

# ***Curriculum Vitae***

## **Gregory Borschel, M.D., F.A.A.P., F.A.C.S.**

A. Citizenship: USA

B. Biographical Information

Office	Division of Plastic and Reconstructive Surgery Riley Hospital for Children;  705 Riley Hospital Drive,  Indianapolis, IN 46202  USA
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### **Brief background:**

Dr. Borschel is the James Harbaugh, Jr., Professor and Chief of Plastic Surgery at Riley Hospital for Children at Indiana University Health, Indianapolis, Indiana, USA. His practice focuses on nerve injuries, corneal neurotization, facial paralysis, congenital hand surgery, and microvascular reconstruction. Dr. Borschel graduated from the Johns Hopkins University School of Medicine in 1997 and completed a residency in Plastic and Reconstructive Surgery at the University of Michigan in 2005. He completed a two-year postdoctoral research fellowship in Neuromuscular Regenerative Medicine at the University of Michigan, and a fellowship in Pediatric Plastic and Reconstructive Surgery at the Hospital for Sick Children in Toronto, Canada. He has developed and popularized new surgical operations in corneal neurotization, a treatment for neurotrophic keratopathy, a rare cause of blindness caused by lack of nerve supply to the cornea, and new ways of improving nerve regeneration. His research laboratory focuses on ways to enhance peripheral nerve regeneration, including drug and growth factor delivery, electrical stimulation, and the cellular and molecular mechanisms governing neurotrophic keratopathy and corneal neurotization.

He has published 180 original peer-reviewed publications, four textbooks in Plastic Surgery, and dozens of book chapters. He has served as primary supervisor for several graduate students and postdoctoral fellows in nerve regeneration research. These students have won dozens of international, national and local awards, fellowships, competitions and prizes for their research in nerve regeneration.

His research sponsors have included the National Institutes of Health (NIH), the US Department of Defense, Canadian Institutes for Health Research, the Natural Sciences

and Engineering Research Council of Canada, the Canada Foundation for Innovation, the Moebius Syndrome Foundation, and the Foundation for Fighting Blindness.

He completed formal leadership and management training in a one-year intensive course jointly administered by the Hospital for Sick Children and the University of Toronto Rotman School of Management.

He has received awards including the American Association of Plastic Surgeons Research Achievement Award for Basic Science Research, the American Association of Plastic Surgeons Academic Scholar Award, the C. James Carrico Faculty Research Award by the American College of Surgeons, and the University of Toronto Department of Surgery George Armstrong Peters Prize “for outstanding academic productivity in research, the highest honour that the Department can bestow upon a young surgeon.” Dr. Borschel was elected President of the American Society for Peripheral Nerve (ASPN) for 2021 and as an emergency measure was reappointed by the executive committee for a second term ending in 2022. He was elected Chair of the Plastic Surgery Research Council (PSRC) for 2020 and was reappointed by board as Chair for a second term until 2022. He received the 2025 Research Achievement Award for Clinical Research by the American Association of Plastic Surgeons (AAPS). He has also been issued multiple patents from the US Patent and Trade Office and the European Patent Office for his inventions that enhance nerve regeneration.

## 1. EDUCATION

### Degrees

1993 - 1997	MD, The Johns Hopkins University, Baltimore, United States
1989 Sep - 1993 Jun	BS, Chemistry; BS, Biology, Emory University, Atlanta, Georgia, United States Postgraduate, Research and Specialty Training

### Training (Residency, Fellowships and Certificates)

2012 Jul 1 - 2013 Jun 30	Rotman / SickKids Executive Partners in Leadership Program, University of Toronto Rotman School of Management, Toronto, Ontario, Canada, Supervisor(s): Brian Golden
2005 - 2006	Pediatric Plastic Surgery Clinical Fellowship, Fellow, Plastic and Reconstructive Surgery, The Hospital for Sick Children / The University of Toronto, Toronto, Ontario, Canada

2003 - 2005	Integrated Plastic Surgery Residency (PGY 5-6), Plastic and Reconstructive Surgery, University of Michigan, Ann Arbor, United States
2001 - 2003	Postdoctoral Research Fellowship within the Functional Tissue Engineering Laboratory and the Muscle Mechanics Laboratory, University of Michigan, Ann Arbor, United States
1997 - 2001	Integrated Plastic Surgery Residency (PGY 1-4), Plastic and Reconstructive Surgery, University of Michigan, Ann Arbor, Michigan, United States

#### Qualifications, Certifications and Licenses

2022 Oct 12	Kenya Medical License 014815 (exp 13 Nov 2022)
2020 Oct – pres	Indiana State Medical License 01084699A exp 10/31/2025
2020 Oct – pres	DEA FB9835286 Exp 7/31/2026
2009 Aug – 2021	Physician and Surgeon, College of Physicians and Surgeons of Ontario, Canada, License / Membership #: 83414
2009 - present	Fellow, American College of Surgeons, United States
2008 - present	Specialty Fellow, Section on Plastic and Reconstructive Surgery, American Academy of Pediatrics, United States
2008 - 2009	Associate Fellow, American College of Surgeons, United States, License / Membership #: 03072070
2007 Nov - present	Diplomate, American Board of Plastic Surgery, Inc. United States, License / Membership #: 7215
2006 Jul - 2010 Jan	Missouri Board for the Healing Arts, United States, License / Membership #: 2006022544
2005 Jul - 2006 Jun	College of Physicians and Surgeons of Ontario, Toronto, Ontario, Canada, License / Membership #: 83414
2000 Jun - 2007 Jan	Physician License, Michigan Board of Medicine, United States, License / Membership #: 4301069916
1998 May	Passed Step III, United States Medical Licensing Examination, United States
1997 Mar	Passed Step II, United States Medical Licensing Examination, United States

1995 Sep	Passed Step I, United States Medical Licensing Examination, United States
2009 Jul	DEA exp. July 31, 2009, License / Membership #: BB6774752
2009 Jun	BNDD, United States, License / Membership #: 802765128

## 2. EMPLOYMENT

### Current Appointments

2020 Nov – pres	James Joseph Harbaugh, Jr., Professor of Plastic Surgery, Indiana University; Indianapolis, Indiana, USA
2021 Jan – pres	Chief of Plastic Surgery, Riley Hospital for Children at Indiana University Health, Indianapolis, Indiana, USA
2022- pres	Professor, Department of Ophthalmology, Indiana University (cross appointment)
2020 – pres	Faculty, Indiana Center for Regenerative Medicine and Engineering

### Previous Appointments

2014 Jun - 2019 Jun	Research Director, Division of Plastic and Reconstructive Surgery, Plastic and Reconstructive Surgery, University of Toronto, The Hospital for Sick Children, Toronto, Ontario, Canada
2018 Apr – 2020	Associate Professor (Cross-Appointment), Department of Ophthalmology and Vision Science, Faculty of Engineering, University of Toronto, Toronto, Ontario, Canada
2013 Apr – 2020	Associate Professor (Cross-Appointment), Institute of Biomaterials and Biomedical Engineering, Faculty of Engineering, University of Toronto (IBBME), Toronto, Ontario, Canada
2013 Apr – 2020	Associate Professor, Division of Plastic and Reconstructive Surgery, Surgery, University of Toronto, Toronto, Ontario, Canada
2012 Feb - 2020	Director, Undergraduate Medical Education, Plastic and Reconstructive Surgery, University of Toronto, The Hospital for Sick Children, Toronto, Ontario, Canada
2009 Nov - 2021	Associate Scientist, Neuroscience, The Hospital for Sick Children Research Institute, Toronto, Ontario, Canada

## *HOSPITAL*

2009 Jul – 2020 Oct	Staff Surgeon, Division of Plastic and Reconstructive Surgery, The Hospital for Sick Children, Toronto, Ontario, Canada
2008 Jan - 2009 Jun	Staff Surgeon, Barnes-Jewish West County Hospital, St. Louis, Missouri, United States
2007 Jan - 2009 Jun	Staff surgeon, Shriner's Hospitals for Children, St. Louis, Missouri, United States
2006 Jul - 2009 Jun	Active Staff, Saint Louis Children's Hospital, St. Louis, Missouri, United States
2006 Jul - 2009 Jun	Active Staff, Barnes-Jewish Hospital, St. Louis, Missouri, United States

## *UNIVERSITY - CROSS APPOINTMENT*

2009 Dec - 2013 Apr	Assistant Professor (Cross-Appointment), Institute of Biomaterials and Biomedical Engineering, Faculty of Engineering, University of Toronto (IBBME), Toronto, Ontario, Canada
2006 Jul - 2009 Jun	Affiliate Faculty, Department of Biomedical Engineering, Washington University in St. Louis, St. Louis, Missouri, United States

## *UNIVERSITY – RANK (Previous)*

2009 Jul - 2013 Apr	Assistant Professor, Division of Plastic and Reconstructive Surgery, Surgery, University of Toronto, Toronto, Ontario, Canada
2008 Jul - 2009 Jun	Assistant Professor, Division of Plastic and Reconstructive Surgery, Department of Surgery, Washington University in St. Louis, St. Louis, Missouri, United States
2006 Jul - 2008 Jun	Instructor, Division of Plastic and Reconstructive Surgery, Department of Surgery, Washington University in St. Louis, St. Louis, Missouri, United States

## **2. HONOURS AND CAREER AWARDS**

Distinctions and Research Awards  
*INTERNATIONAL / NATIONAL*

2025 May	<b>2025 Visiting Professor.</b> American Association of Plastic Surgeons (AAPS)
2025 May	<b>2025 Research Achievement Award for Basic Science Research.</b> American Association of Plastic Surgeons (AAPS) 103 <sup>rd</sup> Annual Meeting, Austin, Texas, May 25, 2025. The AAPS Research Achievement Award for Basic Science honors one investigator per year. The recipient is utilized as AAPS Visiting Professor the following year.
2025 Apr	<b>2025 Editor's Choice Award, <i>Biomaterials</i>.</b> Biohacking Nerve Repair: Novel Biomaterials, Local Drug Delivery, Electrical Stimulation, and Allografts to Aid Surgical Repair. Editor's Choice articles are based on recommendations by the scientific editors of MDPI journals from around the world. Editors select a small number of articles recently published in the journal that they believe will be particularly interesting to readers, or important in the respective research area. The aim is to provide a snapshot of some of the most exciting work published in the various research areas of the journal.
2025 June	<b>Most cited paper published in 2023 in the <i>Journal of Brachial Plexus and Peripheral Nerve Injury</i>.</b> For: Gross JN, Dawson SE, Wu GJ, Loewenstein S, Borschel GH, Adkinson JM. Outcomes after Anterior Interosseous Nerve to Ulnar Motor Nerve Transfer. <i>J Brachial Plex Peripher Nerve Inj.</i> 2023 Jan 11;18(1):e1-e5.
2022 Aug	<b>Visiting Professor:</b> Division of Plastic Surgery. Geneva University Hospital and University of Geneva (Hôpitaux Universitaires Genève et Université de Genève)
2022	<b>President,</b> American Society for Peripheral Nerve (second term, appointed by Executive Committee)
2022	<b>Chair,</b> Plastic Surgery Research Council (second term, appointed by Executive Committee)
2021	<b>President,</b> American Society for Peripheral Nerve
2020	<b>Chair,</b> Plastic Surgery Research Council (PSRC)

2017	<b>Plastic Surgery Foundation (PSF) Visiting Professor</b>
2015 Dec	<b>Cum Laude Award</b> , Radiological Society of North America, Chicago, Illinois, United States. (Educational Exhibit) MRI of Thoracic Outlet Syndrome in Children.
2012 Aug	<b>Visiting Professorship</b> , Departments of Biochemistry and Psychiatry, University of Texas Southwestern Department of Biochemistry, Dallas, Texas, United States. (Visiting Professor) <i>Visiting with students and professors of various disciplines, lecturing on nerve regeneration, clinical problems in nerve injury, and possible pharmacological solutions including our recent data.</i>
2010 Jul	<b>Leaders Opportunity Fund</b> , University of Toronto. (Research Award)
2009 - 2012	C. James Carrico Faculty Research Fellowship for the Study of Trauma and Critical Care, American College of Surgeons, United States.
2007 - 2009	American Association of Plastic Surgeons Academic Scholars Award, American Association of Plastic Surgeons. (Research Award)

#### **PROVINCIAL / REGIONAL**

##### **Received**

2012 Jul - 2015 Jun	<p><b>Ontario Early Researcher Awards (ERA)</b>, Ministry of Economic Development and Innovation. (Research Award)  <i>The Government of Ontario announced the winners of Round VIII of the Ontario Early Researcher Awards (ERA), Monday, April 30 2012. SickKids is home to two of the awardees this year. Drs. Gregory Borschel and Uri Tabori of SickKids were among the 28 winners in the GTA recognized by the Honourable Brad Duguid, Minister of Economic Development and Innovation at an event at the University of Toronto.</i></p> <p><i>Dr. Gregory Borschel, Associate Scientist, Physiology &amp; Experimental Medicine and Plastic Surgery. Total Amount: 150,000 CAD</i></p>
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LOCAL  
Received

- 2024 Oct                    **Resident and Fellow Best Teacher Award.** Indiana University Department of Surgery Educational Award for excellence in teaching residents and fellows within the Department of Surgery
- 2023 Oct                    **ICO Idea to Start Up Pitch Competition** (Indiana University Innovation and Commercialization Office) \$5000, with Brooke Stephanian and Sabin Karki; Development of corneal aesthesiometer device.
- 2021 Jun                    **The Ronald M Zuker, MD Award:** University of Toronto, Department of Surgery, Toronto, Ontario, Canada.  
*To recognize the values of collaboration, Innovation, and Global Impact. University of Toronto Department of Surgery, Division of Plastic Surgery*
- 2021 Jan - pres           **James Harbaugh, Jr. Professorship in Plastic Surgery:** Riley Hospital for Children and Indiana University Department of Surgery
- 2014 May                    **George Armstrong Peters Prize,** Principal Investigator, University of Toronto, Department of Surgery, Toronto, Ontario, Canada. (Research Award, Specialty: Plastic and Reconstructive)  
*This is awarded to a young investigator who has shown outstanding productivity during his/her initial period as an independent investigator as evidenced by research publications in peer reviewed journals, grants held, and students trained and represents the highest level of recognition that can be bestowed by the Department of Surgery on a young surgeon.*
- 2010 Jan - 2013 Jan      **Foundation Award for Research Neuroscientist,** Collaborator, SickKids Foundation, Toronto, Ontario, Canada. (Research Award, Specialty: Plastic and Reconstructive Surgery)  
*Total Amount: 30,000 CAD*



OTHER  
Received

2014 Jul - 2015 Jun	Allergan Prize for Basic Science Research, The Hospital for Sick Children, Toronto, Ontario, Canada. (Research Award)
2009 May	<b>Outstanding Service Award</b> , Cameron's Smile Brachial Plexus Palsy Support Network, St. Louis, Missouri, United States. <i>for dedication to improving the lives of children with brachial plexus palsy.</i>
2009 Jan	<b>Research Award</b> , American Society for Peripheral Nerve, Maui, Hawaii, United States.
2009	<b>Fellow</b> , American College of Surgeons, United States.
2008	<b>Specialty Fellow</b> , American Academy of Pediatrics, United States.
2007 Jul	<b>KLS Academic Scholarship Award</b> , American Association of Plastic Surgeons, United States. <i>"Controlled Release of Glial Cell Line-Derived Neurotrophic Factor (GDNF) in a Fibrin Based Delivery System to Enhance Sciatic Nerve Regeneration".</i>
2007	<b>Investigator Award, 1st Prize, 2007 PSEF Basic Science Essay Contest.</b> , Plastic Surgery Educational Foundation, United States. <i>A Paradigm Shift from Sensory to Motor Nerve Grafting to Improve Nerve Regeneration. Moradzadeh A, Borschel GH, Nichols CM, Hunter DA, Mackinnon SE.</i>
2006	<b>Josie Walther Memorial Award</b> , The Hospital for Sick Children, Toronto, Canada. <i>for Basic Science Research, The Hospital for Sick Children 2006 Annual Surgical Services Laboratory and Clinical Science Research Competition.</i>
2005	<b>Best Research Paper Award</b> , ASPS/PSEF Plastic Surgery Senior Residents Conference, Houston, Texas, United States.
2005	<b>James A. Crudup Senior Resident Research Award</b> , University of Michigan, Ann Arbor, Michigan, United States. <i>Moses Gunn Annual Research Conference, Department of Surgery.</i>
2005	<b>Micrins Microsurgical Award</b> , University of Michigan, Ann Arbor, Michigan, United States.

*for outstanding basic science presentation, 17th Annual Reed O. Dingman Meeting, Section of Plastic Surgery.*

- 2004      **Award for First Place, Plastic Surgery Educational Foundation Basic Research Grant**, American Society of Plastic Surgeons Meeting, Philadelphia, Pennsylvania, United States.
- 2004      **Baronio Scholar**, 49th Annual Meeting of the Plastic Surgery Research Council, Ann Arbor, Michigan, United States.  
*(sponsor: William M. Kuzon, Jr., MD., PhD.).*
- 2004      **Outstanding Basic Science Paper**, Michigan Academy of Plastic Surgeons, Mackinac Island, Michigan, United States.
- 2004      **Outstanding Paper Award**, Annual Meeting of the American Society for the Peripheral Nerve, Palm Springs, California, United States.
- 2003      **Micrins Microsurgical Award**, University of Michigan, Ann Arbor, Michigan, United States.  
*for outstanding basic science presentation, 15th Annual Reed O. Dingman Meeting, Section of Plastic Surgery.*
- 2003      **Outstanding Paper Award**, Engineering Tissue Growth International Conference and Exposition, Pittsburgh, Pennsylvania, United States.
- 2002      **Ethel C. Collier Research Fellowship, Department of Surgery**, University of Michigan, Ann Arbor, Michigan, United States.
- 2002      **Outstanding Clinical Paper**, Michigan Academy of Plastic Surgeons, Mackinac Island, Michigan, United States.
- 1992      **Alpha Epsilon Delta Honor Society**, Emory University, Atlanta, Georgia, United States.
- 1992      **Phi Beta Kappa**, Emory University, Atlanta, Georgia, United States.
- 1991      **Barry M. Goldwater Scholarship**, Emory University, Atlanta, Georgia, United States.
- 1991      **Research Fellowship**, Lawrence Livermore National Laboratory, Livermore, California, United States.
- 1991      **William Jones Scholarship, Department of Chemistry**, Emory University, Atlanta, Georgia, United States.
- 1989      **All-State Academic Teams, Cross Country and Track and Field**, State of Indiana, United States.

- 1989                      **H. W. Cox Scholarship**, Emory University, Atlanta, Georgia, United States.
- 1989                      **Kiwanis International Scholarship**, Indianapolis, Indiana, United States.

