTP 675 Guest Lecturer  
Madison, WI
- 2017: UW Hydrocephalus Research  
Under the Microscope: Neurological Surgery Learning Series  
Madison, WI
- 2017: Healing of the Injured CNS: Axonal Regeneration, Folate Biology, and Epigenetic Pathways. Fall Rotator Talk  
IGPNS Graduate Program  
Madison, WI
- 2017: Ventriculoperitoneal Shunt Malfunction and New Possibilities on the Horizon  
Pediatric Neurocritical Care Research Group  
Madison, WI
- 2017: Folate-dependent epigenetic transgenerational inheritance of a therapeutic trait  
2017 UW Madison Epigenetics Symposium, Wisconsin Institute of Discovery  
Madison, WI
- 2017: Chronic overdrainage mechanism of VP shunt malfunction  
Lebanese American University – UW Visit  
Madison, WI
- 2017: Midbrain and Pons/Medulla Anatomy  
Pediatric Neurology Lecture Series  
Madison, WI
- 2017: Brachial plexus and spinal cord  
Pediatric Neurology Lecture Series

Madison, WI

- 2018: Functional anatomy of the spinal cord  
Pediatric Neurology Lecture Series  
Madison, WI
- 2018: Improving quality of life in spina bifida  
Uehling-Wear Lectures  
Madison, WI
- 2018: Lumps Bumps and Holes: Windows to the Spine  
Urology Grand Rounds  
Madison, WI
- 2019: The Injured Brachial Plexus for the Non-Surgeon: Draw, Understand and Fix  
Wisconsin Nerve Symposium  
Madison, WI
- 2019: Brachial plexus anatomy  
Neurology Resident Conference  
Madison, WI
- 2019: Optimizing Urgent Care of the Child with Shunted Hydrocephalus  
Pediatric Emergency Care – Project ECHO  
Madison, WI
- 2020: Research efforts to resolve 60 years of CSF shunt malfunctions  
Department of Surgery Research Day  
University of Wisconsin School of Medicine and Public Health  
Madison, WI
- 2020: VP shunt overdrainage is driven by gravity and cerebrospinal fluid pulsations: Computer simulation and benchtop testing  
UW Department of Neurological Surgery Virtual Symposium
- 2020: VP shunt overdrainage is driven by gravity and cerebrospinal fluid pulsations: Computer simulation and benchtop testing  
UW Pediatric Neurology Virtual Lecture
- 2020: Spina bifida occulta and the tethered spinal cord  
UW Department of Urology Grand Rounds  
Virtual

- 2020: Going Beyond Survival Improving Quality of Life in Spina Bifida  
Urology Residents Program Rounds  
Virtual
- 2020: Koueik J, Broman AT, **Iskandar BJ**  
Likelihood of CSF shunt independence among chronically shunted patients  
UW Department of Neurological Surgery Research Day  
Madison, WI
- 2020: A smart CSF shunting system to treat hydrocephalus  
WARF Accelerator presentation  
Madison, WI
- 2021: Neurosurgery Mock Oral Boards  
Madison, WI
- 2021: ED Evaluation and Management of VP Shunt Complications  
Ask the Experts lectures, Department of Emergency Medicine  
Madison, WI
- 2023: Neurosurgical intraventricular endoscopy: Part I  
University of Wisconsin Global Weekly Skull Base and Neuroanatomy Resident Course  
Madison, WI
- 2023: Neurosurgical intraventricular endoscopy: Part II  
University of Wisconsin Global Weekly Skull Base and Neuroanatomy Resident Course  
Madison, WI
- 2023: Cutaneous Anomalies  
Sauk Prairie Healthcare CME Conference  
Virtual Presentation
- 2023: Ventricular Neuro-Endoscopy Course (Course Organizer)  
University of Wisconsin School of Medicine and Public Health  
Madison, WI
- 2023: Intracranial Tumors  
Ventricular Neuro-Endoscopy Course (Course Organizer)  
University of Wisconsin School of Medicine and Public Health  
Madison, WI
- 2023: Shunt Endoscopy  
Ventricular Neuro-Endoscopy Course (Course Organizer)  
University of Wisconsin School of Medicine and Public Health  
Madison, WI
- 2023: Neuroanatomy

Pediatric Neurology Lecture Series  
Madison, WI

2024: Neuroanatomy  
Pediatric Neurology Lecture Series  
Madison, WI

### *Invited Symposia & Workshops*

#### International/National

1997: Issues in complex pediatric spine. The tethered spinal cord (Luncheon seminar)  
Congress of Neurological Surgeons  
New Orleans, LA

1999: Neuroscope '99 (Invited faculty)  
Medtronic PS Medical Neuroendoscopy Workshop  
New Orleans, LA

1999: Upper Cervical Spine Fractures  
First Annual Spine Symposium  
American University of Beirut  
Beirut, Lebanon

1999: Pediatric Spine Trauma  
First Annual Spine Symposium  
American University of Beirut  
Beirut, Lebanon

2000: Closing Large Myelomeningoceles (Luncheon Seminar)  
Congress of Neurological Surgeons  
San Antonio, TX

2001: Surgery of Brain Tumors in Children (Invited faculty)  
Middle East Medical Assembly  
Beirut, Lebanon

2002: Intracranial Endoscopy (Invited faculty)  
Congress of Neurological Surgeons  
Philadelphia, PA