Student/Trainee Awards  
International

- 2021 Jun                      **Canadian Society of Plastic Surgeons (CSPS) Educational Foundation resident research award, was awarded to Dr. Kevin Zuo.** Title: “Outcomes of Pediatric Dynamic Facial Reanimation after Two Decades” Authors: Kevin Zuo, Ronald Zuker, Emily Ho, Gregory Borschel. Supervisor: Dr. Gregory Borschel.
- 2020 Feb                      **Allergan Medical Canada Prize for Best Basic Science Award, 2020, was awarded to Dr. Kevin Zuo.** Title: “Local FK506 (Tacrolimus) Drug Delivery Enhances Nerve Regeneration Through Unprocessed Fresh Nerve Allografts” Authors: Kevin Zuo, Gola Shafa, Katelyn Chan, Jennifer Zhang, Kasra Tajdaran, Tessa Gordon, Gregory Borschel. Supervisor: Dr. Gregory Borschel.
- 2019 May                      **The Hospital for Sick Children Perioperative Services Summer Undergraduate Research Award winner**, Marina Manoraj, for her project “Local delivery of FK506 to enhance nerve regeneration”
- 2019 Aug                      **Undergraduate Summer Research Award (USRA) winner** for the Institute of Biomaterials and Biomedical Engineering at the University of Toronto, Marina Manoraj, Summer student
- 2018 Oct                      **Best Presentation Award in the Research. “Corneal Neurotization Prevents Corneal Ulceration and Preserves Vision in a Rat Model of Neurotrophic Keratopathy”** American Society of Plastic Surgeons. Chicago, Illinois, United States. Student Awardee Name: Joseph Catapano

2018 July	<b>SURP (Summer Undergraduate Research Position) winner</b> for the Institute Medical Sciences at the University of Toronto, Marina Manoraj, undergraduate research student
2018 Oct	<b>2018 Postgraduate Research Award. Edward Christie Stevens Fellowships in Medicine, The William S. Fenwich Research Fellowship and the Nellie L. Farthing Fellowship Award. The University of Toronto, Department of Surgery.</b> Toronto, Ontario, Canada. Student Awardee Name: Kevin Zuo. Award \$14,000.76
2018 July	<b>Ontario Graduate Scholarship Award. The University of Toronto.</b> Toronto, Ontario, Canada. Student Awardee Name: Katelyn Chan. Award \$5,000.00 (three consecutive terms)
2018 July	<b>Ontario Graduate Scholarship Award. The University of Toronto.</b> Toronto, Ontario, Canada. Student Awardee Name: Kira Antonyshyn. Award \$5,000.00 (three consecutive terms)
2018 May	<b>School of Graduate Studies Conference Grant. The University of Toronto.</b> Toronto, Ontario, Canada. Student Awardee Name: Kira Antonyshyn. Grant: \$730.00 CAD
2018 May	<b>Gallie Day. University of Toronto, The Hospital for Sick Children.</b> Toronto, Ontario, Canada. Student Awardee Name: Kasra Tajdaran and Katelyn Chan. Oral presentation: A novel local FK506 delivery system for improvement of axon regeneration after surgical peripheral nerve repair.
2018 May	<b>Gallie Day. University of Toronto, The Hospital for Sick Children.</b> Toronto, Ontario, Canada. Student Awardee Name: Joseph Catapano. Oral presentation: Corneal neurotization prevents corneal ulceration and preserves vision in a rat model of neurotrophic keratopathy. First prize for exceptional talk, Surgical Scientist Training Program.
2018 May	<b>Perioperative Service Research Clinical Competition Award, The Hospital for Sick Children.</b> Toronto, Ontario, Canada. Student Awardee Name: Kevin Zuo. Brief Electrical Stimulation Enhances Axon Regeneration through a Nerve Graft. Josie Walther Memorial Fund.
2018 May	<b>Clifford Snyder Past Chairman's Award. Plastic Surgery Research Council Meeting.</b> Birmingham, Alabama, United States. Student Awardee Name: Joseph Catapano. Best Plastic Surgery Resident Award Presentation

2018 Apr	<p><b>Scientist Training Program Scholarship. Department of Surgery, University of Toronto.</b> Toronto, Ontario, Canada. Student Awardee Name: Kevin Zuo. James and Mari Rutka Surgeon Scientist Training Program Scholarship. \$30,000.00</p>
2018 Mar	<p><b>Institute of Biomaterials and Biomedical Engineering. University of Toronto.</b> Toronto, Ontario, Canada. Director's Kickstarter Award. Student Awardee Name: Katelyn Chan. Electrospun Nanofiber System to Deliver Localized and Sustained FK506 for Enhancement of Peripheral Nerve Regeneration. \$12,700.00 CAD</p> <p>2018 Mar <b>Restracomp.</b> Student Awardee Name: Kevin Zuo. \$40,000.00</p> <p>2018 Feb <b>Rare Disease Foundation.</b> Student Awardee Name: Kevin Zuo. Long term outcomes of unilateral facial reanimation. \$5000.00 CAD</p>
2017 Jul	<p><b>Best Basic Research Paper Award,</b> Plastic and Reconstructive Surgery, Student, Awardee Name: Tajdaran, Kasra. American Society for Peripheral Nerve Annual Meeting, Waikoloa, Hawaii, United States. Best Basic Research Paper on "A Novel Local FK506 Delivery System Results in Excellent Nerve Regeneration in Rats".</p>
2017 May	<p><b>Resident Clinical Paper Award.</b> Co-supervisor, Awardee Name: Joseph Catapano (Resident). 62nd Annual Meeting of the Plastic Surgery Research Council, Durham, North Carolina. Project title: "Documentation of improved ocular surface health after corneal neurotization and reinnervation using magnetoencephalography and histology".</p>
2014 Jun	<p><b>Ron Jans Clinical Cornea Research Award,</b> Supervisor, Awardee Name: Uri Elbaz (Fellow). Canadian Ophthalmological Society Meeting, Halifax, Nova Scotia, Canada  <i>"Restoration of corneal sensation with regional nerve transfers and nerve grafts: a new approach to a difficult problem"</i>. Total Amount: 1,000 CAD</p>
2014 Jan	<p><b>Resident Clinical Paper Award,</b> Co-supervisor, Awardee Name: Joseph Catapano (Resident). American Society for Peripheral Nerve Annual Meeting, Nassau, Bahamas. For best resident project. Project title: "Corneal reinnervation: a minimally invasive approach".</p>

2014 Nov	<p><b>Women's Microsurgery Group ViOptix Travel Scholarship</b>, Student, American Society for Reconstructive Microsurgery, United States. (Student Travel Scholarship, Siba Hykal; Specialty: Plastic and Reconstructive Surgery)</p>
2015 Jan	<p><b>2015 Resident Clinical Paper Award / American Society for Peripheral Nerve</b>, Plastic and Reconstructive Surgery, Supervisor, Awardee Name: Catapano, Joseph. The Hospital for Sick Children, United States</p>
2015 Jan	<p><b>Best Clinical Paper Award 2015 for "Corneal Neurotization: A Minimally Invasive Approach (Catapano J, Elbaz U, Ali A, Zuker R, Borschel GH)</b>, Faculty Supervisor, Awardee Name: Joseph Catapano. American Society for Peripheral Nerve, United States</p>
2013 Aug	<p><b>Transplant Society Young Investigator Award</b>, Plastic and Reconstructive Surgery, Awardee Name: McClelland, Brett. Division of Plastic Surgery, University of Toronto, Toronto, Ontario, Canada</p>
2013 Feb	<p><b>Editors' Choice selection</b>, Awardee Name: Wood, Matthew. Scientific, Technical, Medical, and Scholarly Biotechnology and Bioengineering Journal, Toronto, Ontario, Canada</p> <p><i>Article: Functional motor recovery is improved due to local placement of GDNF microspheres after delayed nerve repair has been chosen as an Editors' Choice selection. Publications in this category are either Articles or Communications to the Editor that B&amp;B editors feel will likely have a high impact in the field due to the quality and innovative nature of the research. This article will appear in our Features section in an upcoming issue.</i></p>
2012 May - 2013 May	<p><b>Outstanding paper chosen to speak at EURAPS clinical meeting</b>, Plastic and Reconstructive surgery, Supervisor, Awardee Name: Eva Placheta. EURAPS (European Association of Plastic Surgeons) Research Council, Germany</p> <p><i>Total Amount: 400 EUR</i></p>
2012 Jan	<p><b>Best Basic Science Research Paper of the 2012 Annual Meeting of the American Society for Peripheral Nerve.</b>, Supervisor, Awardee Name: Matthew D. Wood, MD. American Society for Peripheral Nerve, Las Vegas, Nevada, United States</p> <p><i>The Duration of GDNF Release Affects Nerve Regeneration Following Delayed Nerve Repair. The American Society for Peripheral Nerve, Las Vegas, Nevada, United States. Wood, Matthew, Gordon T, Weber C, Phua P, Borschel, Gregory H.</i></p>

- 2011 Oct      **Best Basic Science Research Paper of the 2011 Chang Gung Memorial Hospital Symposium in Reconstructive Surgery**, Supervisor, Awardee Name: Alison Snyder-Warwick. Chang Gung Memorial Hospital Symposium in Reconstructive Surgery, Taipei, Taiwan, Province of China  
*Axonal Counts in Free Muscle Transfer for Facial Paralysis. Chang Gung Mayo Clinic Symposium in Reconstructive Surgery, Taipei, Taiwan, Province of China. Presenter(s): Alison Snyder-Warwick, MD, William Halliday, MD, Gregory H. Borschel MD, FACS, FAAP, Ronald M Zuker, MD, FACS, FAAP.*
- 2009 Aug      **Invited speaker in recognition of the Clifford C. Snyder, M.D. Past Chairman's Award for Best Resident Presentation**, Faculty mentor, Awardee Name: Amy M. Moore, M.D. 1st Annual Meeting of the European Plastic Surgery Research Council, Hamburg, Germany  
*at the annual meeting of the Plastic Surgery Research Council.*
- 2009 Jun      **James Barrett Brown 13th Annual Resident Research Day Award for Best Basic Science Paper**; Faculty mentor, Awardee Name: Amy M. Moore, M.D. Division of Plastic and Reconstructive Surgery, Washington University in St. Louis, St. Louis, Missouri, United States  
*Presented to the plastic surgery resident or fellow presenting the best basic science paper at the James Barrett Brown 13th Annual Resident Research Day.*
- 2009 Jun      **James Barrett Brown 13th Annual Resident Research Day Award for Best Clinical Science Paper; Division of Plastic and Reconstructive Surgery**, Faculty mentor, Awardee Name: Amy M. Moore, M.D. Washington University in St. Louis, St. Louis, Missouri, United States  
*"A Transgenic Rat Expressing Green Fluorescent protein (GFP) in Peripheral Nerves: A New Model for the study of Peripheral nerve Injury and Regeneration".*
- 2009 Apr      **Finalist, The 32nd Annual James L. O'Leary Prize for Research in Neuroscience, Department of Neurology**, Faculty mentor, Awardee Name: Amy M. Moore, M.D. Washington University in St. Louis, St. Louis, Missouri, United States
- 2009      **Clifford C. Snyder, M.D. Past Chairman's Award for Best Resident Presentation**, Faculty mentor, Awardee Name: Amy M. Moore, M.D. 54th Annual Meeting of the Plastic Surgery Research Council, Pittsburg, Pennsylvania, United States

*Presented to the plastic surgery resident or fellow presenting the best paper at the annual meeting of the Plastic Surgery Research Council.*

- 2009                    **Finalist, Tenth Annual Samuel A. Wells, Jr., Resident Research Day Award, Department of Surgery**, Faculty mentor, Awardee Name: Amy M. Moore, M.D. Washington University in St. Louis, St. Louis, Missouri, United States
- 2008 Dec             **First place, Department of Biomedical Engineering, First place, Senior Design Competition**, Faculty mentor, Awardee Name: Yewande Alimi, Lauren Brilli, & Zoe Julian. Washington University in St. Louis, St. Louis, Missouri, United States  
*faculty mentor for BME undergraduate students.*
- 2008 Jun             **James Barrett Brown 12th Annual Resident Research Day Award for Best Basic Science Paper, Washington University in St. Louis**, Faculty mentor, Awardee Name: David Kawamura, M.D. Washington University in St. Louis, St. Louis, Missouri, United States

NATIONAL  
Received

- 2025 Oct             **American Society for Surgery of the Hand 80<sup>th</sup> Annual Meeting, Resident Scholarship**, awarded to Nikhi Singh, MD; Vancouver, British Columbia, Canada, October 9-11, 2025
- 2025 May             **Best Clinical Science Paper.** Long-Term Corneal Neurotization Impacts on Visual Acuity and Sensation in the Treatment of Neurotrophic Keratopathy. Jordan Crabtree, B.S, Charline Boente, MD, Khoa Tran, MPH, Asim Ali, MD, Gregory Borschel, MD. 2025 Annual Meeting of the Ohio Valley Society of Plastic Surgeons, Greenbrier, West Virginia, May 17, 2025
- 2025 May             **Best Basic Science Paper.** NGF Signaling in Innervation-dependent Corneal Epithelial Renewal: A Novel Approach to Neurotrophic Keratopathy Treatment. Arif Hussain, MD, Kaveh Mirmoeini, MD, Chilando Mulenga, B.S, Jordan Crabtree, B.S, Kiana Tajdaran, MD, Noam Blum, B.S, Ruby Shalom-Feuerstein, PhD, Gregory Borschel, MD, Konstantin Feinberg, PhD. 2025 Annual Meeting of the Ohio Valley Society of Plastic Surgeons, Greenbrier, West Virginia, May 17, 2025
- 2025 May             **American Association of Plastic Surgeons 103rd Annual Meeting, 2025 KLS Martin/Bien Air Craniofacial Resident**



**Scholarship**, awarded to Rafaella Genova, Austin, Texas, May 24-27, 2025

- 2025 May      **Ocular Neurobiology, Stark Neurosciences Research Institute Award** for Travel to Association for Research in Vision and Ophthalmology 2025 Annual Meeting, Salt Lake City, Utah, USA; Award to Arif Hussain for "The impact of innervation on corneal wound healing and homeostasis"
- 2025 January      **ASPN Best Paper Award:** Long-term sensory and visual clinical outcomes following corneal neurotization. Jordan Crabtree. 2025 Annual meeting of the American Society for Peripheral Nerve (ASPN), Waikoloa, Big Island of Hawaii, USA
- 2024 May      **Top Scoring Abstract: Plastic Surgery Research Council.** The Mechanism of NGF Signaling in Innervation-dependent Corneal Epithelial Renewal: New Topical Treatment For Neurotrophic Keratopathy Arif Hussain, MD, Kaveh Mirmoeini, MD, Chilando Mulenga, B.S, Jordan Crabtree, B.S, Kiana Tajdaran, MD, Mario Henrique, B.S, Noam Blum, B.S, Ruby Shalom-Feuerstein, PhD, Gregory Borschel, MD, Konstantin Feinberg, PhD. 69<sup>th</sup> Annual Meeting of the Plastic Surgery Research Council, Boston, MA
- 2014 Jun - 2014 Jul      **The Ron Jans Clinical Cornea Research Award (The 2014 Award is given to Uri Elbaz et al, Restoration of corneal sensation with regional nerve transfers and nerve grafts: a new approach to a difficult problem)**, Plastic and Reconstructive Surgery / Ophthalmology, Supervisor, Awardee Name: Uri Elbaz (clinical fellow, Ophthalmology). Canadian Ophthalmological Society, Halifax, Nova Scotia, Canada  
*Established in 2010, this Award is named in honour of Dr. Ronald G. Jans, a specialist in corneal and external diseases of the eye, who passed away on May 9, 2009. Dr. Jans had performed refractive corneal surgery for more than 20 years, and was instrumental in obtaining the first VISX Excimer laser in Calgary and the second in Canada. Total Amount: 3,000*
- 2012 Jun      **Best paper award**, Faculty supervisor, Awardee Name: Dr. Alison Snyder-Warwick. Canadian Society of Plastic

Surgeons, Canada

*Dr. Alison Snyder-Warwick (Fellow, The Hospital for Sick Children): "Functional outcomes in facial reanimation: Comparison of innervation sources" (Supervisors Drs. Zuker and Borschel).*

2012 Jun

**Outstanding poster award by new trainee**, Faculty supervisor, Awardee Name: Edward Liu. 4th Canadian National Medical Student Research Symposium June 12-14, 2012 at the University of Manitoba, Canada

#### **PROVINCIAL / REGIONAL**

##### Received

2017 Apr

**Graduate Scholarship**, Plastic and Reconstructive Surgery, Student, Awardee Name: Zuo, Kevin. Canadian Institute for Health Research, Toronto, Ontario, Canada  
Graduate Scholarship.

2012 Jul - 2013 Jul

**Faculty supervisor**, Awardee Name: Cecilia Alvarez Veronesi. 2012-2013 Ontario Graduate Scholarship (OGS), Ontario, Canada  
*Graduate student funding award. Total Amount: 15,000 CAD*

2012 Jul - 2013 Jun

**2012-2013 Ontario Graduate Scholarship (OGS)**, Supervisor, Awardee Name: Cecilia Alvarez Veronesi. Ontario Graduate Scholarship, Ontario, Canada  
*Total Amount: 15,000 CAD*

#### **LOCAL**

##### Received

2025 Feb

**Indiana University Division of Plastic Surgery Annual JJ Coleman Research Day Award for Best Student Presentation. Indianapolis, Indiana** Awardee: Jordan Crabtree BS | Long-term sensory and visual clinical outcomes following corneal neurotization | Jordan R Crabtree BS, Khoa Tran MPH, Arif Hussain MD, Konstantin Feinberg PhD, Asim Ali, MD, Gregory H Borschel MD

2024 Jan

**Indiana University Division of Plastic Surgery Annual JJ Coleman Research Day Award for Best Basic Science Presentation. Indianapolis, Indiana** Title: "The Mechanism Of Nerve Growth Factor Signaling In Innervation-dependent

Corneal Epithelial Renewal: New Topical Treatment For Neurotrophic Keratopathy” Arif Hussain MD<sup>1</sup> Kaveh Mirmoeini MD<sup>2</sup>, Chilando Mulenga BS<sup>1</sup>, Jordan Crabtree BS<sup>1</sup>, Kiana Tajdaran MD<sup>2</sup>, Mario Henriquez BS<sup>1</sup>, Noam Blum BS<sup>3</sup>, Ruby Shalom-Feuerstein PhD<sup>3</sup>, Gregory Borschel MD<sup>1</sup>, Konstantin Feinberg PhD<sup>1</sup>

- 2023 May      **The Indiana University Department of Surgery resident research award** was awarded to Dr. Jeff Gross. Title: “The Role of Early Latissimus Dorsi Tendon Transfer for Shoulder Movement in Neonatal Brachial Plexus Injury.” Supervisors Gregory Borschel and Joshua Adkinson
- 2017 Nov      **Barbara and Frank Milligan Award.** Awardee Name: Kevin Zuo. Recognition through an internal ranking by IBBME. *Total Amount: \$5,460.*
- 2017 May      **Gallie Day 2017, SSTP Oral Presentation Award.** Awardee Name: Joseph Catapano (SSTP), Simon Fung, Asim Ali, Cecilia Jobst, Douglas Cheyne, Ronald Zuker, Gregory Borschel (Supervisor: Gregory H. Borschel): “Corneal neurotization: A novel surgical procedure to restore sensation and preserve vision in patients with neurotrophic keratopathy”
- 2017 Feb      **Surgical Alumni Fellowship in Surgical Science Award,** Plastic and Reconstructive Surgery, Student, Awardee Name: Catapano, Joseph. Department of Surgery, University of Toronto, Toronto, Ontario, Canada  
Total Amount: 5,800 CAD
- 2016 Aug      **Faculty Supervisor,** Awardee Name: Mark Shafarenko. Institute of Medical Science, University of Toronto, Ottawa, Ontario, Canada  
Second Place, Institute of Medical Science SURP Research Day 2016.
- 2016 Aug      **Best Podium Presentation,** Faculty Supervisor, Awardee Name: Katelyn Chan. Institute of Biomaterials and Biomedical Engineering, University of Toronto, Ottawa, Ontario, Canada  
Second Place for best podium presentation at the Undergraduate Engineering Research Day 2016, in the Materials and Biomaterials Division.
- 2016 Aug      **Best Poster Presentation Day,** Faculty Supervisor, Awardee Name: Katelyn Chan. Institute of Biomaterials and Biomedical Engineering, University of Toronto, Ottawa, Ontario, Canada

First Place for best poster presentation at the Undergraduate Research Summer Program poster day.

- 2016 Feb      **Best Basic Science Presentation Award**, Plastic and Reconstructive Surgery, Supervisor, Awardee Name: Joseph Catapano. University of Toronto, Toronto, Ontario, Canada  
Division of Plastic and Reconstructive Surgery Award for Best Basic Science. Total Amount: 500 CAD
- 2015 Nov      **Samuel Wigdor Medical Scholarship**, Faculty Supervisor, Awardee Name: Steven A. Hanna. Queen's University School of Medicine, Ottawa, Ontario, Canada  
*Medical Student Award. Total Amount: 2,500 CAD*
- 2015 Sep      **Albert Clark Award for Medical Student Research Excellence**, Faculty Supervisor, Awardee Name: Steven A. Hanna. Queen's University School of Medicine, Ontario, Canada  
*Medical Student Research Showcase, HAMC project.*
- 2015 Jul      **Edward Christie Stevens Fellowships in Medicine**, Faculty Supervisor, Awardee Name: Joseph Catapano. University of Toronto, Faculty of Medicine, Department of Surgery, Toronto, Ontario, Canada  
*Medical Student Award. Total Amount: 2,800 CAD*
- 2015 Jul      **Hilda and William Courtney Clayton Paediatric Research Fund**, Plastic and Reconstructive Surgery, Student, Awardee Name: Joseph Catapano. The University of Toronto, Faculty of Medicine, Toronto, Ontario, Canada  
*Graduate Awards Review Committee of the Faculty of Medicine monetary award. Total Amount: 1,800 CAD*
- 2015 May      **CREMS Summer Program**, Plastic and Reconstructive Surgery, Supervisor, Awardee Name: David Scholl. University of Toronto, Toronto, Ontario, Canada  
*Alexandra Yeo foundation funds. Total Amount: 2,750 CAD*
- 2015 Mar      **2015 Undergraduate Research Opportunity Program Award**, Plastic and Reconstructive Surgery, Supervisor, Awardee Name: Steven A. Hanna, BSc. Institute of Biomaterials and Biomedical Engineering, Toronto, Ontario, Canada  
*Institute of Biomaterials and Biomedical Engineering Undergraduate Summer Research Program Award. Total Amount: 2,400 CAD*
- 2014 Jul - 2015 Jul      **American Society of Peripheral Nerve and Plastic Surgery Foundation Combined Pilot Research Grant**, Plastic and Reconstructive Surgery, Awardee Name:

Catapano, Joseph. American Society of Peripheral Nerve and Plastic Surgery Foundation, Toronto, Ontario, Canada  
*Enhancement of nerve regeneration following neonatal nerve injury. Total Amount: 9,930 CAD*

2014 Jul      **Edward Chrstie Stevens Fellowship**, Plastic and Reconstructive Surgery, Student, Awardee Name: Joseph Catapano. The Universtiy of Toronto, Faculty of Medicine, Toronto, Ontario, Canada  
*Postgraduate Awards Committee at the Faculty of Medicine monetary award. Total Amount: 4,000 CAD*

2014 Jul      **Hilda and William Courtney Clayton Paediatric Research Fund**, Plastic and Reconstructive Surgery, Student, Awardee Name: Joseph Catapano. The University of Toronto, Faculty of Medicine, Toronto, Ontario, Canada  
*Graduate Awards Review Committee of the Faculty of Medicine monetary award. Total Amount: 4,100 CAD*

2014 Jul      **Javenthey Soobbiah Scholarship**, Plastic and Reconstructive Surgery, Student, Awardee Name: Kasra Tajdaran. The University of Toronto, Faculty of Medicine, Toronto, Ontario, Canada  
*Postgraduate Awards Committee at the Faculty of Medicine monetary award. Total Amount: 1,380.88 CAD*

2014 Jul      **Joseph M. West Family Memorial Fund**, Plastic and Reconstructive Surgery, Student, Awardee Name: Joseph Catapano. The University of Toronto, Faculty of Medicine, Toronto, Ontario, Canada  
*Postgraduate Awards Committee at the Faculty of Medicine monetary award. Total Amount: 2,637.5 CAD*

2014 Jul      **Peterborough K. M. Hunter Graduate Studentships**, Plastic and Reconstructive Surgery, Student, Awardee Name: Joseph Catapano. The University of Toronto, Faculty of Medicine, Toronto, Ontario, Canada  
*Peterborough K. M. Hunter Graduate Studentships. Total Amount: 10,000 CAD*

2014 Jul      **SickKids Research Training Competition Funding (Restracomp)**, Plastic and Reconstructive Surgery, Awardee Name: Catapano, Joseph. The Hospital for Sick Children, Toronto, Ontario, Canada  
*Total Amount: 40,000 CAD*

2014 May      **School of Graduate Studies Conference Grant**, Plastic and Reconstructive Surgery, Student, Awardee Name: Joseph Catapano. The University of Toronto, Faculty of Medicine, Toronto, Ontario, Canada

*School of Graduate Studies Conference Grant. Total Amount: 730 CAD*

2014 Apr

**2014 Annual Perioperative Services Research Presentation and Competition and The Josie Walther Memorial Awards**, Plastic and Reconstructive Surgery, Student, Awardee Name: Joseph Catapano. The Hospital for Sick Children, Toronto, Ontario, Canada  
*First Place Winner for Basic Science Research Presentation on Enhancement of nerve regeneration following neonatal nerve injury. Total Amount: 500*

2014 Feb - 2015 Feb

**Canadian Institutes of Health Research Graduate Scholarship**, Plastic and Reconstructive Surgery, Applicant, Awardee Name: Joseph Catapano. University of Toronto, Toronto, Ontario, Canada  
*Canada Graduate Scholarships-Master's Award to the University of Toronto Nominated by departmental selection committee and highly ranked by the School of Graduate Studies. Total Amount: 17,500 CAD*

2014 Feb

**Best Scientific Paper**, Plastic and Reconstructive Surgery, Awardee Name: James Michael Hendry. The Hospital for Sick Children, Toronto, Ontario, Canada  
*University of Toronto Resident Research Day. Presentation "The Monoclonal Antibody Herceptin Improves Nerve Regeneration in a Rat Nerve Transection and Repair Model".*

2013 Jul - 2015

**Physician Services Incorporated, Resident Research Grant (PSI)**, Plastic and Reconstructive Surgery, Awardee Name: Catapano, Joseph. The Hospital for Sick Children, Toronto, Ontario, Canada  
*Total Amount: 20,000 CAD*

2013 Jul

**Hilda and William Courtney Clayton Pediatric Research Fund Award**, Plastic and Reconstructive Surgery, Awardee Name: Catapano, Joseph. The Hospital for Sick Children, Toronto, Ontario, Canada  
*Total Amount: 10,000 CAD*

2013 Jul

**Ministry of Health-Clinician Investigator Program funding**, Plastic and Reconstructive Surgery, Awardee Name: Catapano, Joseph. The Hospital for Sick Children, Toronto, Ontario, Canada  
*Total Amount: 58,000 CAD*

2013 Jul

**Ontario Graduate Student Scholarship**, Plastic and Reconstructive Surgery, Awardee Name: Catapano, Joseph. The Hospital for Sick Children, Toronto, Ontario, Canada  
*Total Amount: 15,000 CAD*

2013 Jun - 2014 Aug	<p><b>Summer Undergraduate Research Program</b>, Plastic and Reconstructive Surgery, Supervisor, Awardee Name: Chiang, Cameron D. Institute of Medical Science, University of Toronto, Toronto, Ontario, Canada  <i>Total Amount: 4,800 CAD</i></p>
2013 May	<p><b>School of Graduate Studies Conference Grant / University of Toronto</b>, Plastic and Reconstructive Surgery, Awardee Name: Alvarez Veronesi, Maria Cecilia. The Hospital for Sick Children, Toronto, Ontario, Canada  <i>The Scholl of Graduate Studies Conference Grant is intended to encourage eligible students to actively present their research at a regional, national or international conference or equivalent academic event within this competition's timeframe (March 1, 2013 – Sept.30, 2013). Total Amount: 700 CAD</i></p>
2013 Apr	<p><b>Best Scientific Poster Award</b>, Plastic and Reconstructive Surgery, Awardee Name: Liu, Edward. McMaster University, Toronto, Ontario, Canada  <i>Best Scientific Poster Award, McMaster Research Day.</i></p>
2013 Jan	<p><b>Comprehensive Research Experience for Medical Students 2011</b>, Plastic and Reconstructive Surgery, Awardee Name: Szykaruk, Mark. University of Toronto, Toronto, Ontario, Canada  <i>Poster winner of Comprehensive Research Experience for Medical Students 2011 category.</i></p>
2012 Sep	<p><b>Clinical Investigator Program</b>, Plastic and Reconstructive Surgery, Awardee Name: Hendry, James Mike. University of Toronto, Toronto, Ontario, Canada  <i>Accredited postgraduate medical education program of the Royal College of Physicians and Surgeons of Canada – awarded full salary support and benefits for first year of study.</i></p>
2012 Sep	<p><b>James F. Crothers Family Fellowship Award</b>, Plastic and Reconstructive Surgery, Awardee Name: Hendry, James Mike. University of Toronto, Toronto, Ontario, Canada  <i>Awarded through the OSOTF and Restricted Awards competition offered through the Faculty of Medicine, Graduate Affairs Office, University of Toronto, \$11000. Total Amount: 11,000 CAD</i></p>
2012 Sep	<p><b>John Edward De Toro Scholarship</b>, Plastic and Reconstructive Surgery, Awardee Name: Hendry, James Mike. University of Toronto, Toronto, Ontario, Canada  <i>Total Amount: 550 CAD</i></p>
2012 Sep	<p><b>Mentor Medical Systems Scholarship</b>, Plastic and Reconstructive Surgery, Awardee Name: Hendry, James</p>

Mike. University of Toronto, Toronto, Ontario, Canada  
*Total Amount: 8,401.52 CAD*

2012 Sep      **Restracomp - Research Training Competition**, Plastic and Reconstructive Surgery, Awardee Name: Hendry, James Mike. The Hospital for Sick Children, Toronto, Ontario, Canada  
*This studentship is supported, fully or in part, by the Ontario Student Opportunity Trust Fund - Hospital for Sick Children Foundation Student Scholarship Program. Total Amount: 40,000 CAD*

2012 Sep      **William S. Fenwick Fellowship**, Plastic and Reconstructive Surgery, Awardee Name: Hendry, James Mike. University of Toronto, Toronto, Ontario, Canada  
*Awarded as part of the 2012-2013 Postgraduate Research Awards competition offered through the dept. of Postgraduate Medical Education, University of Toronto.*

2012 Aug      **Joseph M. West Family Memorial Fund**, Awardee Name: Hendry, James Mike. University of Toronto, Toronto, Ontario, Canada  
*Awarded as part of the 2012-2013 Postgraduate Research Awards competition offered through the dept. of Postgraduate Medical Education, University of Toronto, \$6750.00 awarded in combination with William S. Fenwick Fellowship. Total Amount: 6,750 CAD*

2012 Aug      **Outstanding poster award**, Faculty supervisor, Awardee Name: Krisanne Stanoulis. University of Toronto Institute of medical Science, Toronto, Canada

2012 Aug      **Summer Undergraduate Research Program 2012 Presentation Day (SURP)**, Undergraduate Research Summer Student, Awardee Name: Stanoulis, Krisanne. University of Toronto / Institute of Medical Science Summer Undergraduate Research Program (SURP), Toronto, Ontario, Canada  
*Total Amount: 50 CAD*

2012 Jul      **The John Edward De Toro Scholarship**, Faculty supervisor, Awardee Name: Michael Hendry, Toronto, Ontario, Canada  
*The De Toro family has generously provided this scholarship to recognize plastic surgery residents' research efforts that will have an impact. Total Amount: 500 CAD*

2012 Jan - 2013 Jan      **The role of P7C3/A20 therapy on axonal regeneration and behavioural recovery**, Plastic and Reconstructive Surgery, Supervisor, Awardee Name: Liu, Edward. Canadian



Institutes of Health Research Health Professional Student  
Research Awards, Toronto, Ontario, Canada  
*Total Amount: 4,251 CAD*

- 2012 Jan      **Basic Science Poster Award**, Supervisor, Awardee Name: Szyndkaruk, Mark, BSc. Comprehensive Research Experience for Medical Students (CREMS) at the University of Toronto Faculty of Medicine, Toronto, Ontario, Canada  
*Anatomical, Behavioural and Myological Analysis of the Transgenic Thy1-GFP Rat Following Peripheral Nerve Injury.*  
*Presenter(s): Szyndkaruk, Mark, BSc, Kemp, S.WP., Wood, M.D., Phua, P.D., Stanoulis, K.N., Gordon, T., Borschel, G.H.*
- 2011 Jan - 2012 Dec      **IAMGOLD Fellowship**, Plastic and Reconstructive Surgery, Postdoctoral Fellow, Awardee Name: Stephen Kemp. The Hospital for Sick Children, Physiology & Experimental Medicine, Toronto, Ontario, Canada  
*Total Amount: 40,000 CAD*
- 2010 Nov      **Exceptional Trainee Award 2010**, Research, Postdoctoral Fellow, Awardee Name: Matthew D. Wood. The Hospital for Sick Children Research Institute, Toronto, Ontario, Canada  
*Exceptional Trainee Award 2010 for the Physiology and Experimental Medicine Program.*
- 2010 Jun      **Best Research Paper by a Fellow 2010**, Awardee Name: Abdullah Kattan (faculty mentors Borschel and Clarke). The Hospital for Sick Children Division of Plastic and Reconstructive Surgery
- 2009 Jun      **James Barrett Brown 13th Annual Resident Research Day Award for Best Clinical Science Paper**; Faculty mentor, Awardee Name: David M. Kawamura, M.D. Division of Plastic and Reconstructive Surgery, Washington University in St. Louis, St. Louis, Missouri, United States  
*Presented to the plastic surgery resident or fellow presenting the best clinical science paper at the James Barrett Brown 13th Annual Resident Research Day.*

OTHER  
Received

- 2009 Jun      **James Barrett Brown 13th Annual Resident Research Day Award for Best Clinical Science Paper; Division of Plastic and Reconstructive Surgery**, Faculty mentor, Awardee Name: David Kawamura, M.D. Washington University in St. Louis, St. Louis, Missouri, United States

#### 4. PROFESSIONAL AFFILIATIONS AND ACTIVITIES

##### Professional Associations

2021 - 2022	<b>Chair (President)</b> , Plastic Surgery Research Council (2nd Term)
2021 - 2022	<b>President</b> , American Society for Peripheral Nerve (Second Term)
2020 - 2021	<b>President</b> , American Society for Peripheral Nerve
2019 - 2020	<b>Chair (President)</b> , Plastic Surgery Research Council
2018 - 2019	<b>Chair-Elect</b> , Plastic Surgery Research Council
2019 - 2020	<b>President-Elect (2nd term)</b> , American Society for Peripheral Nerve
2018 - present	<b>Scientific Advisory Board</b> , Mobius Syndrome Foundation
2017 - present	<b>Committee Member</b> , Collaborative Program in Neuroscience (CPIN), University of Toronto, Institute of Biomaterials and Biomedical Engineering and Institute of Medical Science
2015 - 2016	<b>Treasurer</b> , American Society for Peripheral Nerve
2016 - 2017	<b>Treasurer (second term)</b> , American Society for Peripheral Nerve
2017 - 2018	<b>Vice-President</b> , American Society for Peripheral Nerve
2018 - 2019	<b>President-Elect</b> , American Society for Peripheral Nerve
2015 - 2018	<b>Secretary-Treasurer</b> , Plastic Surgery Research Council
2014 Jan - 2015 Jan	<b>Education Committee Member</b> , American Society for Peripheral Nerve
2014 Jan - 2015 Jan	<b>Finance Committee Member</b> , American Society for Peripheral Nerve
2014 Jan - 2015 Jan	<b>Grants Committee Member</b> , American Society for Peripheral Nerve
2011 Jul - 2014 Jan	<b>Editor, Hand and Peripheral Nerve Section</b> , Plastic Surgery Education Network (cooperative venture between plastic surgery societies)
2011 Jan - 2011 Dec	<b>Bylaws Committee Member</b> , American Society for Peripheral Nerve

2011 Jan - 2011 Dec	<b>Program Committee Member</b> , American Society for Peripheral Nerve
2011 Jan - 2011 Dec	<b>Time &amp; Place Committee Member</b> , American Society for Peripheral Nerve
2015 Aug - present	<b>Director of Educational Foundation</b> , Canadian Society of Plastic Surgeons
2015 Jun 8 - present	<b>Member - Active Fellow</b> , American Association of Plastic Surgeons
2015 Jun 5 - present	<b>Program Committee Member, Office of the President</b> , American Association of Plastic Surgeons
2013 Oct 1 - present	<b>Member</b> , American Society for Reconstructive Microsurgery
2011 Apr - present	<b>Member</b> , Society for Neuroscience, 210162729
2010 Dec - present	<b>Co-chair</b> , Tissue Engineering and Regenerative Medicine International Society
2010 Oct - present	<b>Scientific Committee</b> , International Confederation for Plastic Reconstructive and Aesthetic Surgery
2010 Jun - present	<b>Full Member</b> , Canadian Society of Plastic Surgeons
2008 - present	<b>Website committee member, Coding and reimbursement committee member, scientific program committee, membership committee</b> , American Society for Peripheral Nerve
2008 - present	<b>Member</b> , American Society of Plastic Surgeons
2007 - present	<b>Scientific program committee</b> , Plastic Surgery Research Council
2005 - present	Frederick A. Coller Society
2005 - present	Reed O. Dingman Society
2002 - present	Tissue Engineering Society International, 549
2011 Jan	<b>Team Member</b> , Patient Care and Communication Super Task Force
2006 - 2008	American Cleft Palate-Craniofacial Association
2002 - 2008	<b>Resident Member</b> , American Society of Plastic Surgeons
2001 - 2007	<b>Resident Member</b> , Plastic Surgery Research Council

Administrative Activities  
*INTERNATIONAL*

American Society for Peripheral Nerve

2021 Jan - 2022 Jan	President, Second term, by Executive Committee appointment
2020 Jan - 2021 Jan	President
2019 Jan - 2020 Jan	President-Elect
2018 Jan - 2019 Jan	Vice President
2017 Jan - 2018 Jan	Secretary
2016 Jan - 2017 Jan	Treasurer, second term
2014 Jan - 2015 Jan	Treasurer
2014 Jan - 2015 Jan	Program Chair, 2015
2014 Jan - 2015 Jan	Grants Committee
2014 Jan - 2015 Jan	Finance Committee
2013 Jan - 2014 Jan	Historian
2012 Jan - 2013 Jan	Executive Committee (Member at large)
2012 Jan - 2013 Jan	Bylaw Committee
2012 Jan - 2013 Jan	Membership Council Committee
2012 Jan - 2013 Jan	Time and Place Committee,
2012 Jan - 2013 Jan	Bylaw Committee
2011 Jan - 2012 Jan	Executive Committee (Member at large)
2010 Jan - 2011 Jan	Member, Membership Committee, Website Committee

British Medical Research Council

2013 Jul 30 - 2013 Aug 13    Peer Review, United Kingdom.

Deputy Editor, Journal of Plastic, Reconstructive and Aesthetic Surgery

2012 Jul 1 - present            Oxford, United Kingdom.

#### Plastic Surgery Research Council

2021– 2022	President (Chair); second term by executive committee appointment
2019– 2020	President (Chair)
2016 – 2019	Secretary-Treasurer
2011 Apr 24 - 2012 Apr	Scientific Program Committee, Louisville, United States.
2009 May - 2010 May	<b>Member</b> , Scientific Program Committee, Chicago, Illinois, United States.
2009 May - 2010 May	<b>Member</b> , Scientific Program Committee, Chicago, Illinois, United States.