2002: Hydrodynamics Conference (Invited faculty)  
Pittsburgh, PA

- 2003: Head Injury Breakfast Seminar (Invited faculty)  
American Association of Neurological Surgeons  
San Diego, CA
- 2003: Diagnostic Pitfalls in Hydrocephalus (Invited faculty)  
Weekend Course on Hydrocephalus/Congress of Neurological Surgeons  
Denver, CO
- 2003: Hydrocephalus (Session moderator)  
AANS/CNS Section on Pediatric Neurological Surgery  
San Diego, CA
- 2004: Chiari I Malformation (Breakfast Seminar Panelist)  
American Association of Neurological Surgeons  
Orlando, FL
- 2005: Session Moderator  
NIH Hydrocephalus Consensus Conference  
Bethesda, MD
- 2006: Pediatric Neurosurgical Cases Breakfast Seminar: Meet the Experts  
American Association of Neurological Surgeons  
San Francisco, CA
- 2006: Chiari I: Syndrome or Malformation Breakfast Seminar  
American Association of Neurological Surgeons  
San Francisco, CA
- 2006: WALN Conference (Session moderator)  
Beirut, Lebanon
- 2007: Chiari Malformations (Breakfast Seminar Panelist)  
American Association of Neurological Surgeons  
Washington, D.C.
- 2008: The Chiari Malformations: Diagnosis and Controversies (Breakfast Seminar Panelist)  
American Association of Neurological Surgeons  
Chicago, IL
- 2009: Chiari Malformations (Breakfast Seminar Panelist)  
American Association of Neurological Surgeons  
San Diego, CA
- 2009: Pediatric Hydrocephalus (Breakfast Seminar Panelist)  
American Association of Neurological Surgeons  
San Diego, CA



- 2011: Scientific Session Moderator  
American Association of Neurological Surgeons  
Denver, CO
- 2013-2015: Co-Organizer and Moderator: Pediatric Scientific Sessions of the AANS and CNS  
national meetings
- 2017: Co-Organizer Moderator: Pediatric Session  
AANS International Neurosurgery Symposium  
Los Angeles, 2017
- 2017: Abstract reviewer  
International Society of Pediatric Neurosurgeons  
Denver, CO 2017
- 2017: Co-organizer and Moderator  
Proximal shunt malfunction symposium  
American Society of Pediatric Neurosurgeons  
Maui, HI
- 2021: Does the Chiari 0.5 exist? Point/Counter Point lecture series (Moderator)  
50<sup>th</sup> Annual AANS/CNS Section on Pediatric Neurological Surgery  
Salt Lake City, UT
- 2022: Hydrocephalus. AANS Community (co-organizer and co-moderator)  
2022 Annual AANS Scientific Meeting  
Philadelphia, PA

### **Bibliography:**

#### *Peer-reviewed*

- 1: Dawkins D, Aagaard-Kienitz B, Capel K, Eisenmenger L, Samsonov A, Li Y, Sandoval-Garcia C, Iskandar B. In Reply: Wide Arterial Sparing Encephalo-Duro-Synangiosis for Moyamoya: Surgical Technique and Outcomes. *Oper Neurosurg* (Hagerstown). 2023 Jun 1;24(6):e473. doi: 10.1227/ons.0000000000000714. Epub 2023 Apr 11. PMID: 37039599.
- 2: Whitman A, Damodharan S, Bhatia A, Puccetti D, Iskandar B. Hemangioblastoma and mosaic von Hippel Lindau disease: rare presentation and review of the literature. *Childs Nerv Syst*. 2023 May;39(5):1361-1363. doi: 10.1007/s00381-023-05859-7. Epub 2023 Jan 28. PMID: 36708374.
- 3: Zhao S, Mekbib KY, van der Ent MA, Allington G, Prendergast A, Chau JE, Smith

H, Shohfi J, Ocken J, Duran D, Furey CG, Le HT, Duy PQ, Reeves BC, Zhang J, Nelson-Williams C, Chen D, Li B, Nottoli T, Bai S, Rolle M, Zeng X, Dong W, Fu PY, Wang YC, Mane S, Piwowarczyk P, Fehnel KP, See AP, Iskandar BJ, Aagaard-Kienitz B, Kundishora AJ, DeSpenza T, Greenberg ABW, Kidanemariam SM, Hale AT, Johnston JM, Jackson EM, Storm PB, Lang SS, Butler WE, Carter BS, Chapman P, Stapleton CJ, Patel AB, Rodesch G, Smajda S, Berenstein A, Barak T, Erson-Omay EZ, Zhao H, Moreno-De-Luca A, Proctor MR, Smith ER, Orbach DB, Alper SL, Nicoli S, Boggon TJ, Lifton RP, Gunel M, King PD, Jin SC, Kahle KT. Genetic dysregulation of an endothelial Ras signaling network in vein of Galen malformations. *bioRxiv* [Preprint]. 2023 Mar 21:2023.03.18.532837. doi: 10.1101/2023.03.18.532837. PMID: 36993588; PMCID: PMC10055230.

4: Rizk E, Madrid A, Koueik J, Sun D, Stewart K, Chen D, Luo S, Hong F, Papale LA, Hariharan N, Alisch RS, Iskandar BJ. Purified regenerating retinal neurons reveal regulatory role of DNA methylation-mediated Na<sup>+</sup>/K<sup>+</sup>-ATPase in murine axon regeneration. *Commun Biol*. 2023 Jan 30;6(1):120. doi: 10.1038/s42003-023-04463-4. PMID: 36717618; PMCID: PMC9886953.

5: Madrid A, Alisch RS, Rizk E, Papale LA, Hogan KJ, Iskandar BJ. Transgenerational epigenetic inheritance of axonal regeneration after spinal cord injury. *Environ Epigenet*. 2023 Jan 17;9(1):dvad002. doi: 10.1093/eep/dvad002. PMID: 36843857; PMCID: PMC9949995.

6: Cools MJ, Wellons JC 3rd, Iskandar BJ. The Nomenclature of Chiari Malformations. *Neurosurg Clin N Am*. 2023 Jan;34(1):1-7. doi: 10.1016/j.nec.2022.08.003. Epub 2022 Nov 2. PMID: 36424049.

7: Dawkins D, Aagaard-Kienitz B, Capel K, Eisenmenger L, Samsonov A, Li Y, Sandoval-Garcia C, Iskandar B. Wide Arterial Sparing Encephalo-Duro-Synangiosis for Moyamoya: Surgical Technique and Outcomes. *Oper Neurosurg (Hagerstown)*. 2022 Dec 1;23(6):489-498. doi: 10.1227/ons.0000000000000376. Epub 2022 Sep 16. Erratum in: *Oper Neurosurg (Hagerstown)*. 2023 Apr 1;24(4):e314-314. PMID: 36113163.

8: Iskandar BJ, Finnell RH. Spina Bifida. Reply. *N Engl J Med*. 2022 Oct 27;387(17):1628. doi: 10.1056/NEJMc2211513. PMID: 36300989.

9: Damodharan S, Diamond C, Helgager J, Iskandar B. Intralesional glucocorticoid treatment of an isolated intracranial juvenile xanthogranuloma: a case report. *Childs Nerv Syst*. 2022 Oct;38(10):2021-2024. doi: 10.1007/s00381-022-05500-z. Epub 2022 Mar 18. PMID: 35304626.

10: Iskandar BJ, Finnell RH. Spina Bifida. *N Engl J Med*. 2022 Aug 4;387(5):444-450. doi: 10.1056/NEJMra2116032. PMID: 35921452.

11: Akbari SHA, Yahanda AT, Ackerman LL, Adelson PD, Ahmed R, Albert GW, Aldana

PR, Alden TD, Anderson RCE, Bauer DF, Bethel-Anderson T, Bierbrauer K, Brockmeyer DL, Chern JJ, Couture DE, Daniels DJ, Dlouhy BJ, Durham SR, Ellenbogen RG, Eskandari R, Fuchs HE, Grant GA, Graupman PC, Greene S, Greenfield JP, Gross NL, Guillaume DJ, Hankinson TC, Heuer GG, Iantosca M, Iskandar BJ, Jackson EM, Jallo GI, Johnston JM, Kaufman BA, Keating RF, Khan NR, Krieger MD, Leonard JR, Maher CO, Mangano FT, McComb JG, McEvoy SD, Meehan T, Menezes AH, Muhlbauer MS, O'Neill BR, Olavarria G, Ragheb J, Selden NR, Shah MN, Shannon CN, Shimony JS, Smyth MD, Stone SSD, Strahle JM, Tamber MS, Torner JC, Tuite GF, Tyler-Kabara EC, Wait SD, Wellons JC, Whitehead WE, Park TS, Limbrick DD. Complications and outcomes of posterior fossa decompression with duraplasty versus without duraplasty for pediatric patients with Chiari malformation type I and syringomyelia: a study from the Park-Reeves Syringomyelia Research Consortium. *J Neurosurg Pediatr.* 2022 Apr 15:1-13. doi: 10.3171/2022.2.PEDS21446. Epub ahead of print. PMID: 35426814.

12: Akbari SHA, Rizvi AA, CreveCoeur TS, Han RH, Greenberg JK, Torner J, Brockmeyer DL, Wellons JC, Leonard JR, Mangano FT, Johnston JM, Shah MN, Iskandar BJ, Ahmed R, Tuite GF, Kaufman BA, Daniels DJ, Jackson EM, Grant GA, Powers AK, Couture DE, Adelson PD, Alden TD, Aldana PR, Anderson RCE, Selden NR, Bierbrauer K, Boydston W, Chern JJ, Whitehead WE, Dauser RC, Ellenbogen RG, Ojemann JG, Fuchs HE, Guillaume DJ, Hankinson TC, O'Neill BR, Iantosca M, Oakes WJ, Keating RF, Klimo P, Muhlbauer MS, McComb JG, Menezes AH, Khan NR, Niazi TN, Ragheb J, Shannon CN, Smith JL, Ackerman LL, Jea AH, Maher CO, Narayan P, Albert GW, Stone SSD, Baird LC, Gross NL, Durham SR, Greene S, McKinstry RC, Shimony JS, Strahle JM, Smyth MD, Dacey RG, Park TS, Limbrick DD. Socioeconomic and demographic factors in the diagnosis and treatment of Chiari malformation type I and syringomyelia. *J Neurosurg Pediatr.* 2021 Dec 3;29(3):288-297. doi: 10.3171/2021.9.PEDS2185. PMID: 34861643.

13: Koueik J, DeSanti RL, Iskandar BJ. Posterior fossa decompression for children with Chiari I malformation and hydrocephalus. *Childs Nerv Syst.* 2022 Jan;38(1):153-161. doi: 10.1007/s00381-021-05377-4. Epub 2021 Oct 20. PMID: 34671850.

14: Koueik J, Iskandar BJ, Yang Z, Kraemer MR, Armstrong S, Wakim V, Broman AT, Medow J, Luzzio C, Hsu DA. Ventriculoperitoneal Shunt Drainage Increases With Gravity and Cerebrospinal Fluid Pressure Pulsations: Benchtop Model. *Neurosurgery.* 2021 Nov 18;89(6):1141-1147. doi: 10.1093/neuros/nyab336. PMID: 34528096; PMCID: PMC8600163.