#### TERMIS NA (Tissue Engineering and Regenerative Medicine International Society, North America)

2010 Dec	Session Co Chair, Neuro, United States.
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#### The American Association for Hand Surgery, The American Society for Peripheral Nerve, The American Society for Reconstructive Microsurgery

2014 Jan 11	AAHS, ASPN, ASRM Exhibitory Advisory Committee, Hawaii, United States.
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#### Tissue Engineering Regenerative Medicine International Society, North America

2009 Dec - 2010 Dec	<b>Chair</b> , Scientific Program Committee, Baltimore, Maryland, United States.
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#### NATIONAL

#### American College of Surgeons

2001 - 2008	<b>Member</b> , Candidate Group
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#### The Banting Institute

2012 Jun - 2013	Plastic and Reconstructive Surgery Division Chair Search Committee, Faculty of Medicine, Dept of Surgery, Plastic Surgery, Toronto, Ontario, Canada.
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## LOCAL

### Department of Surgery / Indiana University

2022 - pres                      Dept of Surgery Research Committee

### Department of Surgery / University of Toronto

2013 Feb - 2020              Research Committee, Toronto, Ontario, Canada.

### Division of Plastic Surgery / University of Toronto

2012 Feb - 2020              Executive Committee, Toronto, Ontario, Canada.

### The Hospital for Sick Children

2012 Jul - 2020              The Research Training Center, Toronto, Ontario, Canada.

### University of Michigan

2003 - 2004                      **Coordinator**, Plastic Surgery Didactic Conference

2001                                **Member**, House Officer Contract Negotiation Committee

### University of Toronto

2012 Feb - 2020              Director, Undergraduate Medical Education, The Hospital for Sick Children Division of Plastic and Reconstructive Surgery, Faculty of Medicine, Dept of Surgery, Plastic Surgery, Undergraduate MD, Toronto, Ontario, Canada.

### Washington University in St. Louis

2009                                **Scientific Chair**, James Barrett Brown 13th Visiting Professorship and Resident Research Day, Division of Plastic and Reconstructive Surgery

2008                                **Scientific Chair**, James Barrett Brown 12th Visiting Professorship and Resident Research Day, Division of Plastic and Reconstructive Surgery

2007	<b>Scientific Chair</b> , James Barrett Brown 11th Visiting Professorship and Resident Research Day, Division of Plastic and Reconstructive Surgery
2006 - 2009 Jun	<b>Director</b> , Plastic Surgery Journal Club, Division of Plastic and Reconstructive Surgery

Washington University School of Medicine

2008	<b>Contributor</b> , Draft Research Plan: "Planning for Excellence: Advancing Human Health"
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Peer Review Activities

*GRANT REVIEWS*

External Grant Reviewer

2014 Aug - 2015 Sep	Canadian Institutes of Health Research, Number of Reviews: 6
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Reviewer

2013 Jul 23 - 2013 Aug 13	British Medical Research Council grant proposal peer review committee 2013, Number of Reviews: 1
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*MANUSCRIPT REVIEWS AND EDITORIAL BOARDS*

Reviewer

2012 Oct - present	<i>Science</i>
2009 Jul 1 - 2010 Jun 30	<i>Journal of Biomaterials Research Part A,</i>
2020 Aug - present	<i>Journal of Plastic and Reconstructive Surgery</i>
2008 Dec - present	<i>Journal of Children's Orthopaedics</i>
2008 Sep - present	<i>Experimental Neurology</i> (Editorial Board)
2008 Aug - present	<i>Transplantation</i>
2008 Apr - present	<i>Journal of Plastic, Reconstructive &amp; Aesthetic Surgery</i>
2007 Oct - present	<i>Microsurgery</i>
2007 May - present	<i>Journal of Reconstructive Microsurgery</i>
2007 Apr - present	<i>Plastic and Reconstructive Surgery</i>
2006 Dec - present	<i>Neuroscience</i>
2006 Aug - present	<i>Annals of Plastic Surgery</i>

2006 Aug - present	<i>Muscle and Nerve</i>
2006 Aug - present	<i>Plastic and Reconstructive Surgery</i>

#### *GRANT PROPOSAL REVIEW*

##### Reviewer

2023 Aug - 2024 Sep	German National Science Foundation
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2014 Aug - 2014 Sep	Swiss National Science Foundation
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#### *JOURNAL REVIEW*

##### Journal Referee and Reviewer

2014 - pres	<i>Journal of Craniofacial Surgery</i>
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2014 - pres	<i>BioMed Research International</i>
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#### C. Academic Profile

##### *1. RESEARCH STATEMENTS*

2009 Sep 7 - present	<p>Peripheral Nerve Regeneration Research. Our group seeks to elucidate novel mechanisms by which peripheral nerves regenerate following injury. We are also developing unique biomaterials and growth factor and drug based methods to improve nerve regeneration.</p>
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2009 Sep 7 - present	<p>Clinical research. Our group is interested in developing new methods of evaluating outcomes in paediatric hand surgery and peripheral nerve surgery.</p>
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#### D. Research Funding

##### *1. Grants, Contracts and Clinical Trials*

##### PEER-REVIEWED GRANTS

*PENDING*



2024 (subm Jun) **Co-Investigator.** US National Institutes of Health (NIH). The role of TrkA and p75NTR signaling in corneal wound healing. \$2.7M, 5 yrs. PI Feinberg K. (submitted Jun 2024)

2024 (LoI submitted) **Principal Investigator.** US Department of Defense FY24 Vision Research Program; Investigator Initiated Research Award (co-I: Feinberg K). LoI Submitted July 2023. \$750,000

### *FUNDED*

2024 **Principal Investigator.** US National Institutes of Health (NIH R01 EY036047-01). Mechanisms governing nerve-mediated control of corneal wound healing: new hope for patients with neurotrophic keratopathy. \$2.7M, 5 yrs. Co-PI Feinberg K.

2024-2026 **Co-Investigator.** Pilot Funding for Research Use of Core Facilities, Indiana Clinical and Translational Sciences Institute (co-I w Dr. Feinberg, PI). \$10,000

2024-2026 **Co-Investigator.** National Endowment for Plastic Surgery (2y; \$50,000, co-I w Dr. Feinberg, PI)

2024-2025 **Co-Investigator.** Knights Templar Eye Foundation, Inc. (co-I w Dr. Feinberg, PI). \$90,000

2024-2025 **Co-Investigator.** Biomedical Research Grant, Indiana Clinical and Translational Sciences Institute (co-I w Dr. Feinberg, PI, 1 y; \$50,000)

2023 - 2025 **Principal Investigator.** US Department of Defense Congressionally Directed Medical Research and Development Command; Discovery Award HT94252310081; A tacrolimus releasing nanofiber nerve wrap to enhance motor and sensory recovery in injured peripheral nerves. Grants.gov ID: GRANT13621208; duration 24 mo; budget USD \$317,000. Collaborators Santerre, P., Feinberg K

2023	<b>Principal Investigator. ICO Idea to Start Up Pitch Competition</b> (Indiana University Innovation and Commercialization Office) with Brooke Stephanian and Sabin Karki, collaborators; Development of corneal aesthesiometer device, \$5000, Borschel PI
2022 July – 2023 Jun	<b>Principal Investigator.</b> Biomedical Research Grant. Institution: Indiana University. Project title: <i>Corneal Neurotization Assessment Registry (CorNeA): Design, Infrastructure, and Feasibility</i> ; \$50,000.00 USD; collaborators: Asim Ali, Charline Boente, Lava Timsina
2020 July – 2023 July	<b>Principal Investigator.</b> Fighting Blindness Canada. Project title: Novel Treatments for Blindness Caused by Neurotrophic Keratopathy: the Role of Stem Cells, Innervation, and Therapeutics. \$300,000.00 CAD; collaborators: Asim Ali, David Kaplan
2020 Jan – 2021 Dec	Co-Investigator. Corneal neurotization: a systemic assessment of anatomical and functional outcomes. Quebec FRQS Vision Health Research Network. Collaborators: Isabelle Brunette (PI), Asim Ali, David Kaplan, Ezekiel Weiss, Ahmed Al-Ghoul, Annabelle Reaux. 40,000 CAD
2020 July – 2022 July	<b>Principal Investigator.</b> Ontario Provincial Government Ministry of Health. Project title: N95 Respirator Reprocessing with Moist Heat for the COVID-19 Pandemic. \$333,000.00 CAD [Grants]
2020 July – 2023 July	<b>Principal Investigator.</b> SickKids Foundation / Teck Industries (Public Private Partnership). Project title: N95 Reprocessing – Long Term Real World Outcomes. \$150,000.00 CAD [Grants]
2020 Nov - 2023 Nov	<b>Principal Investigator.</b> Surgical Treatment to Enhance Dynamic Eyelid Closure in Patients with Moebius Syndrome Foundation. Collaborator(s): Zuker, Ronald; Ho, Emily. 210,00 USD. [Grants]
2019-2023	<b>Co-Investigator.</b> Non-invasive imaging of sensorimotor plasticity following cranial nerve repair. To determine the way the brain changes in response to our operations for facial palsy, primarily relying on MEG/fMRI imaging. Canadian Institutes of Health Research (CIHR). Collaborator(s):

	Cheyne, Douglas; Chau, T; Donner, Elizabeth; Van Lieshout, P; \$673,200. CAD [Grants]
2018-22	<b>Principal Investigator.</b> Physicians' Services Incorporated Foundation (PSI). Project title: Electrical stimulation to improve recovery after peripheral nerve injury; a randomized controlled clinical trial. \$193,000.00 CAD [Grants]
2018 Mar	<b>Principal Investigator.</b> 2018 Perioperative Services Summer Studentship Program Fund. Project title: Evaluation of long-term outcomes and quality of life after facial reanimation in pediatric facial paralysis. \$4000.00 CAD [Grants]
2015 Nov - 2019 Nov	<b>Principal Investigator.</b> Moebius Syndrome Patient Registry. Moebius Syndrome Foundation. Moebius Syndrome Foundation. Collaborator(s): Zuker, Ronald; Ho, Emily. 131,000 USD. [Grants]
2018 Feb	<b>Principal Investigator.</b> HSBC Bank Canada Catalyst Research Grant Competition. Project title: Electrical stimulation device to enhance regeneration after nerve injury. Collaborators(s): Tessa Gordon, Thomas Looi, Matthew Asselin, Ming Chan. \$50,000.00 [Grants]
2018 Feb	<b>Principal Investigator.</b> Rare Diseases Foundation Award. Long term outcomes of unilateral facial reanimation. Collaborator(s): Kevin Zuo. \$5000.00 CAD [Grants]
2018 May - 2019 May	<b>Principal Investigator.</b> Neurosciences and Mental Health, The Hospital for Sick Children. HSBC Bank Canada Catalyst Research Grant Competition Dragon's Den. "Electrical stimulation device to enhance regeneration after nerve injury" Borschel, Gregory H. \$50,000. CAD [Grants]
2016 Jul - 2017 Jun	<b>Principal Investigator.</b> Corneal neurotization: studying a novel solution for neurotrophic keratitis. Plastic Surgery Foundation Combined Pilot Research Grant (PSF-CPRG).: Gregory Borschel (PI), Joseph Catapano, Asim Ali. 10,000 USD
2015 May	<b>Co-Investigator.</b> Plastic Surgery Educational Foundation. n/a. Collaborator(s): Davidge, Kristen M; Wong, Karen (PI); Zuker,

Ronald. [Grants]  
*FACE-Q Kids.*

2015 Mar - 2015 Sep      **Award to Student.** School of Graduate Studies Conference Grant. School of Graduate Studies - University of Toronto. Winter/Spring 2015 School of Graduate Studies Conference Gra. n/a. PI: **Borschel, Gregory**. 680 CAD. [Grants]  
*Kasra Tajdaran.*

2014 May - 2014 Aug      **Award to Student.** Use of a tissue engineered nerve graft to improve nerve regeneration. Comprehensive Research Experience for Medical Students (CREMS). Summer Program 2014. n/a. PI: **Borschel, Gregory**. Collaborator(s): Gordon, Tessa (co-supervisor). 2,750 CAD. [Research Fellowships]  
*Mr. David Scholl, U of T medical student.*

2013 Jul - 2015 Jun      **Principal Investigator.** Evaluation of the novel aminopropyl carbazole in nerve regeneration. RestraComp. Postdoctoral fellowship funding program. Collaborator(s): Catapano, Joseph. 80,000 CAD. [Grants]  
*P7C3 and its analogs will be tested in neonatal and adult models of peripheral nerve injury to determine efficacy and dose response relationships.*

2013 Apr - 2017 Apr      **Principal Investigator.** Enhancement of nerve regeneration with controlled release of neurotrophic factors. Canadian Institute of Health Research / CIHR. operating grant, CIHR/NSERC Collaborative Health Research. Collaborator(s): Gordon, Tessa; Shoichet, Molly S. 536,711 CAD. [Grants]  
*The goal of the project is to enhance nerve regeneration by local controlled release of glial derived neurotrophic factor (GDNF) to rescue neurons from degenerating after injury.*

2012 Nov - 2013 Oct      **Principal Investigator.** Comparison of Tests of Sensory Outcome After Nerve Injury in Children. The Hospital for Sick Children. Peri-operative Services Innovation Fund Grant. Collaborator(s): Emily Ho. 4,865 CAD. [POS Innovation Fund]

- 2012 Sep - 2014 Aug      **Principal Investigator.** Enhancing outcomes following nerve injury using combined electrical stimulation and nerve bridges to the chronically denervated stump. RestraComp. Postdoctoral fellowship funding program. Collaborator(s): Michael Hendry. 80,000 CAD. [Grants]
- 2012 Sep - 2013 Sep      **Co-Investigator.** Comparisons of Tests of Sensory Outcome After Nerve Injury in Children. Ontario Society of Occupational Therapists. Ontario Society of Occupational Therapists Research Fund. PI: Ho, Emily. Collaborator(s): Clarke, Howard. 1,000 CAD. [Grants]
- 2012 Jul - 2015 Jul      **Principal Applicant.** Early Researcher Award: Enhancing Recovery Following Nerve Injury. Ontario Ministry of Research and Innovation. Early Researcher Award Round 8. PI: **Borschel, Gregory H.** Collaborator(s): Gordon, Tessa. 150,000 CAD. [Grants]
- 2012 Jul - 2013 Jul      **Principal Investigator.** Ministry of Training, Colleges and Universities Student Financial A. Ministry of Training, Colleges and Universities. Ontario Graduate Scholarship. 15,000 CAD. [Research Fellowships]
- 2012 Jul - 2013 Jul      **Principal Investigator.** Treatment of Peripheral Nerve Injury with P7C3. Plastic Surgery Foundation. Collaborator(s): Stephen Kemp, PhD (trainee PI). 10,000 USD. [Grants]  
*Pilot Research Grant.*
- 2012 Mar - 2013 Jan      **Principal Investigator.** BDNF and GDNF for treatment of nerve injury. CIHR Health Professional Student Research Award. Collaborator(s): Edward Liu, McMaster University. 4,251 CAD. [Grants]  
*Neurotrophic factors are used to enhance nerve regeneration using a microsphere delivery system.*
- 2011 Jul - 2013 Jul      **Principal Investigator.** GDNF and BDNF Microspheres for Treatment of Nerve Injury. Ontario Ministry of Innovation. Post Doctoral Fellowship (PDF) Program. Collaborator(s): Wood,

Matthew; Gordon, Tessa; Shoichet, Molly. 100,000 CAD.  
[Research Fellowships]

*Polymer beads will be used to deposit neurotrophic factors to enhance nerve regeneration following injury in a rat hindlimb model.*

2011 Jul - 2012 Dec

**Principal Investigator.** Nerve Research Centre at the Hospital for Sick Children in Toronto. Canada Foundation for Innovation. Leaders Opportunity Fund. 26497. Collaborator(s): Tessa Gordon. 549,322 CAD. [Grants]

*We propose advance imaging, surgical and histological infrastructural support for novel nerve regeneration studies.*

2011 Jul - 2012 Dec

**Principal Investigator.** Infrastructure Operating Funds (IOF); Nerve Research Centre at the Hospital for Sick Children in Toronto. Canada Foundation for Innovation (New Opportunities Fund). Infrastructure Operating Funds (IOF). 26497. Collaborator(s): Tessa Gordon. 47,574 CAD. [Grants]

*We proposed advanced imaging, surgical and histological infrastructural support for novel nerve regeneration studies.*

2011 Jul - 2012 Jun

**Principal Investigator.** BDNF and GDNF for treatment of nerve injury. Plastic Surgery Foundation. Collaborator(s): Matthew D. Wood, PhD (trainee PI). 10,000 USD. [Grants]  
*Pilot Research Grant.*

2011 Jul - 2012 Jun

**Principal Investigator.** Side-to-side nerve grafting to enhance nerve regeneration. Plastic Surgery Foundation. National Endowment for Plastic Surgery. 198879. Collaborator(s): Tessa Gordon. 50,000 USD. [Grants]  
*National Endowment for Plastic Surgery.*

2011 Jul - 2012 Jun

**Principal Investigator.** Behavioural study of facial nerve injury and regeneration. The Hospital for Sick Children Research Institute. Trainee Startup Fund (TSUF). Collaborator(s): Kemp, Stephen. 3,000 CAD. [Grants]  
*Behavioural study of facial nerve injury and regeneration is critical to our study of recovery following facial nerve injury. This grant allows collaboration between our group and other in*

*which behavioural study of facial nerve function is performed.*

2011 Jul - 2012 Jun

**Principal Investigator.** GDNF microspheres for treatment of nerve injury in a rat model. RestraComp. Postdoctoral fellowship funding program. Collaborator(s): Matthew Wood. 36,750 CAD. [Grants]  
*Microspheres are fabricated and tested for their ability to promote nerve regeneration in a rat hindlimb nerve injury model.*

2011 Jul - 2012 Jun

**Principal Investigator.** Evaluation of P7C3, a novel neuroprotective compound, for peripheral nerve regeneration. RestraComp. Postdoctoral fellowship funding program. Collaborator(s): Stephen Kemp. 36,750 CAD. [Grants]  
*We hypothesize the P7C3, which has been shown to protect central nervous system neurons from degeneration, will also protect neurons in the peripheral nervous system from degeneration following nerve injury.*

2011 Jun - 2014 Jul

**Principal Investigator.** Improving functional recovery after peripheral nerve injury. Canadian Institute for Health Research (CIHR). Operating Grant. Collaborator(s): Gordon, Tessa. 290,996 CAD. [Grants]  
*We propose to investigate the mechanisms responsible for protection of peripheral nerve pathways following side to side nerve grafting. The results will form the basis of a novel surgical repair paradigm.*

2011 Apr - 2012 Mar

**Principal Investigator.** Application of side-to-side nerve grafting to support regeneration in facial paralysis. Österreichisch Fonds zur Förderung der wissenschaftlichen Forschung [The Austrian Science Fund (FWF)]. Collaborator(s): Manfred Frey and Tessa Gordon. 45,000 EUR. [Research Fellowships]  
*In a rat model of facial paralysis we will determine the effects of protecting the distal stumps of the denervated facial nerve with axons donated from regional sensory nerves.*

- 2011 Jan - 2013 Jan      **Principal Investigator.** Side to side nerve grafting to enhance regeneration in denervated distal nerve stumps. Comprehensive Research Experience for Medical Students (CREMS). CREMS 2011-13. n/a. Collaborator(s): Gordon, Tessa (co-supervisor). 5,500 CAD. [Research Fellowships]  
*Mr Mark Szykaruk, U of T medical student, will study the use side to side nerve grafting to enhance regeneration in denervated distal nerve stumps.*
- 2011 Jan - 2011 Dec      **Principal Investigator.** "How do side-to-side nerve grafts promote recovery after nerve injury?". CIHR. CIHR Health Professional Student Research Award. Collaborator(s): Peter Phua, McMaster University. 4,251 CAD. [Grants]  
*Side to side nerve grafts will be assessed in a rodent hindlimb model for their ability to promote a growth permissive state in denervated distal nerve stumps.*
- 2010 Jul - 2011 Jun      **Principal Investigator.** GDNF microspheres for treatment of nerve injury in a rat model. RestraComp. Postdoctoral fellowship funding program. Collaborator(s): Matthew Wood. 36,750 CAD. [Grants]  
*Microspheres are fabricated and tested for their ability to promote nerve regeneration in a rat hindlimb nerve injury model.*
- 2010 Jun - 2010 Aug      **Principal Investigator.** Use of a tissue engineered nerve graft to improve nerve regeneration. Comprehensive Research Experience for Medical Students (CREMS). Summer Program 2010. n/a. Collaborator(s): Gordon, Tessa (co-supervisor). 2,750 CAD. [Research Fellowships]  
*Mr Collin Nguyen, U of T medical student, will develop new methods of imaging regeneration following nerve injury.*
- 2010 Jun - 2010 Aug      **Principal Investigator.** Use of microspheres to enhance neuromuscular junction formation following nerve injury. Comprehensive Research Experience for Medical Students (CREMS). Summer Program 2010. n/a. Collaborator(s): Gordon, Tessa (co-supervisor). 2,750 CAD. [Research Fellowships]  
*Mr Daniel Ennis, U of T medical student, will study the use of microspheres to enhance neuromuscular junction formation*



*following nerve injury in a rat hindlimb model.*

2009 - 2011

**Principal Investigator.** Controlled growth factor delivery for motor nerve injury. American College of Surgeons. Collaborator(s): Shelly Sakiyama-Elbert, Susan E. Mackinnon. 80,000 USD. [Grants]  
*C. James Carrico Faculty Research Fellowship for the Study of Trauma and Critical Care.*

2009 - 2010

**Principal Investigator.** A Transgenic Rat Expressing GFP in Peripheral Nerves. Plastic Surgery Educational Foundation. Collaborator(s): Amy M. Moore, M.D. (Grantee), Susan Mackinnon, M.D. 10,000 CAD. [Grants]  
*Pilot Research Grant.*

2009 - 2010

**Principal Investigator.** Decellularized Nerve Allografts and Motor Nerve Regeneration. Plastic Surgery Educational Foundation. 137077. Collaborator(s): Michael C. Nicoson, M.D. (Grantee), Susan Mackinnon, M.D. 10,000 CAD. [Grants]  
*Pilot Research Grant.*

2009 - 2010

**Co-Investigator.** Radiologic Predictors of Functional Outcome in Newborn Brachial Plexus Injury. Barnes-Jewish Hospital Foundation. PI: Zaidman C. Collaborator(s): Borschel. 25,000 USD. [Grants]  
*Barnes-Jewish Hospital Foundation/Washington University Institute of Clinical and Translational Sciences Clinical and Translational Research Funding Program planning grant.*

2009 - 2010

**Principal Investigator.** A Novel Transgenic Rat Expressing Green Fluorescent Protein (GFP) in Peripheral Nerve. American Society for the Peripheral Nerve. Collaborator(s): Amy M. Moore, M.D, Shelly E. Sakiyama-Elbert, Ph.D., Susan E. Mackinnon, M.D. 5,000 USD. [Grants]  
*American Society for the Peripheral Nerve research grant program.*

- 2009                      The Effects of Controlled Release GDNF on Motor Nerve Regeneration. American Association for Hand Surgery. PI: Amy M. Moore, M.D. Collaborator(s): **Gregory H. Borschel**, M.D., Shelly Sakiyama-Elbert, Susan E. Mackinnon. 5,000 USD. [Grants]
- 2008 - 2009                      **Co-Investigator.** GDNF: The Influence on Motor Nerve Regeneration in a Rat Femoral Nerve Model. American Society for Surgery of the Hand. PI: Amy M. Moore. Collaborator(s): **Gregory H. Borschel**, co-investigator; Shelly Sakiyama-Elbert, Susan Mackinnon, collaborators. 20,000 USD. [Grants]
- 2008                      The Effects of Controlled Release GDNF on Motor Nerve Regeneration. American Society for the Peripheral Nerve. PI: Terry Myckatyn, M.D. Collaborator(s): Amy M. Moore, M.D., **Gregory H. Borschel**, M.D., Shelly E. Sakiyama-Elbert, Ph.D., Susan E. Mackinnon, M.D. 5,000 USD. [Grants]
- 2007 - 2009                      **Principal Investigator.** Controlled Release of Glial Cell Line-Derived Neurotrophic Factor (GDNF) in a Fibrin Based Delivery System to Enhance Sciatic Nerve Regeneration. American Association of Plastic Surgeons. Collaborator(s): Shelly E. Sakiyama-Elbert, Ph.D.; Terence M. Myckatyn, M.D., Susan E. Mackinnon, M.D., Jeffrey Milbrandt, Ph.D. (co-investigators). 60,000 USD. [Grants]  
*KLS Academic Scholarship Award*  
*(Award intended for salary support and direct costs).*
- 2007 - 2008                      **Co-Investigator.** An Investigation of Modality-Specific Nerve Regeneration. American Association for Hand Surgery (The). PI: Kawamura D. Collaborator(s): Hunter D, Mackinnon S, **Borschel GH**, Tung T. 3,262 USD. [Grants]  
*direct costs.*
- 2007 - 2008                      **Principal Investigator.** Evaluation of axonal regeneration within a decellularized, chondroitinase-treated peripheral nerve allograft. AxoGen, Inc. Collaborator(s): Mackinnon SE, Hunter DA (co-investigators). 350,000 USD. [Grants]

*direct costs, plus indirect costs.*

2007 - 2008

**Faculty Mentor.** Degradation of sulfated proteoglycans and concurrent Schwann cell coculture to improve regeneration through decellularized nerve grafts. Howard Hughes Medical Institute (Chevy Chase, MD). PI: **Borschel, Gregory**. Collaborator(s): Elizabeth Whitlock, Susan E Mackinnon, MD. 47,000 USD. [Grants]  
*direct costs, plus indirect costs.*

2007 - 2008

**Principal Investigator.** The Effects of Seprafilm on Peripheral Nervous Tissue in a Non-Injury Model and Following Sciatic Nerve Cut-and-Repair. Genzyme, Inc. Collaborator(s): Sami Tuffaha, BA (Co-Investigator). 32,000 USD. [Grants]

2007 - 2008

**Principal Investigator.** Controlled release of glial cell line-derived neurotrophic factor (GDNF) in a fibrin based delivery system to enhance sciatic nerve regeneration. Coulter Foundation. Collaborator(s): Co-investigators: Terence M. Myckatyn, M.D., Susan E. Mackinnon, M.D., Jeffrey Milbrandt, Ph.D. 50,000 USD. [Grants]  
*(direct costs).*

2003

**Principal Investigator.** Tissue Engineered Recellularized Small Diameter Vascular Grafts. Plastic Surgery Educational Foundation. Collaborator(s): Brown, Faculty Mentor; Dennis and Kuzon, Co-Investigators. 5,000 USD. [Grants]

2003

University of Michigan. 45,000 USD. [Research Fellowships]  
*Ethel C. Collier Research Fellowship, Department of Surgery.*

2002

**Principal Investigator.** Tissue Engineered Skeletal Muscle Using Acellularized Whole Muscle. Plastic Surgery Educational Foundation. Collaborator(s): William M. Kuzon, Faculty Mentor, Robert G. Dennis, Co-Investigator. 4,000 USD. [Grants]

## NON-PEER-REVIEWED GRANTS

### FUNDED

- 2018 Jan **Principal Investigator.** Sustained localized delivery of FK506 in PLGA microspheres to enhance peripheral nerve regeneration through an acellular nerve allograft. Kickstarter Award. Institute of Biomaterials and Biomedical Engineering (IBBME) 5000.00 CAD [Grants]
- 2015 Sept **Principal Investigator.** Development of a Decision Aid for Adolescents with Obstetrical Brachial Plexus Palsy: Making choices regarding treatment for a functionally limiting and socially-stigmatizing elbow flexion contracture. The Hospital for Sick Children. Perioperative Services Innovation Project. Collaborator(s): Ho, Emily. 12,605 CAD. [Grants]
- 2013 Jul - 2017 Jul **Principal Investigator.** Electrical stimulation of muscle to improve specificity of reinnervation of denervated muscle. Med-EI Medical Electronics (USA). Collaborator(s): Gordon, Tessa. 395,410 CAD. [Industrial Grants]  
*We propose applying electrical stimulation to denervated muscle to improve their capacity to support nerve regeneration and improve their functional characteristics.*
- 2013 Jul - 2014 Jun **Co-Principal Investigator.** Sensorimotor plasticity following reconstructive surgery for facial nerve palsy. The Hospital for Sick Children. Peri-Operative Service. PI: **Borschel, Gregory H.** Collaborator(s): Zuker, Ronald; Donner, Elizabeth; Cheyne, Douglas. 11,750 CAD  
*We propose to use a combination of functional and structural brain imaging techniques to study sensorimotor cortical plasticity underlying motor function recovery in children undergoing dynamic facial reanimation at the Hospital for Sick Children. The hypothesis that cortical reorganization underlies these changes in sensorimotor function will be tested using magnetoencephalographic (MEG) functional mapping prior to and after surgery. We will also take advantage of a novel, unique, validated motion tracking system for monitoring facial kinematics developed at SickKids.*

- 2013 Jul - 2014 Jun      **Principal Investigator.** Enhancement of nerve regeneration with aminopropyl carbazoles following nerve injury. PSI Foundation. PSI Foundation. Collaborator(s): Catapano, Joseph. 20,000 CAD. [Grants]  
*The applicants propose to investigate the utility of using a novel molecular tool to enhance motor and sensory neuron survival and to improve regeneration and behavioral recovery following peripheral nerve injury.*
- 2011 Oct - 2012 Oct      **Principal Investigator.** Peripheral Nerve Regeneration Travel Grant. University of Toronto Division of Plastic and Reconstructive Surgery. Collaborator(s): Gordon T. 7,500 CAD. [Grants]  
*Permits travel to a meeting to present our findings.*
- 2011 Jan - 2013 Jan      **Principal Investigator.** IAMGold Fellowship in Peripheral Nerve Regeneration Research. IAMGold, Inc. Collaborator(s): Gordon, Tessa. 80,000 CAD. [Grants]  
*Provides salary support for a postdoctoral fellow for two years.*

## 2. Salary Support and Other Funding

### Trainee Salary Support

- 2014 Jul - 2016 Jul      Clinician Investigator Program. Trainee Name: Daniel Demsey. The University of British Columbia. 60,702.95 CAD. Victoria, British Columbia, Canada. (Specialty: Plastic and Reconstructive Surgery).

### Internal Research Funding

- 2014 Sep      Salary Support for Senior Scientist. The Hospital for Sick Children Foundation. 75,000 CAD. Toronto, Ontario, Canada. (Specialty: Plastic and Reconstructive Surgery).
- 2013 Sep      Salary Support for Senior Scientist. The Hospital for Sick Children Foundation. 75,000 CAD. Toronto, Ontario, Canada.

(Specialty: Plastic and Reconstructive Surgery).

2012 Sep                      Salary Support for Senior Scientist. The Hospital for Sick Children Foundation. 75,000 CAD. Toronto, Ontario, Canada. (Specialty: Plastic and Reconstructive Surgery).

2011 Sep                      Salary Support for Senior Scientist. The Hospital for Sick Children Foundation. 75,000 CAD. Toronto, Ontario, Canada. (Specialty: Plastic and Reconstructive Surgery).

2010 Sep                      Salary Support for Senior Scientist. The Hospital for Sick Children Foundation. 75,000 CAD. Toronto, Ontario, Canada. (Specialty: Plastic and Reconstructive Surgery).

2009 Sep                      Salary Support for Senior Scientist. The Hospital for Sick Children Foundation. 75,000 CAD. Toronto, Ontario, Canada. (Specialty: Plastic and Reconstructive Surgery).

[Salary Support for Neuroscientist](#)

2010 Jan - 2013 Jan                      Foundation Support for Research Neuroscientist. SickKids Foundation. 300,000 CAD. Toronto, Ontario, Canada.

## E. Publications

### PEER-REVIEWED PUBLICATIONS

#### Journal Articles

**For link to Dr. Borschel's publications** please use:

[https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=borschel+g&sort\\_order=desc](https://pubmed.ncbi.nlm.nih.gov/?sort=date&term=borschel+g&sort_order=desc)

**For Google Scholar link, please use:**

[https://scholar.google.com/citations?hl=en&view\\_op=list\\_works&gmla=AJsN-F7YqcBXqT9sTa4sR\\_yR9WR-5zXLA9Snn1QPOeKFamaBFOW1bh3GOOpUpUVRtmFVsvf5fRbRI-GVL8IPYsUxUD4FALI9nSw&user=tHHDwdsAAAAJ](https://scholar.google.com/citations?hl=en&view_op=list_works&gmla=AJsN-F7YqcBXqT9sTa4sR_yR9WR-5zXLA9Snn1QPOeKFamaBFOW1bh3GOOpUpUVRtmFVsvf5fRbRI-GVL8IPYsUxUD4FALI9nSw&user=tHHDwdsAAAAJ)

**Total citations: 8802 as of July 2025**

**H-Index: 51**

**i10 index 135**

**AD Academic Rankings (#66 ranked scientist, Indiana University, as of July, 2025)**

<https://www.adscientificindex.com/subject-rankings/?q=gregory+borschel>

1: Wan EL, Nguyen SC, Lustbader JM, Borschel GH. Letter to the Editor regarding "The effect of various muscle transfer procedures on eye closure and blink in longstanding facial palsy patients" and a call for collaboration among ophthalmology and plastic surgery. J Plast Reconstr Aesthet Surg. 2025 Jul;106:446-449. doi: 10.1016/j.bjps.2025.04.053. Epub 2025 May 14. PMID: 40383651.

2: Hassan AM, Borschel GH, King TW. Whose Procedure Is It Anyway? Navigating Specialty Creep in Plastic Surgery. *Plast Reconstr Surg*. 2025 May 13. doi: 10.1097/PRS.00000000000012206. Epub ahead of print. PMID: 40366305.

3: Newsom KD, Akhavan AA, Tran KD, Chen W, Peters BR, Borschel GH. Experiences of LGBTQ+ Plastic Surgeons in the US and Canada. *Plast Surg (Oakv)*. 2025 May;33(2):329-337. doi: 10.1177/22925503231208449. Epub 2023 Oct 23. PMID: 40351799; PMCID: PMC12062699.

4: Gouvea L, Woo JH, Agarwal M, Witsberger E, Borschel GH, Mireskandari K, Ali A. Outcomes of Corneal Transplantation After Minimally Invasive Corneal Neurotization in Children. *Cornea*. 2025 May 2. doi: 10.1097/ICO.0000000000003887. Epub ahead of print. PMID: 40324105.

5: Tannir S, Mulenga C, Tran K, Ali A, Boente C, Borschel GH. A Narrative Medicine Approach to Navigating Barriers to the Diagnosis of Pediatric Neurotrophic Keratopathy. *Am J Ophthalmol*. 2025 Aug;276:109-116. doi: 10.1016/j.ajo.2025.03.043. Epub 2025 Mar 31. PMID: 40174715.

6: Wiebe JE, Rowe LW, Boente CS, Borschel GH. Single-Stage Bilateral Corneal Neurotization for Neurotrophic Keratopathy in Stüve-Wiedemann Syndrome: A Case Report and Literature Review. *J Pediatr Ophthalmol Strabismus*. 2024 Sep-Oct;61(5):e54-e58. doi: 10.3928/01913913-20240807-04. Epub 2024 Sep 1. PMID: 39301824.