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21. Haughton V, Dolar M, Korosek F, Quigley M, **Iskandar B.** Peak systolic CSF velocity in patients with Chiari malformations and in normal subjects. Nordic Neuroradiologic Society Meeting, Reykjavik, June 2002
22. Quigley MF, **Iskandar B**, Mistretta CA, Haughton VM. Spatial and Temporal Characterization of CSF flow in the foramen magnum in normal subjects and patients with Chiari I malformations.
23. Puccetti D, Nguyen PH, Salamat S, **Iskandar B** and Norton L. Rapidly Growing Embryonal Carcinoma Arising in the Mesencephalon of a Young Child: A Case Report. 10th International Symposium of Paediatric Neuro-Oncology. June 2002
24. Puccetti D, **Iskandar B**, Osenga K, and Schloegel D. False positive surveillance MR images in a young male with medulloblastoma Puccetti D, Iskandar B, Osenga K, and Schloegel D. 10th International Symposium of Paediatric Neuro-Oncology. June 2002.
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27. Medow J, **Iskandar B.** Quick-Brain MRI instead of CT in Shunted Hydrocephalus. AANS/CNS Joint Section of Pediatric Neurosurgery, December 2002.
28. Dziurzynski K, **Iskandar B.** Foramen Magnum Placement of Baclofen Pump Catheters. AANS/CNS Joint Section of Pediatric Neurosurgery, December 2002.
29. Medow J, Haughton V, **Iskandar J.** Elevation of peak systolic CSF velocity in patients with Chiari malformations compared to normal subjects. Congress of Neurological Surgeons, September 2002
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45. Rizk E, Simon K, Jarrard D, Hariharan N, **Iskandar B**. The Role of DNA Methylation in Central Nervous System Regeneration. Neurotrauma Society, Washington DC, 2005.
46. **Iskandar B**. The role of DNA methylation in CNS regeneration. Neural Tube Defects Conference. Indian Wells, CA. September 2005.
47. Rajpal S, Tubbs S, Salamat S, Oakes WJ, **Iskandar BJ**. Spinal cutaneous tracts in spina bifida occulta: Reclassification. (AANS/CNS Section on Pediatric Neurosurgery, Orlando 2005.
48. Medow J, **Iskandar B**. Transcutaneous Inductive Pressure (TIP) Monitor: Prototype for a Permanently Implanted ICP Device. AANS/CNS Section on Pediatric Neurosurgery, Orlando 2005.
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51. Dziurzynski K, **Iskandar B**. The development of osmolar therapy at the University of Wisconsin. AANS/CNS Section on Pediatric Neurosurgery, Orlando 2005.
52. Rizk E, Simon K, Jarrard D, Hariharan N, **Iskandar B**. DNA methylation plays a significant role in folate-related CNS regeneration. AANS/CNS Section on Pediatric Neurosurgery, Orlando 2005.
53. Rizk E, Moftakhar R, Medow JE, Hariharan N, **Iskandar B**. Phenytoin decreases the ability of the CNS to repair after injury. Congress of Neurological Surgeons, Boston, 2005.
54. **Iskandar B**. The role of DNA methylation in CNS regeneration. American Academy of Neurological Surgeons, San Francisco Fall 2005; and Neurotrauma meeting Washington DC Fall 2005.

55. **Iskandar B.** Pediatric Neurosurgical Cases. AANS Breakfast Seminar: Meet the Experts. AANS. San Francisco. April 2006.
56. **Iskandar B.** Chiari I: Syndrome or Malformation. AANS Breakfast Seminar: The Chiari Malformation. AANS. San Francisco. April 2006.
57. **Iskandar B.** Accuracy of CSF flow imaging in the differentiation of symptomatic Chiari I malformation from asymptomatic incidental tonsillar ectopia. American Syringomyelia Alliance Project. Denver. July 2006.
58. **Iskandar BJ.** The folate pathway, DNA methylation and CNS repair. FASEB. Palm Springs. August 2006.
59. **Iskandar B** DNA Methylation and CNS Repair. Society of Neuroscience. Atlanta. September 2006.
60. Rocque B, Lapsiwala S, **Iskandar B.** Shunt Tap as a Predictor of Proximal Shunt Function in Patients with Suspected Shunt Malfunction: a Prospective Study. AANS/CNS Section on Pediatric Neurosurgery, Denver. December 2006.
61. Rizk E, **Iskandar B.** The Folate Receptors in CNS Repair. AANS/CNS Section on Pediatric Neurosurgery, Denver. December 2006.
62. Rizk E, **Iskandar B.** The methyltransferases in CNS Regeneration after Injury. AANS/CNS Pediatric Section. Miami. December 2007.
63. Meier B, **Iskandar B.** Nitrous Oxide Inhibits Neuronal Elongation in Culture. AANS/CNS Pediatric Section. Miami. December 2007.
64. Patel N, **Iskandar B.** The Association of Faint Midline Lumbar Cutaneous Hemangioma with Occult Spinal Dysraphism. AANS/CNS Pediatric Section. Miami. December 2007.
65. **Iskandar BJ.** Understanding the Folate Pathway in CNS Repair. American Academy of Neurological Surgery. Las Vegas. October 2007.
66. **Iskandar J.** The Role of the Folate Pathway in CNS Regeneration and Repair. NTD Research Meeting. Monterey. September 2007
67. Patel N, **Iskandar B:** ICP Monitoring in patients with spasticity prior to Baclofen pump placement. AANS/CNS Joint Section on Pediatric Neurosurgery. Washington. December 2008.
68. Stewart K, Iskandar BJ: The effect of folic acid on CNS regeneration in vitro. AANS/CNS Joint Section on Pediatric Neurosurgery. Washington. December 2008.
69. Rizk E, **Iskandar B:** Update on the The Folate Pathway and CNS Repair. American Academy of Neurological Surgeons. September 2008 (presented in absentia by Dr. Rizk).
70. Rizk E, **Iskandar B:** The role of the NaK ATPase Pump in CNS regeneration. American Academy of Neurological Surgery. Arizona. September 2008 (presented by Dr. Rizk).
71. Martin BA, Labuda R, Royston TJ, Oshinski JN, **Iskandar B,** Loth F. Pathological biomechanics of cerebrospinal fluid pressure in syringomyelia: Fluid structure interaction of an in vitro coaxial elastic tube system. ASME 2009 Summer Bioengineering Conference.
72. **Iskandar B,** Banerjee R, Bottiglieri T, Finnell R, Hogan K. The role of the folate pathway in repair of the injured central nervous system, NTD Conference, Burlington, Vermont, September 2009.
73. **Iskandar B,** Stewart K, Meier B, Rizk E, Hariharan N. Folic Acid Supplementation Enhances CNS Regeneration in Vitro. American Academy of Neurological Surgery, West Palm Beach, Florida, October 2009.

74. **Iskandar B**, Patel N. Supplementing methyl donor groups in the Rat diet, increases neural regeneration after spinal cord injury. AANS/CNS Joint Section on Pediatric Neurosurgery, Boston, Massachusetts, December 2009.
75. **Iskandar B**. Folate Mediated Repair of the Central Nervous System through Epigenetic Pathways. Trauma and Neurotrauma Critical Care Symposium. Palm Beach, May 2010.
76. Patel NJ, Diamond CA, Salamat MS, Bradley K, Gondi V, Kennedy TA, Keller L, **Iskandar B**, Puccetti D. A case of malignant rhabdoid tumor in the epidural space of the spine. J Neurooncology, 14th International Symposium on Pediatric Neuro-Oncology (ISPNO), Vienna, Austria, June 2010.
77. Patel NJ, Salamat MS, Puccetti DM, Gondi V, Bradley K, Keller L, Casey K, Kennedy TA, **Iskandar B**. Primitive neuroectodermal tumor of the spine in a patient with a long lasting history of hydrocephalus. J Neurooncology , 14th International Symposium on Pediatric Neuro-Oncology (ISPNO), Vienna, Austria, June 2010.
78. Puccetti DM, Patel NJ, **Iskandar B**, Ward M, Casey K, Salamat MS, Kennedy TA. A child with disseminated primary spinal cord oligodendroglioma. J Neurooncology, 14th International Symposium on Pediatric Neuro-Oncology (ISPNO), Vienna, Austria, June 2010.
79. Meier B, Stewart K, **Iskandar B**, Rizk E, Hogan K, et al. Nitrous Oxide Impairs Axonal Regeneration. (Submitted), American Society of Anesthesiologists Annual Meeting, San Diego, CA, October 2010.
80. Stewart K, **Iskandar B**. Folic Acid Supplementation Enhances CNS Regeneration In Vitro on Inhibitory CNS Myelin. AANS/CNS Section on Pediatric Annual Meeting, Austin, TX, December 2010.
81. **Iskandar, B**. Folate promotes endogenous axonal regeneration by epigenetic mechanisms. 8<sup>th</sup> International Conference on Homocysteine Metabolism, Portugal 2011.
82. Nicholas Shaffer, Francis Loth, Oliver Wieben, Brandon Rocque, **Bermans Iskandar**, John Oshinski. Impedance to cerebrospinal fluid flow in the spinal canal is dominated by geometric complexity. ASME 2011. Framington, PA.
83. Hogan KJ, Rizk EB, Hariharan N, **Iskandar B**. In Utero Nitrous Oxide Exposure Impairs Murine Agouti Signal Protein Expression. American Society of Anesthesiologists Annual Meeting 2011.
84. **Iskandar B**. Controversial topics 2: Chiari I: Syndrome or Malformation? American Chiari and Syringomyelia Alliance Project. Denver 2011.
85. **Iskandar B**. Outcomes in Patients Undergoing Surgical Intervention for Chiari Type 1 Malformation with Syringomyelia. American Chiari and Syringomyelia Alliance Project. Denver 2011.
86. **Iskandar B**. Epigenetic Pathways Modulate Repair of the injured Central Nervous System. American Academy of Neurological Surgeons Annual Meeting, Fall 2011.
87. **Iskandar B**. Transgenerational epigenetic enhancement of CNS axon regeneration through folate supplementation. ASPN. Puerto Rico, January 2012.
88. **Iskandar B**. The Chiari Malformations in Humans. Neurology Keynote Speaker. The American College of Veterinary Internal Medicine – New Orleans, May 2012.
89. **Iskandar B**. Neuroendoscopy in the Treatment of Human Hydrocephalus and Other Anomalies. Neurology Keynote Speaker. The American College of Veterinary Internal Medicine – New Orleans, May 2012.