7: Mulenga CM, Tran KD, Jorge MD, Crabtree JR, Henriquez MA, Boente CS, Meanwell EV, Zuker RM, Bogart KR, Borschel GH. Through their eyes: Navigating life with limited eyelid closure in patients with Moebius syndrome. *J Plast Reconstr Aesthet Surg*. 2024 Nov;98:230-239. doi: 10.1016/j.bjps.2024.08.052. Epub 2024 Aug 14. PMID: 39293324.



8: Wiebe JE, Mulenga C, Crabtree JR, Hussain A, Borschel GH. Overview of Unilateral and Bilateral Pediatric Facial Paralysis: Workup, Treatment, and Frontiers. *Facial Plast Surg.* 2025 Jun;41(3):410-416. doi: 10.1055/s-0044-1788994. Epub 2024 Aug 29. PMID: 39209283.

9: Crabtree JR, Mulenga CM, Tran K, Feinberg K, Santerre JP, Borschel GH. Biohacking Nerve Repair: Novel Biomaterials, Local Drug Delivery, Electrical Stimulation, and Allografts to Aid Surgical Repair. *Bioengineering (Basel).* 2024 Jul 31;11(8):776. doi: 10.3390/bioengineering11080776. PMID: 39199733; PMCID: PMC11352148.

10: Zuo KJ, Heinelt M, Ho ES, Borschel GH, Zuker RM. Evaluation of Long-Term Surgical and Patient-Reported Outcomes after Pediatric Facial Reanimation. *Plast Reconstr Surg.* 2024 Sep 1;154(3):618-629. doi: 10.1097/PRS.00000000000011073. Epub 2023 Sep 19. PMID: 39196867.

11: Wiebe JE, Borschel GH. Therapeutic Electrical Stimulation for Surgeons: How it Works and How to Apply it. *Hand Clin.* 2024 Aug;40(3):421-427. doi: 10.1016/j.hcl.2024.03.006. Epub 2024 May 23. PMID: 38972686.

12: Crabtree JR, Tannir S, Tran K, Boente CS, Ali A, Borschel GH. Corneal Nerve Assessment by Aesthesiometry: History, Advancements, and Future Directions. *Vision (Basel).* 2024 May 12;8(2):34. doi: 10.3390/vision8020034. PMID: 38804355; PMCID: PMC11130793.

13: Daeschler SC, So KJW, Feinberg K, Manoraj M, Cheung J, Zhang J, Mirmoeini K, Santerre JP, Gordon T, Borschel GH. A functional tacrolimus-releasing nerve wrap for enhancing nerve regeneration following surgical nerve repair. *Neural Regen Res.* 2025 Jan 1;20(1):291-304. doi: 10.4103/NRR.NRR-D-22-01198. Epub 2024 Jan

31. PMID: 38767493; PMCID: PMC11246136.

14: Crabtree JR, Mulenga C, Tran K, Hussain A, Boente CS, Ali A, Feinberg K, Borschel GH. Corneal Neurotization: Essentials for The Facial Paralysis Surgeon. *Facial Plast Surg*. 2024 Aug;40(4):424-432. doi: 10.1055/a-2272-6077. Epub 2024 Feb 20. PMID: 38378042.

15: Olukoga C, Samiei A, Borschel G, Kowal R. Hyperkeratotic Pigmented Plaques With Blaschkoid Distribution in a Child: Challenge. *Am J Dermatopathol*. 2024 Mar 1;46(3):e21-e22. doi: 10.1097/DAD.0000000000002620. PMID: 38354390.

16: Olukoga C, Samiei A, Borschel G, Kowal R. Hyperkeratotic Pigmented Plaques with Blaschkoid Distribution in a Child: Answer. *Am J Dermatopathol*. 2024 Mar 1;46(3):183-184. doi: 10.1097/DAD.0000000000002621. PMID: 38354386.

17: Gross JN, Bhagat N, Tran K, Liu S, Boente CS, Ali A, Borschel GH. Minimally Invasive Corneal Neurotization: 10-Year Update in Technique Including Novel Donor Transfer of the Great Auricular Nerve. *Plast Reconstr Surg*. 2024 Oct 1;154(4):795e-798e. doi: 10.1097/PRS.00000000000011250. Epub 2023 Dec 22. PMID: 38194587.

18: Bhagat ND, Patel A, Gross JN, Borschel GH. Surgical Management of Sirenomelia: A Case Study. *Plast Reconstr Surg Glob Open*. 2023 Sep 15;11(9):e5275. doi: 10.1097/GOX.0000000000005275. PMID: 38155744; PMCID: PMC10754566.

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## Book Chapters

1. Alan Tom, MD,<sup>1</sup> Gerald J. Wu, MD,<sup>1</sup> Ronald M. Zuker, MD<sup>2</sup> and Gregory H. Borschel, Evolution of Reconstruction in Facial Paralysis. In: Khajuria, Neligan, Hong Eds. Landmark papers in plastic surgery – commented guide by authors and experts. Springer 2024
2. Simeon C. Daeschler MD <sup>1,2</sup>, Gregory H. Borschel. Optical Tissue Clearing Enables Three-Dimensional Morphometry in Experimental Nerve Regeneration Research. In: Signal Transduction Immunohistochemistry; Ed Alex Kalyuzhny; Springer, New York, 2023.
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### 3. NON-PEER-REVIEWED PUBLICATIONS

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2. **Borschel GH**, Ho E, Clarke HM. Failure of formation of parts – congenital hand deformities. In: Bentz M, Bauer B and Zuker RM, eds. Principles and Practice of Pediatric Plastic Surgery, Quality Medical Publishing, St. Louis, 2007. **Principal Author**.



3. **Borschel GH**, Zuker RM. Facial paralysis. In: Persing J and Evans GRD, eds. Soft-Tissue Surgery of the Craniofacial Region, Informa Healthcare, Abingdon, UK, 2007. **Principal Author.**
4. Marcus J, **Borschel GH**, Zuker RM. Facial paralysis. In: Bentz M, Bauer B and Zuker RM, eds. Principles and Practice of Pediatric Plastic Surgery, Quality Medical Publishing, St. Louis, 2007. **Co-Principal Author.**
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2. Fattah, Adel; **Borschel, G.H**; Zuker, R.M. "Smile Reconstruction in Children". American Society of Peripheral Nerve Newsletter (Trainee publication, Fattah: postdoctoral fellow). **Senior Responsible Author**.

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1. **Borschel, Gregory H.**; Zuker, Ronald. Gracilis Transfer Video for the Plastic Surgery Education Network. Plastic Surgery Education Network. 2014 Jul. **Surgeon**.

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2. CBS story about Harper Gray, an Indiana girl born with sirenomelia: <https://cbs4indy.com/indiana-news/shes-doing-amazing-things-indy-girl-born-with-fused-legs-takes-first-steps/>
3. Plastic and Reconstructive Surgery article: review of the Michigan Manual of Plastic Surgery. <http://www.plasreconsurg.com/pt/re/prs/abstract.00006534-200603000-00056.htm;jsessionid=H20BmF6X2G5ypbr1y1n9SGLc8B2L3JnTBNVGMjgsFYX P9j38bHcQ!1390229169!181195629!8091!-1>. **Acknowledged in Publication (Not Author)**.
4. Haley Murray. Something to Smile About: Congenital facial paralysis can confuse and sadden new parents, but it can often be fixed. Metro East Community Health. December, 2008. **Acknowledged in Publication (Not Author)**.
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11. Fox News story about pediatric treadmill injuries to the hand.  
<http://www.myfoxstl.com/myfox/pages/News/Detail?contentId=7989120&version=1&locale=EN-US&layoutCode=TSTY&pageId=3.1.1>. **Acknowledged in Publication (Not Author).**
12. Annals of Surgery: review of the Michigan Manual of Plastic Surgery.  
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#### Theses

1. **Borsche GH.** Rhenium Complexes in Nuclear Medicine. (Master's Thesis, Inorganic Chemistry). Emory University, Atlanta, 1993; Luigi M. Marzilli, Ph.D., supervisor. **Principal Author.**

#### Website

1. <http://www.sickkids.ca/Research/AbouttheInstitute/Profiles/index.html>.  
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#### 4. SUBMITTED PUBLICATIONS

##### Book Chapters

1. **Borsche, Gregory H.** Obstetrical Brachial Plexus Palsy. Surgery of the Hand and Upper Extremity  
Case Reviews in Plastic Surgery  
QMP Medical Publishing, St. Louis, Missouri, USA. **Principal Author.**
2. Adel Fattah, Ron M Zuker, **Gregory H Borsche** and Ralph T Manktelow. Facial Reanimation in Children and Adults. In: Operative Microsurgery. B Boyd and NF Jonse, Eds. (Trainee publication, Fattah, clinical pediatric plastic surgery fellow). **Coauthor or Collaborator.**

## F. Intellectual Property

### 1. Patents

#### ICO NO. 2022-109: TREATMENT PROTOCOL TO PREVENT DIABETIC NEUROPATHY

TITLE	COUNTRY	APPLICATION NO.	FILING DATE	STATUS
METHODS OF TREATING NEUROPATHY USING FORETINIB AND COMPOSITIONS THEREOF	United States	63/336,669	04/29/2022	Continued
METHODS OF TREATING NEUROPATHY USING FORETINIB AND COMPOSITIONS THEREOF	PCT	PCT/US2023/020610	05/01/2023	Continued
METHODS OF TREATING NEUROPATHY USING FORETINIB AND COMPOSITIONS THEREOF	Europe	23797410.0	10/24/2024	Published
METHODS OF TREATING NEUROPATHY USING FORETINIB AND COMPOSITIONS THEREOF	United States	18/861,393	10/29/2024	Pending

#### Representative Claim from PCT Application: PCT/US2023/020610 -

<https://patents.google.com/patent/WO2023212411A1/en?q=WO+2023%2f212411>+

**Claim 1:** A method of treating neurodegeneration in a subject in need thereof comprising administering a therapeutically effective amount of foretinib to the subject to treat the neurodegeneration.

#### Notes:

**ICO NO. 2023-073: SMALL MOLECULE INHIBITORS FOR TREATMENT OF NEUROTROPHIC KERATOPATHY**

**2024-005: TREATMENT OF NEUROTROPHIC KERATOPATHY**

TITLE	COUNTRY	APPLICATION NO.	FILING DATE	STATUS
COMPOSITIONS COMPRISING P75NTR INHIBITORS AND RECOMBINANT NERVE GROWTH FACTOR AND METHODS FOR THE TREATMENT OF CORNEAL DISEASES AND DISORDERS	United States	63/593,283	10/26/2023	Converted
COMPOSITIONS COMPRISING P75NTR INHIBITORS AND RECOMBINANT NERVE GROWTH FACTOR AND METHODS FOR THE TREATMENT OF CORNEAL DISEASES AND DISORDERS	PCT	PCT/US2024/053226	10/28/2024	Published

**Representative Claim from PCT Application: PCT/US2024/053226:**  
<https://patents.google.com/patent/WO2025091016A1/en?q=+WO+2025%2f091016+>

**Claim 1:** A method of treating neurotrophic keratopathy in a subject in need thereof, the method comprising administering a therapeutically effective amount of THX-B and/or anti- proNGF, and a therapeutically effective amount of at least one TrkA agonist selected from recombinant nerve growth factor (rNGF), recombinant human NGF (rhNGF), and NGF mimetic Tavilermide to the subject to treat the neurotrophic keratopathy in the subject

**Notes: National Stage Deadline 04/26/2026**

**ICO NO. 2023-076: TOPICAL TREATMENT FOR NEUROTROPHIC KERATOPATHY**

TITLE	COUNTRY	APPLICATION NO.	FILING DATE	STATUS
COMPOSITIONS AND METHODS FOR THE TREATMENT OF CORNEAL DISEASES AND DISORDERS	United States	63/504,388	05/25/2023	Converted
COMPOSITIONS AND METHODS FOR THE TREATMENT OF CORNEAL DISEASES AND DISORDERS	PCT	PCT/US2024/031006	05/24/2024	Published

**Representative Claim from PCT Application: PCT/US2024/031006:**

<https://patents.google.com/patent/WO2024243516A1/en?q=+WO+2024%2f243516>

**Claim 1:** A pharmaceutical composition comprising ciliary neurotrophic factor (CNTF) and at least one additional trophic factor selected from the group consisting of: pleiotrophin (PTN), transforming growth factor beta 1 (TGF $\beta$ 1), and platelet-derived growth factor alpha (PDGF $\alpha$ ).

**Notes:** National Stage Deadline would be due November 25, 2025

ICO NO. 2023-097: CORNEAL SENSORY TESTING DEVICE

TITLE	COUNTRY	APPLICATION NO.	FILING DATE	STATUS
Medical Device	United States	29/944,659	May 29, 2024	Pending

Representative Claim from US Application: 29/944,659:

**Claim 1:** The ornamental design for a medical device, as shown and described.

**Notes:** Design Patent

ICO NO. 2024-059: TOPICAL THERAPY TO PREVENT NEUROTROPIC KERATOPATHY

TITLE	COUNTRY	APPLICATION NO.	FILING DATE	STATUS
COMPOSITIONS COMPRISING NEUREGULIN AND METHODS OF USING THE SAME TO TREAT OR PREVENT NEUROTROPHIC KERATITIS	United States	63/607,858	12/08/2023	Completed
COMPOSITIONS COMPRISING NEUREGULIN AND METHODS OF USING THE SAME TO TREAT OR PREVENT NEUROTROPHIC KERATITIS	PCT	PCT/US2024/058408	12/04/2024	Pending

Representative Claim from US Application: 63/607,858

**Claim 1:** A pharmaceutical composition comprising neuregulin 1, type I (NRF1).

**Notes:** National Stage Deadline would be due June 8, 2025



**ICO NO. 2025-022: TREATMENT OF NEUROTROPHIC KERATOPATHY**

TITLE	COUNTRY	APPLICATION NO.	FILING DATE	STATUS
METHODS FOR TREATING NEUROTROPHIC KERATITIS	United States	63/696,424	09/19/2024	Pending

**Representative Claim from US Application: 63/696,424**

**Claim 1:** A method of treating a corneal disease or disorder in a subject in need thereof, the method comprising administering a therapeutically effective amount of a TrkA agonist to the subject to treat the corneal disease or disorder in the subject.

**Notes: Convert Deadline September 19, 2025**

- 2023 Oct      **US Provisional Application Serial No. 63/593,283 filed Oct 26, 2023. COMPOSITIONS COMPRISING P75NTR INHIBITORS AND RECOMBINANT NERVE GROWTH FACTOR AND METHODS FOR THE TREATMENT OF CORNEAL DISEASES AND DISORDERS,** Filing Date: 04 APRIL 2017. Applicant/Assignee: INDIANA UNIVERSITY. Inventors: KONSTANTIN FEINBERG, GREGORY BORSCHEL
- 2023 May      **US Provisional Application Serial No. 63/504,388 filed May 25, 2023. COMPOSITIONS AND METHODS FOR THE TREATMENT OF CORNEAL DISEASES AND DISORDERS.** Applicant/Assignee: INDIANA UNIVERSITY. Inventors: KONSTANTIN FEINBERG, GREGORY BORSCHEL
- 2022 Jul      **US Patent No. 11,376,224 B2. SYSTEM FOR DELIVERY OF FK506 FOR ENHANCING NERVE REGENERATION.** Date of Patent: July 5, 2022. Filing Date: 04 APRIL 2017. Applicant: THE HOSPITAL FOR SICK CHILDREN. Inventors: KASRA TAJDARAN, GREGORY BORSCHEL, TESSA GORDON.
- 2023 (pnd)      **European Patent Office.** European Regional Phase Patent Application No. 17778507.8 International PCT No: PCT/CA2017/050410. **SYSTEM FOR DELIVERY OF FK506 FOR ENHANCING NERVE REGENERATION.** Filing Date: 04 APRIL 2017. Applicant: THE HOSPITAL FOR SICK CHILDREN. Inventors: KASRA TAJDARAN, GREGORY BORSCHEL, TESSA GORDON.

2021 Oct	<b>US Patent No. 11,053,321. ErbB2 Signaling AND NERVE REGENERATION.</b> Filing Date: 04 June 2019. Applicant: THE HOSPITAL FOR SICK CHILDREN. Inventors: HENDRY, James M., BORSCHEL, Gregory
2016 May	<b>System for delivery of FK506 for enhancing nerve regeneration, US Provisional Patent.</b> Submitted Apr 2017. . United States. Joint Holder Name(s): Borschel Gregory H.; Tajdaran K, Gordon T
2016 Dec	<b>System and method to enhance outcomes following peripheral nerve injury, US Provisional Patent Submitted.</b> Name(s): Borschel Gregory H.; Willand M, Gordon T, Catapano J
2014 May	<b>ErbB2 Signaling and Nerve Regeneration, US Provisional Patent No. 61/987,692.</b> Granted. Patents #: US Patent # 499-020-P, United States. Joint Holder Name(s): Borschel Gregory H.; Hendry, James M.
2008 Mar	<b>System and method for forming a cardiac tissue construct.</b> Granted. Patents #: US Patent # 7,338,798, United States. Joint Holder Name(s): Arruda, EM, Baar KR, Birla RK, Borschel GH, Boluyt MO, Dennis RG. <i>A tissue engineered cardiac muscle construct capable of producing longitudinal rhythmic contractile force in vivo.</i> <a href="http://www.google.ca/patents?hl=en&amp;lr=&amp;vid=USPAT7338798&amp;id=-I2pAAAAEBAJ&amp;oi=fnd&amp;dq=borschel+g&amp;printsec=abstract#v=onepage&amp;q=borschel%20g&amp;f=false">http://www.google.ca/patents?hl=en&amp;lr=&amp;vid=USPAT7338798&amp;id=-I2pAAAAEBAJ&amp;oi=fnd&amp;dq=borschel+g&amp;printsec=abstract#v=onepage&amp;q=borschel%20g&amp;f=false</a> .
2005 Jun	<b>Tissue engineered vascular construct and method for producing same.</b> Applied. Patents #: 20050125049, United States. Joint Holder Name(s): Brown, DL, Borschel GH, Dennis RG. Serial No. 10/970537 <a href="http://appft1.uspto.gov/netacgi/nph-Parser?Sect1=PTO2&amp;Sect2=HITOFF&amp;u=%2Fnetahhtml%2FFPTO%2Fsearch-adv.html&amp;r=1&amp;p=1&amp;f=G&amp;l=50&amp;d=PG01&amp;S1=20050125049&amp;OS=20050125049&amp;RS=20050125049">http://appft1.uspto.gov/netacgi/nph-Parser?Sect1=PTO2&amp;Sect2=HITOFF&amp;u=%2Fnetahhtml%2FFPTO%2Fsearch-adv.html&amp;r=1&amp;p=1&amp;f=G&amp;l=50&amp;d=PG01&amp;S1=20050125049&amp;OS=20050125049&amp;RS=20050125049</a> .
2004 Jul	<b>System and method for forming a cardiac muscle construct.</b> Granted. Patents #: 20040132184, United States. Joint Holder Name(s):

Dennis RG, Birla RK, Baar K, Boluyt MO, Arruda EA, Borschel GH.  
*This application was a continuation-in-part of U.S. application Serial No. 09/709,890 5 (submitted July, 2003); technology licensed to Tissue Genesis, Inc.* <http://appft1.uspto.gov/netacgi/nph-Parser?Sect1=PTO2&Sect2=HITOFF&u=%2Fnetahhtml%2FPTO%2Fsearch-adv.html&r=1&p=1&f=G&l=50&d=PG01&S1=20040132184&OS=20040132184&RS=20040132184>.