90. Puccetti DM, Salamat S, Kennedy T, Fangusara J, Patel N, Bradley K, Casey K, **Iskandar B**. Gliomatosis cerebri in a nine year old boy: Case review and review of the literature. 15<sup>th</sup> International Symposium on Pediatric Neuro-Oncology (ISPNO), Toronto, Canada, June 2012.
91. Pucetti D, Salamat S, Rusinak D, Patel N, Bradley K, Casey K, Knight P, Onel K, Wargowski D, Stettner A, **Iskandar B**, Glioblastoma multiforme in a child subsequently diagnosed with li-fraumeni syndrome. 15<sup>th</sup> International Symposium on Pediatric Neuro-Oncology (ISPNO), Toronto, Canada, June 2012.
92. **Iskandar B**, Hogan KJ. Folate, B12 & One Carbon Metabolism. Parameters of Folate-mediated Tissue Regeneration and Fairy Tale Heroines, FASEB Summer Research Conference Crete, July 2012.
93. Wildenberg J, Kennedy T, Huston J, **Iskandar B**. Non-Gated Isotropic 3D T2 FRFSE dephasing artifacts for the assessment of CSF flow in Normal Controls and in Patient's After Third Ventriculostomy. Radiological Society of North America 98<sup>th</sup> Scientific Assembly and Annual Meeting, Chicago, Illinois, November 2012.
94. Rizk E, Stewart K, Meethal S, Hariharan N, Gasch A, and **Iskandar B**. Gene expression patterns of CNS growth and regeneration at various developmental stages and after injury. AANS/CNS Pediatric Section. St. Louis, November 2012.
95. Meethal SV, **Iskandar B**. Methylation/Demethylation Mechanisms are Key to Folate-induced Axon Regeneration in the Injured Central Nervous System. Keystone symposia, New Mexico 2013.
96. Meier BM, Stewart KJ, Rizk EB, Hariharan N, Andrei A, **Iskandar B**, Hogan KJ. Nitrous oxide impairs axonal regeneration in the spinal cord. International Anesthesia Research Society. San Diego. May 2013.
97. Stewart KJ, Meier BM, Rizk EB, Hariharan N, Andrei A, **Iskandar B**, Hogan KJ. Nitrous oxide impairs axonal regeneration in dorsal root ganglia. International Anesthesia Research Society. San Diego. May 2013.
98. Transgenerational Epigenetic Inheritance of a Therapeutic Trait Methyl Supplementation. 8<sup>th</sup> International Conference on Neural Tube Defects. October 2013.
99. Sandoval-Garcia C, Kraemer M, **Iskandar B**. Surgery for obstructive non-tumoral posterior fossa problems. 42<sup>nd</sup> Annual Meeting of the AANS/CNS Section on Pediatric Neurological Surgery, Ontario, December 2013.
100. Cassini T, Makkiyah F, Rocque B, **Iskandar B**. The value of placing external ventricular drains after endoscopic third ventriculostomy. 42<sup>nd</sup> Annual Meeting of the AANS/CNS Section on Pediatric Neurological Surgery, Ontario, December 2013.
101. Wolfe A, Capitini C, Salamat S, DeSantes K, Bradley K, **Iskandar B**, Bragg, T Kennedy T, Patel N. Improved outcome of extradural, cervical malignant rhabdoid tumor when marrow-ablative chemotherapy with autologous stem cell rescue is added to primary multimodal therapy. 27<sup>th</sup> Annual Meeting of the American Society of Pediatric Hematology Oncology, Chicago, IL, May 2014.
102. Gibb W, Strebe J, Skarda E, Meethal SV, Hariharan H, **Iskandar B**. DNA Methylation is Key to Folate-Mediated Spinal Axon Regeneration. UW Department of Neurosurgery Research Day. October 2014.
103. Vadakkadath MS, Hariharan N, Rizk E, Gibb W, Strebe J, Cedrick H, Weber K, Cassini T, Chindhy A, Skoda L and **Iskandar B**. TET Inhibition Enhances Spinal Regeneration

- at High Doses of Folic Acid. UW Department of Neurosurgery Research Day. October 2014.
104. Kraemer M, **Iskandar B**. Endoscopic Aqueductoplasty for Management of Trapped Fourth Ventricle. AANS/CNS Section on Pediatric Neurosurgery. Amelia Island. December 2014.
  105. Madura C, Lemrise A, **Iskandar B**, Bragg T. Prevention of Traumatic Brain and Spinal Cord Injury: The Importance of Neurosurgical Leadership. AANS/CNS Section on Pediatric Neurosurgery. Amelia Island. December 2014.
  106. Bishop, C., Carlson, B., Gibb, W., Hariharan, N., Vadakkadath Meethal, S. and **Iskandar, B** (2014). Folic acid enhances regrowth of cultured adult DRG neurons from spinal cord injured rats in a biphasic and dose-dependent manner (Poster presentation) Intro Bio 152 Undergraduate Mentored Research Poster Session, University of Wisconsin-Madison, Madison, WI, USA
  107. Luo, S., Raul, C.S., Gibb, W., Strebe, J., Skarda, E., Skoda, L., Hariharan, N., Vadakkadath Meethal, S. and **Iskandar, B**. (2014) DNMT knockdown reverses the transgenerational effect of folic acid on axon growth in vitro (Poster presentation) Intro Bio 152 Undergraduate Mentored Research Poster Session, University of Wisconsin-Madison, Madison, WI, USA
  108. Poepping, J., Skoda, L., Hariharan, N., Vadakkadath Meethal, S. and **Iskandar, B**. (2014) Nuclear TET1 hydroxylase activity and folic acid supplementation after spinal cord injury in sprague-dawley rats (Poster presentation) Intro Bio 152 Undergraduate Mentored Research Poster Session, University of Wisconsin-Madison, Madison, WI, USA
  109. Keating, G., Mendoza, M., Hariharan, N., Vadakkadath Meethal, S. and **Iskandar, B**. (2014) Dose-dependent effect of folic acid on the expression of nestin in central nervous system injury and regeneration (Poster presentation) Intro Bio 152 Undergraduate Mentored Research Poster Session, University of Wisconsin-Madison, Madison, WI, USA
  110. Hopfensperger, K., Withington, C., Holden, C., Keating, G., Hariharan, N., Vadakkadath Meethal, S. and **Iskandar, B**. (2015). Effect of folate agonists on central nervous system regeneration after injury (Poster presentation) Undergraduate Research Scholar Symposium, Union South, University of Wisconsin-Madison, Madison, WI, USA
  111. Tenorio, A., Bonfiglio, G., Geanon, D., Skoda, D., Hariharan, N., Vadakkadath Meethal, S. and **Iskandar, B**. (2015). Does DNMT3b expression correlate with axonal regeneration in the peripheral vs. central nervous systems? (Poster presentation) Undergraduate Research Scholar Symposium, Union South, University of Wisconsin-Madison, Madison, WI, USA
  112. Ondoma, S., Hariharan, N., Holden, C., Keating, G., Hopfensperger, K., Withington, C., Raul, C., Luo, S., Carlson, B., Bonfiglio, G., Sharma, P., Maltz, E., Vadakkadath Meethal, S. and **Iskandar, B**. (2015) Methylation cycle agonists enhance the regeneration of injured spinal axons independently from folate (Poster presentation) Department of Medicine Research Day, University of Wisconsin School of Medicine and Public Health, Madison.
  113. **Iskandar, B**. (2015) Nerve Regeneration and Epigenetics-New Leads (Lecture). UW Department of Neurosurgery Research Day.

114. **Kraemer, M and Iskandar, B.** The Wisconsin Hydrocephalus Survey: shunt-dependent hydrocephalus management style among members of the American Society of Pediatric Neurosurgeons. *Fluids and Barriers of the CNS* 2015 **12**(Suppl 1):O35 (18 September 2015).
115. **Iskandar, B.** The role of Tet1 in folate-enhanced spinal cord axon regeneration. 9<sup>th</sup> International Conference on Neural Tube Defects, Austin, TX, October 2015.
116. **Iskandar, B** (invited lecture). CNS axon regeneration, folate, and epigenetics. 16th International Symposium on Neural Regeneration (ISNR), Asilomar, Pacific Grove, California, December 2015.
117. Kearl, T, Patel, N, Casey K, Bashir, M, **Iskandar, B**, Salamat, M, Bradley K, and Puccetti D. Multifocal glioblastoma: a pediatric case and literature review. 2015 Society of Neuro-Oncology Meeting, San Antonio, TX, November 2015.
118. Sandoval-Garcia, C, Aagaard-Kienitz, B., Uluc, K., and **Iskandar, B.J.** Outcome and Surgical Technique for Wide Arterial Sparing Encephalo-Duro-Synangiosis (WASEDS) for Moyamoya Disease. 44<sup>th</sup> Annual Meeting of the AANS/CNS Section on Pediatric Neurological Surgery, Seattle, WA, December 2015.
119. Kraemer M and **Iskandar, B.** Overdrainage-Related Ventricular Tissue is a Significant Cause of Proximal Shunt Obstruction. 84rd AANS Annual Scientific Meeting, Chicago, IL, May 2016.
120. Vidal, E., Odoma, S., Hariharan, N., Holden, C., Keating, G., Hopfensperger, K., Withington, C., Raul, C., Luo, S., Carlson, B., Bonfiglio, G., Sharma, P., Maltz, E., Vadakkadath Meethal, S. and **Iskandar, B.** (2016) In vivo assessment of the gender specific inheritance of spinal axon regeneration phenotype in response to folic acid. Undergraduate Research Symposium, University of Wisconsin-Madison, Madison, WI, USA.
121. Defnet J, Bonfiglio G, Sharma P, Hong F, Skoda L, Hariharan N, Rizk, E, Vadakkadath Meethal S and **Iskandar B** (2016) Ten Eleven Translocase 1 (TET1) expression increases with escalating doses of folic acid in spinal cord-injured rats 152 Biology Undergraduate Research Symposium, University of Wisconsin-Madison, Madison, WI.
122. Yutuc N, Miranpuri G, Vadakkadath Meethal S, Buttar S, Nacht C, Moreno N, Patel K, Liu L, Hariharan N, **Iskandar B**, Resnick D (2016) Folic acid modulates MMP2 expression, alleviates neuropathic pain and improves functional recovery in spinal cord injured rat 152 Biology Undergraduate Research Symposium, University of Wisconsin-Madison, Madison, WI.
123. DeGroot A, Langer S, Raul C, Carlson C, Kunsel T, Keating G, Hopfensperger K, Withington C, Ondoma S, Hariharan N, Vadakkadath Meethal S and **Iskandar B** (2016) The inheritance of spinal axon regeneration trait in F3 progeny rats in response to ancestral folic acid is not gender-specific. 152 Biology Undergraduate Research Symposium, University of Wisconsin-Madison, Madison, WI.
124. Jedrzejczak A, Keating G, Ondoma S, Hopfensperger K, Withington C, Hariharan N, Vadakkadath Meethal S and **Iskandar B** (2016) Methylation cycle agonists promote spinal axon regeneration in the injured adult central nervous system. 152 Biology Undergraduate Research Symposium, University of Wisconsin-Madison, Madison, WI.
125. Patel N, Rizk E, Hogan K, Stewart K, Vadakkadath Meethal S, Ondoma S, Gorges L, Weber K, Lake W, Bauer A, Hariharan N, Kuehn T, Withington C, Hopfensperger K,