## G. Presentations, Abstracts and Special Lectures

- 2025 Oct      Parent Reported Outcomes Following Type B Post-axial Polydactyly Excision in the Clinic Versus the Operating Room” Joshu Gerstein, Nikhi Singh, Gregory Borschel, Khoa Tran, Joshua Adkinson. American Society for Surgery of the Hand 80<sup>th</sup> Annual Meeting, Vancouver, Canada, Oct 9 – 11, 2025
- 2025 Jun      International Microsurgery Club Invited Faculty and Moderator. Jun 21, 2025. Speaker: Ashok Gupta, Mumbai, India. 45 Years of Microsurgery. Organizer: Tommy Chang, MD
- 2025 May      New Hope For Patients With Neurotrophic Keratopathy: Molecular Interactions Governing Nerve-mediated Control Of Corneal Epithelial Renewal And Wound Healing. Arif Hussain, MD1, Kaveh Mirmoeini, MD2, Chilando M. Mulenga, B.S1, Jordan Crabtree, B.S1, Kiana Tajdaran, MD2, Mario Henriquez, B.S1, Konstantin Feinberg, PhD1, Gregory Borschel, MD1. May 26, 2025. American Association of Plastic Surgeons 103<sup>rd</sup> Annual Meeting, May 27, 2025
- 2025 May      Invited Discussant: Discovering Nuclear Vs. Cytoplasmic Roles Of ESRP1 And ESRP2 RNA Splicing Regulators In Craniofacial Development. Sogand Schafer, MD1, Feng Wang, PhD2, Caroline Caetano, PhD1, Yongjun Li, PhD2, Shannon Carroll, PhD1, Shantae Lacey1, Yi Xing, PhD2, Eric C. Liao, MD, PhD1. My 26, 2025. American Association of plastic Surgeons 103<sup>rd</sup> Annual Meeting, May 26, 2025
- 2025 May      Exploring NGF Mechanisms In Innervation-dependent Corneal Healing: Novel Therapies For Neurotrophic Keratopathy. Arif Hussain, MD1, Kaveh Mirmoeini, MD2, Chilando Mulenga, BS1, Jordan Crabtree, BS1, Kiana Tajdaran, MD2, Ruby Shalom-Feuerstein, Phd3, Gregory Borschel, MD1, Konstantin Feinberg, Phd1 May 3, 2025. Plastic Surgery Research Council 70<sup>th</sup> Annual Meeting.
- 2025 May      A Novel Rodent Model For Neurotrophic Keratopathy: Retro-orbital Nasociliary Neurotomy. Arif Hussain, MD, Chilando Mulenga, BS, Jordan Crabtree, BS, Konstantin Feinberg, Phd, Gregory Borschel, MD. May 2, 2025. Plastic Surgery Research Council 70<sup>th</sup> Annual Meeting.
- 2025 March      Keynote speaker: Facial Paralysis in Moebius Syndrome. Chinese Society of Plastic Surgeons Annual Meeting (PRS Week); Shanghai, People’s Republic of China. March 21 2025
- 2025 Feb      Mechanisms Governing Nerve- mediated Control of Corneal Epithelial Renewal : New Hope for Patients with Neurotrophic Keratopathy | Arif Hussain MD, Chilando Mulenga BS, Jordan Crabtree BS, Konstantin, Feinberg PhD, Gregory Borschel MD. Indiana University Division of Plastic Surgery Annual JJ Coleman Research Day

- 2025 Feb **Indiana University Division of Plastic Surgery Annual JJ Coleman Research Day Award for Best Student Presentation. Indianapolis, Indiana** Awardee: Jordan Crabtree BS | Long-term sensory and visual clinical outcomes following corneal neurotization | Jordan R Crabtree BS, Khoa Tran MPH, Arif Hussain MD, Konstantin Feinberg PhD, Asim Ali, MD, Gregory H Borschel MD
- 2025 Feb Invited Faculty / Visiting Professor Lecture: "Facial Paralysis Reconstruction in Children." Grand Rounds. University of Texas, San Antonio, Division of Plastic Surgery. Faculty coordinator, Mahdi Malekpour. San Antonio, Texas
- 2025 Feb Invited Panelist / Moderator: Dr. Tommy Nai-Jen Chang (Taiwan): *"Robotic-Assisted Sympathetic Trunk Reconstruction: 160+ Case Experiences in Chang-Gung"*. Dr. Johnny Chuieng-Yi Lu (Taiwan) will moderate the talk. Drs. Gregory Borschel (U.S.A.), Ronald Zuker (Canada), Isao Koshima (Japan), Jonathan Winograd (U.S.A.), Jonathan Cheng (U.S.A.), and Mariano Sokolovsky (Argentina), panelists.
- 2025 Jan Two Birds With One Stone: Combined Early Nerve Reconstruction and Latissimus Dorsi Teres Major Tendon Transfer Improves Outcomes In Obstetrical Brachial Plexus Palsy  
Chilando M Mulenga, B.S; Khoa Dang Tran, MPH; Jordan R Crabtree, B.S; Jeffrey N Gross, MD; Joshua M Adkinson, MD; Gregory H Borschel, MD; 2025 Annual meeting of the American Society for Peripheral Nerve (ASPN)
- 2025 Jan A Novel Rodent Model for Neurotrophic Keratopathy: Retro-orbital Nasociliary Neurotomy  
Arif Hussain, MD1; Chilando M Mulenga, BS1; Jordan R Crabtree, BS1; Konstantin Feinberg, PhD1; Gregory H Borschel, MD1,2  
2025 Annual meeting of the American Society for Peripheral Nerve (ASPN)
- 2025 Jan The Mechanism of NGF Signaling in Innervation-dependent Corneal Epithelial Renewal: New Topical Treatment for Neurotrophic Keratopathy  
Arif Hussain, MD1; Kaveh Mirmoeini, MD1; Chilando M Mulenga, B.S1; Jordan R Crabtree, B.S1; Kiana Tajdaran, MD, MASc2; Mario Henriquez, BS1; Noam Blum, BS3; Ruby Shalom-Feuerstein, PhD3; Gregory H Borschel, MD1; Konstantin Feinberg, PhD1. 2025 Annual meeting of the American Society for Peripheral Nerve (ASPN)
- 2025 Jan The Mechanism of NGF Signaling in Innervation-dependent Corneal Epithelial Renewal: New Topical Treatment for Neurotrophic Keratopathy  
Arif Hussain, MD1; Kaveh Mirmoeini, MD1; Chilando M Mulenga, B.S1; Jordan R Crabtree, B.S1; Kiana Tajdaran, MD, MASc2; Mario Henriquez, BS1; Noam Blum, BS3; Ruby Shalom-Feuerstein, PhD3; Gregory H Borschel, MD1; Konstantin Feinberg, PhD1. 2025 Annual meeting of the American Society for Peripheral Nerve (ASPN)

- 2025 Jan Faculty panelist: Facial Reanimation: Techniques vs Outcomes. Moebius Syndrome and Bilateral Facial Paralysis. Borschel, GH. 2025 Annual meeting of the American Society for Peripheral Nerve (ASPN) joint meeting with the American Society for Reconstructive Microsurgery (ASRM); Waikoloa, Hawaii. Co-panelists Phuong Ngyuen, Joe Dayan, Michael Klebuc
- 2025 Jan Faculty panelist: Sewing with the Nerve Masters. Borschel, GH. 2025 Annual meeting of the American Society for Peripheral Nerve (ASPN) joint meeting with the American Society for Reconstructive Microsurgery (ASRM); Waikoloa, Hawaii. Co-panelists Shai Rozen, Kristen Davidge, Jaret Olson
- 2025 Jan Faculty panelist: Birth Brachial Plexus Injuries. Obstetrical brachial plexus palsy: An algorithmic approach. Borschel, GH. 2025 Annual meeting of the American Society for Peripheral Nerve (ASPN) joint meeting with the American Association for Hand Surgery (AAHS); Waikoloa, Hawaii. Co-panelists Aaron Berger, Paige Fox, Nick Pulos, Erin Meisel, Meagan Pehnke
- 2025 Jan Faculty panel moderator: What technology do I find helpful for peripheral nerve injury / research? ASPN IC 301. Borschel, GH. 2025 Annual meeting of the American Society for Peripheral Nerve (ASPN) joint with the American Association for Hand Surgery (AAHS) and the American Society for Reconstructive Microsurgery (ASRM); Waikoloa, Hawaii
- 2025 Jan Best paper award: Long-term sensory and visual clinical outcomes following corneal neurotization. Jordan Crabtree. 2025 Annual meeting of the American Society for Peripheral Nerve (ASPN), Waikoloa, Big Island of Hawaii, USA
- 2024 Nov Keynote speaker: Facial Paralysis in Children. Cincinnati Children's Medical Center. Tri-State Craniofacial and Cleft Conference. Faculty Host: Brian Pan, MD. Cincinnati, OH
- 2024 Oct Visiting Professor: Corneal neurotization: a nerve-based treatment for blindness. New England Eye Center, Tufts University, Boston, MA. Faculty Host: Pedram Hamrah, MD, PhD
- 2024 Oct Visiting Professor: Intraoperative teaching with live surgery: Corneal neurotization. New England Eye Center, Tufts University, Boston, MA. Faculty Host: Pedram Hamrah, MD, PhD
- 2024 Oct Visiting Professor: Corneal neurotization: a nerve-based treatment for blindness. New England Eye Center, Tufts University, Boston, MA. Faculty Host: Pedram Hamrah, MD, PhD

2024 Oct	Visiting Professor: Schwann cells – the key the understanding neurotrophic keratopathy. New England Eye Center, Tufts University, Boston, MA; Faculty Host: Pedram Hamrah, MD, PhD
2024 Oct	Grand Rounds Visiting Lecturer: Corneal neurotization: a nerve based treatment for blindness. University of Texas San Antonio.
2024 Sep	Invited Speaker. American Association for Hand Surgery. The Great Debate: Electrical Stimulation: How it Works and How to Use It.
2024 Sep	Invited Speaker: Corneal neurotization: a nerve based treatment for blindness. International Microsurgery Club. Taipei, taiwan
2024 Aug	Corneal neurotization: bench to bedside. European Plastic Surgery Research Council Keynote Speaker, Brno, Czech Republic
2024 May	Invited Faculty: American Society of Maxillofacial Surgeons (ASMS): Facial Paralysis.
2024 May	The Mechanism of Nerve Growth Factor Signaling in Corneal Epithelial Renewal. Feinberg K, Mulenga C, Hussain A, Borschel GH. ARVO 2024 Annual Meeting
2024 Mar	Corneal Neurotization: Bench to Bedside. Mountain West Society of Plastic Surgeons Annual Meeting Invited Speaker. Whistler, British Columbia, Canada, March 7-10, 2024
2024 Mar	Moebius Syndrome: The Importance of Rare Disorders Advocacy Panel Discussion. Rare Disorders Advocacy Organization. Greatness Adewumi / jointly sponsored by the Moebius Syndrome Foundation.
2024 Feb	Invited Faculty and Panelist. Corneal neurotization for neurotrophic keratopathy. ICOPLAST Symposium in Facial Paralysis. International Confederation of Plastic Surgery Societies. Feb 19, 2024.
2024 Feb	Panelist – Innovation in Nerve Reconstruction and Nerve Regeneration. International Microsurgery Club. Feb 11, 2024
2024 Jan	Chair and Moderator, Panel – Blink Restoration in facial paralysis. American Society for Reconstructive Microsurgery and American Society for Peripheral Nerve 2024 joint panel

- 2023 Dec      Invited Faculty. Facial paralysis in children and periocular reconstruction. Periocular reconstruction in facial paralysis. Annual Meeting of the Nordic Facial Paralysis Society. Uppsala, Sweden.
- 2023 Oct      Invited Panelist. Facial paralysis A to Z. Periocular reconstruction in facial paralysis. Plastic Surgery the Meeting. American Society of Plastic Surgeons Annual Meeting. Austin, TX, USA
- 2023 Oct      Surgical Management of Sirenomelia: A Case Study. Adi Patel, Jeffrey Gross, Gregory Borschel.  
Plastic Surgery the Meeting. American Society of Plastic Surgeons Annual Meeting. Austin, TX, USA
- 2023 Oct      The Role of Early Latissimus Dorsi Tendon Transfers for Shoulder Movement and Stability in Neonatal Brachial Plexus Injury  
Jeffrey Gross, Nikhi Singh, Gregory Borschel, Joshua Adkinson  
Plastic Surgery the Meeting. American Society of Plastic Surgeons Annual Meeting. Austin, TX, USA
- 2023 Sept 16      Invited Faculty Lecturer, Medical University of Vienna Facial Palsy Course, Vienna, Austria. Lecture series including 1) facial paralysis in children; 2) how to start a program in corneal neurotization; 3) advances in nerve regeneration.
- 2023 Sept 18      Keynote Lecture, German Society of Plastic Surgeons, Heidelberg, Germany. Corneal neurotization: a novel treatment for blindness. Bench to bedside
- 2023 Aug 16      Keynote Lecture, European Plastic Surgery Research Council, Geneva, Switzerland. The role of FK506 in nerve regeneration: bench to bedside
- 2022 Dec 16      Visiting Professor: Vanderbilt University Department of Plastic Surgery Grand Rounds. "Corneal neurotization – a new treatment for neurotrophic keratopathy"
- 2022 Dec 16      Visiting Professor: Vanderbilt University Department of Plastic Surgery Lecture: Facial paralysis. Didactic lecture and anatomy lab prosection with trainees



- 2022 Nov 16 Barwick Endowed Lectureship. Duke University Department of Surgery. "Corneal neurotization – a new treatment for neurotrophic keratopathy." Local hosts Brett Phillips and Jeffrey Marcus
- 2022 Nov 10 Visiting Professor: University of Rochester Department of Surgery Grand Rounds. "Corneal neurotization – a new treatment for neurotrophic keratopathy." Local host Jonathan Leckenby
- 2022 Nov 11 Invited Speaker for University of Rochester Division of Plastic Surgery Resident Research Day – "Nerve Regeneration"
- 2022 Nov 8 US Department of Veterans Affairs Stoke Rehabilitation Lecture (SQUINT Lecture Series): Neurotrophic Keratopathy from central nervous system lesion and corneal neurotization. Washington, D.C., United States
- 2022 Oct 30 Moderator and Chair: Facial paralysis – cutting edge techniques. Plastic Surgery the Meeting. American Society of Plastic Surgeons Annual Meeting. Boston, MA, USA
- 2022 Oct 30 Facial sensory reconstruction. Plastic Surgery the Meeting. American Society of Plastic Surgeons Annual Meeting. Boston, MA, USA
- 2022 Oct 14 Presentation. Brachial plexus injuries in children. Moi Referral and Teaching Hospital Department of Orthopedic Surgery Grand Rounds. Eldoret, Kenya
- 2022 Oct 16 Presentation. Nerve Regeneration. Moi Referral and Teaching Hospital Department of Orthopedic Surgery Grand Rounds. Eldoret, Kenya
- 2022 Aug Visiting Professor: Geneva University Hospital and University of Geneva. Facial Paralysis
- 2022 Aug Visiting Professor: Geneva University Hospital and University of Geneva. Nerve Regeneration
- 2022 Aug Visiting Professor: Geneva University Hospital and University of Geneva. Corneal Neurotization

- 2022 Jun 11 **Presentation.** Plastic Surgery Research Council 67<sup>th</sup> Annual Meeting. Toronto, Canada. has “Schwann Cells Are Required For Efficient Corneal Wound Healing” Presented by Kaveh Mirmoeini
- 2022 Apr 29 **Keynote Lecturer.** Bilateral facial paralysis in children. International Facial Nerve Society (IFNS) Quadrennial Meeting. Seoul, South Korea
- 2022 Apr 30 **Invited Lecturer.** Facial paralysis in children. International Facial Nerve Society (IFNS) Quadrennial Meeting. Seoul, South Korea
- 2022 Mar 3 **Invited Lecturer.** Facial paralysis in children. Lecture to Sertoma Club of Indianapolis, Indiana (Non-governmental charitable organization).
- 2022 Feb 9 **Visiting Professor.** University of Pittsburgh Dept of Plastic Surgery. Facial Paralysis in Children. Pittsburgh, PA, USA
- 2022 Jan 16 **Presidential Address:** American Society for Peripheral Nerve. Collaboration in Nerve Regeneration. Carlsbad, CA, USA
- 2021 Nov 15 **Course Faculty.** 2021 American Academy of Ophthalmology Annual Meeting. Corneal neurotization for neurotrophic keratopathy: background and technique. The use of nerve grafts for minimally invasive corneal neurotization. New Orleans, USA
- 2021 Nov 14 **Course Faculty.** 2021 American Academy of Ophthalmology Annual Meeting. Corneal neurotization techniques: sural nerve grafting and use of great auricular nerve. Skills Transfer Laboratory. New Orleans, USA
- 2021 Nov 14 **Course Faculty.** 2021 American Academy of Ophthalmology Annual Meeting. Corneal neurotization techniques. Overview of surgical donor sensory nerve (SON, STN, ION, GAN) and sural nerve anatomy & basic principles of nerve surgery & regeneration. New Orleans, USA
- 2021 Oct 29 **Course Director.** Advances in Nerve Injury (Panel / Course Chair). Plastic Surgery the Meeting (American Society of Plastic Surgeons Annual Meeting); October 2021, Atlanta, GA, USA; panelists Sami Tuffaha, Phuong Nguyen, and Amy Moore
- 2021 Oct 22 **Invited Speaker.** Association of Plastic Surgeons of India (APSI) Annual Meeting (APSICON 2021). Current Status and Future Directions in Facial Reanimation. Corneal neurotization. Scientific Committee Chair, Sanjay Mahendru MBBS
- 2021 Oct 22 **Invited Speaker.** Association of Plastic Surgeons of India (APSI) Annual Meeting (APSICON 2021). Current Status and Future Directions in Facial Reanimation. Facial paralysis in Children