- Carlson B, Luo S, Defnet J, Hong F, Jedrzejczak A, Maltz E, Vidal E, Cook C, Keles S, and **Iskandar B** (2016) Folate-Induced Transgenerational Inheritance in Central Nervous System Injury First Epigenetic Symposium, Pyle Center, University of Wisconsin-Madison, Madison, WI.
126. Kunsel, T., Raul, C., Luo, S., Carlson, B., Hariharan, N., Vadakkadath Meethal, S. and **Iskandar, B.** (2016) Inheritance of the spinal axon regeneration phenotype in response to folic acid is not gender specific. Undergraduate Research Symposium, University of Wisconsin-Madison, Madison, WI, USA.
  127. Kraemer M and **Iskandar, B.** Overdrainage-Related Ventricular Tissue is a Significant Cause of Proximal Shunt Obstruction. 84rd AANS Annual Scientific Meeting, Chicago, IL, May 2016.
  128. Sandoval-Garcia C and **Iskandar B.** Outcomes in Children Undergoing Surgical Intervention for Chiari I Malformation with Syringomyelia: A Prospective, Multi-center, Pilot Study. 45<sup>th</sup> Annual Meeting of the AANS/CNS Section on Pediatric Neurological Surgery, Orlando, FL, December 2016.
  129. Vidal E, Odoma S, Hariharan N, Holden C, Keating G, Hopfensperger K, Withington C, Raul C, Luo S, Carlson B, Bonfiglio G, Sharma P, Maltz E, Vadakkadath Meethal S, and **Iskandar B** (2016) In vivo assessment of the gender specific inheritance of spinal axon regeneration phenotype in response to folic acid. Undergraduate Research Symposium, University of Wisconsin-Madison, Madison.
  130. Kunsel T, Raul C, Luo S, Carlson B, Hariharan N, Vadakkadath Meethal S, and **Iskandar BJ** (2016) Inheritance of the spinal axon regeneration phenotype in response to folic acid is not gender specific. Undergraduate Research Symposium, University of Wisconsin-Madison, Madison.
  131. Meltz E, Ondoma S, Hariharan N, Hopfensperger, K, DeGroot A, Vadakkadath Meethal S and **Iskandar BJ.** (2016) Succinate Enhances Axon Regeneration after Spinal Cord Injury Even at High Doses of Folic Acid, Presumably by Inhibiting Tet Enzymes (Poster) Department of Neurosurgery Research Day, University of Wisconsin School of Medicine and Public Health, Madison, WI
  132. Sing V, Buttar S, Radzin A, Chopra A, Sing R, Yutuc N, Sampene E, Hariharan N, Vadakkadath Meethal S, Miranpuri GS, **Iskandar BJ** and Resnick DK. (2016) Epigenetic regulation of matrix metalloproteinase by folic acid to alleviate spinal cord injury-induced neuropathic pain (Poster) Department of Neurosurgery Research Day, University of Wisconsin School of Medicine and Public Health, Madison, WI.
  133. Sandoval-Garcia C and **Iskandar BJ.** Outcomes in Children Undergoing Surgical Intervention for Chiari I Malformation with Syringomyelia: A Prospective, Multi-center, Pilot Study. 45th Annual Meeting of the AANS/CNS Section on Pediatric Neurological Surgery, Orlando, FL, December 2016.
  134. **Iskandar B,** Kraemer M. Overdrainage-Related Ventricular Tissue is a Significant Cause of Proximal Shunt Obstruction. American Society of Pediatric Neurosurgeons, Maui, HI, January 2017.
  135. Hamilton K, **Iskandar B.** Amenorrhea and reversible infertility due to obstructive hydrocephalus: literature review and case report. AANS, Los Angeles, April 2017.
  136. **Iskandar B.** Chronic overdrainage mechanism or VP shunt malfunction. IHIWG. ASNR, April 2017.

137. Barnes B, Hong F, Koueik K, Zielinski K, Hu A, Defnet J, Langer S, Dentice A, Jedrzejczak A, Withington C, Vidal E, Hariharan N, Meethal S, **Iskandar B**. The Role of TET1 Hydroxymethylation in Folate-Enhanced Spinal Axon Repair. University of Wisconsin Biology 152 Symposium. Madison, WI, December 2017.
138. Kunsel T, Hong F, DeGroot A, Langer S, Hariharan N, Meethal S, **Iskandar B**. Spinal axon regeneration after erythropoietin silencing in rats with spinal cord injury. University of Wisconsin Biology 152 Symposium. Madison, WI, December 2017.
139. **Iskandar B**, et al. Ancestral Folate Promotes Neuronal Regeneration by Transgenerational Epigenetic Inheritance. Epigenetics. Gordon Research Conference. Holderness School, Holderness NH, August 2017.
140. Zhang X, [...], **Iskandar B**, Webster J, Medow J. RFID based smart shunt system Wisconsin hydrocephalus project (WHP). Research Day. UW Department of Neurological Surgery, Madison WI, October 2017.
141. Koueik J, Kraemer M, Hsu D, **Iskandar BJ**. Addition of anti-siphon devices decreases the incidence of proximal shunt obstruction. Research Day. UW Department of Neurological Surgery, Madison WI, October 2017.
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