- 2021 Oct 11 **Invited Keynote Speaker.** American Association of Pediatrics (AAP) annual meeting. (OD0361) Recognizing and Treating Facial Nerve Palsy in Children: What's new in facial paralysis surgery for children? Philadelphia, Pennsylvania, Oct 8-11, 2021
- 2021 Oct 6 **Visiting Professor.** University of Wisconsin Division of Plastic Surgery, USA. Corneal neurotization: a new paradigm. Madison, WI, USA
- 2021 Sep 25 **Keynote Lecturer.** Electrical stimulation and pediatric nerve injuries. American Society of Electroneurodiagnostic Technologists – ISETT 2021 Annual Meeting. Indianapolis, USA
- 2021 Sep 20 **Invited Lecturer and Course Faculty.** Vienna Facial Paralysis Meeting 2021. Vienna, Austria. Facial paralysis in children.
- 2021 Sep 20 **Invited Lecturer and Course Faculty.** Vienna Facial Paralysis Meeting 2021. Vienna, Austria. Corneal neurotization: technique and rationale.
- 2021 Sept 13 **Invited Panelist.** Facial Paralysis Innovations. Chang Gung Memorial Hospital, Taipei/Linkou; Taiwan (Republic of China)
- 2021 July 15 **Invited Panelist.** Facial Paralysis Innovations. Moebius Syndrome Foundation Scientific Advisory Board Meeting. "Blink Reconstruction in Moebius Syndrome; an Update"
- 2021 Feb 24 **Invited Visiting Professor.** Yale Division of Plastic Surgery, USA. Facial paralysis in children. New Haven, Connecticut, USA
- 2021 Feb 6 **Invited Lecturer;** American Society for Pediatric Ophthalmology, National Journal Club (Online Meeting): Corneal Neurotization for Congenital Anomalies; in collaboration with Asim Ali (SickKids, Toronto)
- 2021 Feb 3 **Visiting Professor.** University of Wisconsin Division of Plastic Surgery, USA. Facial paralysis in children. Corneal neurotization: Madison, Wisconsin USA
- 2021 Jan 4 **Invited Speaker.** Review of article 'Treatment of neurotrophic keratopathy with minimally invasive corneal neurotization: long-term clinical outcomes and evidence of corneal reinnervation.' American Association of Pediatric Ophthalmology and Strabismus Journal Club, San Francisco, CA, United States.
- 2020 Nov 21 **Invited Speaker.** Facial Reanimation Surgery Meeting. Prince of Wales Hospital, Chinese University of Hong Kong, Hong Kong. "Pediatric Facial Paralysis;" "Corneal Neurotization."
- 2020 July **Invited Moderator and Panelist.** St. Andrew's Centre Facial Palsy Management Webinar Series 3; Chemsford, United Kingdom
- 2020 July **Invited Speaker. Facial Paralysis in Children** St. Andrew's Centre Facial Palsy Management Webinar Series 1; Chemsford, United Kingdom

- 2020 June 11 **Invited Visiting Professor.** Buncke Clinic Virtual Online Atlas of Microsurgery. Corneal Neurotization. The Buncke Clinic Virtual Visiting Professor Series. Reconstructive Microsurgery. San Francisco, California, USA.
- 2020 May 25 **Invited Speaker.** Virtual Grand Rounds. Corneal Neurotization. 75 attendees: surgeons, residents and students. Columbian Plastic Surgeons. Bogota, Columbia.
- 2020 May 8 **Co-Author.** Corneal Schwann cells abundantly populate the limbal niche and regulate limbal stem cells. Association for Research in Vision and Ophthalmology Annual Meeting. Baltimore, Maryland, United States. Presenters: Feinberg K, Ali A, **Borschel G.** Presented remotely.
- 2020 Apr 27 **Invited Speaker.** Virtual Grand Rounds. Facial Paralysis. 415 attendees/viewed. American Society of Plastic Surgeons. Arlington Heights, Illinois, USA.
- 2020 Jan 11 **Invited Speaker. Moderator.** American Society of Peripheral Nerve Scientific Paper Session II. American Society of Peripheral Nerve. Ft. Lauderdale, Florida. USA.
- 2020 Jan 11 **Invited Speaker. Instructional course.** Clinical applications of end to side neurorrhaphy : does it work and when should i use it ? American Society of Peripheral Nerve. Ft. Lauderdale, Florida. USA.
- 2020 Jan 10 **Invited Speaker.** Local delivery of FK506 cells, drugs and devices: what is on the horizon for nerve ? American Society of Peripheral Nerve. Ft. Lauderdale, Florida. USA.
- 2019 Dec 3 **Invited Speaker.** A mouse model of corneal regeneration that includes limbal stem markers and in vivo neuronal imaging. Ophthalmology and Vision Sciences Department at the University of Toronto, Toronto, Ontario, Canada.
- 2019 Nov 20 **Invited Speaker.** Facial Paralysis in Moebius Syndrome. Plastic and Reconstructive Surgery Rounds. The Hospital for Sick Children. Toronto, Ontario, Canada.
- 2019 Nov 5 **Invited Speaker.** Neurotrophic keratopathy and corneal neurotization: cellular processes in rodent models. 24th Sunderland Society Meeting. Jerusalem, Israel.
- 2019 Nov 4 **Invited Speaker.** Electrical stimulation for thirty minutes is as effective as one hour for enhancing peripheral nerve regeneration. 24th Sunderland Society Meeting. Jerusalem, Israel.
- 2019 Oct 15 **Invited Speaker. Course Teaching.** Neurotization for Neurotrophic Keratopathy: background and technique. Instructional course on corneal neurotization. American Academy of Ophthalmology. San Francisco, USA.

- 2019 Sept 28 **Invited Speaker.** Basic science in facial nerve reconstruction. Facial Palsy Course. Center for Anatomy and Cell Biology Medical University. Vienna, Austria.
- 2019 Sept 27 **Invited Speaker.** Facial reanimation in children. Facial Palsy Course. Center for Anatomy and Cell Biology Medical University. Vienna, Austria.
- 2019 Sept 27 **Invited Speaker.** Tips and Tricks Lecture: Insetting of Gracilis Muscle for Smile Restoration. Facial Palsy Course. Center for Anatomy and Cell Biology Medical University. Vienna, Austria.
- 2019 Sept 26 **Invited Speaker.** Corneal Neurotization: Step by step. Facial Palsy Course. Center for Anatomy and Cell Biology Medical University. Vienna, Austria.
- 2019 Sept 26 **Invited Speaker.** Corneal Neurotization. Facial Palsy Course. Center for Anatomy and Cell Biology Medical University. Vienna, Austria.
- 2019 Sept 22 **Invited Speaker.** Facial Reanimation and Moebius Syndrome. American Society of Plastic Surgeons. San Diego, California, USA
- 2019 Sept 22 **Invited Speaker.** Microsurgery in Pediatric Patients. American Society of Plastic Surgeons. San Diego, California, USA
- 2019 Aug 7 **Invited Visiting Professor.** Treatment of Apert's Syndactyly. 36th Annual Orthopaedic Hand Day Conference. Cincinnati Children's Hospital. Cincinnati, Ohio, USA
- 2019 Aug 7 **Invited Visiting Professor.** Enhancing Nerve Regeneration. 36th Annual Orthopaedic Hand Day Conference. Cincinnati Children's Hospital. Cincinnati, Ohio, USA
- 2019 July 17 **Invited Speaker.** Facial Paralysis in Children. Plastic and Reconstructive Surgery Rounds. The Hospital for Sick Children. Toronto, Ontario, Canada
- 2019 June 15 **Invited Speaker.** New Trends in Facial Palsy II. World Society for Reconstructive Microsurgery. Bologna, Italy
- 2019 June 14 **Invited Speaker.** Soft Tissue Reconstruction After Resection of Pediatric Sarcomas. World Society for Reconstructive Microsurgery. Bologna, Italy
- 2019 June 13 **Invited Speaker.** Short gap nerve repair. World Society for Reconstructive Microsurgery. Bologna, Italy
- 2019 May 28 **Invited Speaker.** Innovation update: corneal neurotization procedure. Perioperative Services Chiefs Committee meeting. The Hospital for Sick Children. Toronto, Ontario, Canada. Presenters: Ali A and **Borschel G.**
- 2019 May 8 **Invited Speaker.** Corneal neurotization. Plastic and Reconstructive Surgery Rounds. The Hospital for Sick Children. Toronto, Ontario, Canada.
- 2019 May 2 **Invited Moderator.** Session 1. Plastic Surgery Research Council. Baltimore, Maryland, USA.

- 2019 April 13 **Invited Speaker.** Use of end to side in new clinical situations. International Symposium Institut de la Main. Peripheral nerve reconstruction: News and fake news. Paris, France.
- 2019 April 13 **Invited Speaker.** The value of electrical stimulation. International Symposium Institut de la Main. Peripheral nerve reconstruction: News and fake news. Paris, France.
- 2019 April 13 **Invited Speaker.** Corneal reinnervation: Sight saving Microsurgery. International Symposium Institut de la Main. Peripheral nerve reconstruction: News and fake news. Paris, France.
- 2019 April 13 **Invited Speaker.** Drug and growth factor delivery. International Symposium Institut de la Main. Peripheral nerve reconstruction: News and fake news. Paris, France.
- 2019 April 9 **Invited Speaker.** Modification of the lengthening temporalis myoplasty for smile reanimation in facial paralysis. American Association of Plastic Surgeons. Baltimore, Maryland, USA.
- 2019 April 6 **Invited Speaker.** Facial Reanimation. American Association of Plastic Surgeons. Baltimore, Maryland, USA.
- 2019 April 5 **Invited Keynote Speaker.** Surgical techniques and neurobiology of Corneal neurotization. The Dyer Grant Conference. Houston Methodist Walther Tower. Houston, Texas.
- 2019 Mar 15 **Invited Speaker.** Facial reanimation in children. The 18th Annual Shanghai International Plastic and Aesthetic Surgery Conference. Shanghai Ninth People's Hospital. Shanghai, China.
- 2019 Mar 15 **Invited Speaker.** Corneal Neurotization. The 18th Annual Shanghai International Plastic and Aesthetic Surgery Conference. Shanghai Ninth People's Hospital. Shanghai, China.
- 2019 Feb 3 **Invited Faculty Session Speaker.** Diversity and Inclusivity. Unsolved Problems of Facial Palsy - Smile and Beyond. American Society for Reconstructive Microsurgery. Palm Springs, California.
- 2019 Feb 3 **Invited Course Instructor.** Restoration of Sensation. American Society of Peripheral Nerve. Palm Springs, California.
- 2019 Feb 1 **Invited Speaker.** Facial Reanimation - Optimizing Power Augmenting Input. Bench to bedside augmenting input. American Society for Reconstructive Microsurgery. Palm Springs, California.
- 2019 Feb 1 **Invited Faculty Session.** Diversity and Inclusivity / Master Series in Microsurgery, Battle of the Masters. American Society for Reconstructive Microsurgery. Palm Springs, California.
- 2018 Nov9 **Invited Speaker.** Nerve grafts and nerve transfers to treat neurotrophic keratopathy and restore vision. Second Annual Peripheral Nerve Symposium. London, Ontario, Canada.

- 2018 Oct 1 **Invited Speaker.** Facial reanimation outcomes. The American Society of Plastic Surgeons. Plastic Surgery The Meeting. Chicago, Illinois.
- 2018 Sept 30 **Invited Speaker.** (24110) Comprehensive Facial Paralysis Surgical Techniques: Animated Gracilis Free Flap, Hypoglossal Nerve Transfer and Static Techniques - Cadaver Demo. The American Society of Plastic Surgeons. Plastic Surgery The Meeting. Chicago, Illinois.
- 2018 Aug 25 **Moderator.** Scientific Session X: Education and Technology. European Plastic Surgery Research Council. Hamburg, Germany.
- 2018 Aug 24 **Moderator.** European Plastic Surgery Research Council Highlight Session. Scientific Session. Hamburg, Germany
- 2018 Aug 24 **Invited Speaker.** Innovation in Plastic Surgery: Corneal Neurotization. Keynote Lecture VI. European Plastic Surgery Research Council. Hamburg, Germany
- 2018 July 25 **Invited Speaker.** Midfacial Animation in Moebius Syndrome. Plastic Surgery Divisional Rounds. The Hospital for Sick Children. Toronto, Ontario, Canada.
- 2018 May 17 **Moderator.** Plastic Surgery Research Council. Session 1. Birmingham, Alabama, USA.
- 2018 Apr 10 **Invited Speaker.** Corneal Neurotization for Neurotrophic Keratopathy: Two year outcomes. American Association of Plastic Surgeons. Seattle, Washington, USA.
- 2018 Mar 5 **Invited Speaker.** Nerve transfers to address blindness in neurotrophic keratopathy: Clinical outcome. Sunderland Society Meeting. Stanford University. Li Ka Shing Conference Center, San Francisco, California.
- 2018 Mar 4 **Invited Speaker.** The role of binding proteins in localized FK506 Delivery to enhance nerve regeneration. Sunderland Society Meeting. Stanford University. Li Ka Shing Conference Center, San Francisco, California.
- 2018 Feb 29 **Invited Speaker.** How to avoid errors in facial paralysis reconstruction: tips and tricks. ENT Commissioned Training. Contemporary Approach in Managing Facial Paralysis Conference, Tseung Kwan O Hospital, Hong Kong
- 2018 Feb 29 **Invited Speaker.** Challenging cases in cross face nerve grafts. ENT Commissioned Training. Contemporary Approach in Managing Facial Paralysis Conference, Tseung Kwan O Hospital, Hong Kong
- 2018 Feb 29 **Invited Speaker.** Emerging Strategies to augment the power of cross face nerve grafts. ENT Commissioned Training. Contemporary Approach in Managing Facial Paralysis Conference, Tseung Kwan O Hospital, Hong Kong

- 2018 Feb 29 **Invited Speaker.** Use of electrical stimulation to enhance nerve regeneration. ENT Commissioned Training. Contemporary Approach in Managing Facial Paralysis Conference, Tseung Kwan O Hospital, Hong Kong
- 2018 Feb 28 **Invited Speaker.** Management of congenital lower lip paralysis. ENT Commissioned Training. Contemporary Approach in Managing Facial Paralysis Conference, Tseung Kwan O Hospital, Hong Kong
- 2018 Feb 28 **Invited Speaker.** Sural nerve harvest: Unilateral free muscle transfer and Free muscle transfer for Mobius syndrome. ENT Commissioned Training. Contemporary Approach in Managing Facial Paralysis Conference, Tseung Kwan O Hospital, Hong Kong
- 2018 Feb 28 **Invited Speaker.** Blink restoration for paralytic lagophthalmos and neurotrophic keratopathy. ENT Commissioned Training. Contemporary Approach in Managing Facial Paralysis Conference, Tseung Kwan O Hospital, Hong Kong
- 2018 Feb 28 **Invited Speaker.** Facial paralysis in children: functional and aesthetic considerations and key concepts. ENT Commissioned Training. Contemporary Approach in Managing Facial Paralysis Conference, Tseung Kwan O Hospital, Hong Kong
- 2018 Feb 28 **Invited Speaker.** How our facial paralysis clinic works. ENT Commissioned Training. Contemporary Approach in Managing Facial Paralysis Conference, Tseung Kwan O Hospital, Hong Kong
- 2018 Feb 10 **Co-author:** Corneal neurotization in the treatment of neurotrophic keratitis: long-term follow-up. Asia-Pacific Academy of Ophthalmology Congress. Hong Kong. Presenter(s): **Ali A**, Borschel G, Catapano J, Fung S, Zuker R.
- 2018 Jan 12 **Invited Speaker.** Corneal Neurotization. ASPN 2018 Peripheral nerve surgery and restoration of sensation. ASPN Meeting. Phoenix, Arizona, USA.
- 2017 Nov 17 **Invited Speaker.** Topical FK506 to enhance nerve regeneration. First Canadian Peripheral Nerve Symposium. London, Ontario, Canada
- 2017 Oct 18 **Invited Speaker.** Corneal Innervation. University of Toronto Peripheral Nerve Update. Peter Gilgan Centre for Research and Learning. Toronto, Ontario, Canada.
- 2017 Sept 22 **Invited Speaker.** Neurotrophic Keratopathy: Restoration of Sensation and Ocular Surface Health Using Nerve Transfers. St. Michael's Hospital. Grand Rounds. Toronto, Ontario, Canada.



- 2017 Aug 16 **Invited Speaker.** Facial paralysis reconstruction in Mobius syndrome. The Hospital for Sick Children. Plastic and Reconstructive Surgery Rounds. Toronto, Ontario, Canada.
- 2017 Aug 5 **Invited Speaker.** Panel Session: Pediatric facial paralysis 2. International Facial Nerve Symposium, Los Angeles, California
- 2017 Aug 5 **Invited Speaker.** Introduction to Corneal Neurotization. International Facial Nerve Symposium, Los Angeles, California
- 2017 Aug 4 **Invited Speaker.** The Scientific Rationale for Therapeutic 20 Hz Intraoperative Electrical Stimulation for Facial Nerve. International Facial Nerve Symposium, Los Angeles, California
- 2017 Aug 4 **Invited Speaker.** Local Delivery of FK506 to Enhance Nerve Regeneration. International Facial Nerve Symposium, Los Angeles, California
- 2017 Aug 3 **Invited Speaker.** Enhancement of facial nerve motoneuron regeneration through cross-face nerve grafts by adding end-to-side sensory axons. International Facial Nerve Symposium, Los Angeles, California
- 2017 Jun **Co-author.** Corneal neurotization reinnervates anaesthetic corneas and improves ocular surface health. Canadian Ophthalmological Society Annual Meeting. Montreal, Quebec, Canada. Presenter(s): Ali A, Fung S, Catapano J, Halliday W, Ho E, Zuker R, **Borschel G.**
- 2017 May 19 **Invited Speaker.** Hand Transplant Update; Preparing to List SickKids First Patient, The Hospital for Sick Children, Transplant and Regenerative Education Rounds, Toronto, Ontario, Canada. **Presenter(s):\_Borschel, Gregory H.**
- 2017 May **Invited Speaker.** William Grabb Visiting Professor, University of Michigan; Facial Paralysis in Children.
- 2017 May 8 **Co-Author.** A rat model of corneal reinnervation using nerve graft and transfers from the contralateral face. Association for Research in Vision and Ophthalmology Annual Meeting. Baltimore, Maryland, United States. Presenter(s): Catapano J, Antonyshyn K, Zhang J, **Borschel GH**, Ali A. Published in Investigative Ophthalmology & Visual Science 57(12); 6164.
- 2017 May 4 **Co-Author.** Documentation of improved ocular surface health after corneal neurotization and reinnervation using magnetoencephalography and histology. Plastic Surgery Research Council Meeting. Durham, North Carolina, USA. Presenter(s): Catapano J, Fung SSM, Halliday W, Jobst C, Cheyne D, Ho ES, Zuker R, Ali A and **Borschel GH.**
- 2016 May 5 **Co-Author.** Developing an animal model of corneal neurotization as a means of restoring sensation and improving corneal epithelial

maintenance and repair. The Association for Research in Vision and Ophthalmology Annual Meeting. Seattle, Washington, United States. Presenter(s): Catapano J, Willand MP, Ali A, **Borschel GH**. Published in Investigative Ophthalmology & Visual Science, 57(12); 6164-6164.

- 2015 Nov 7     **Keynote Speaker.** Paediatric Facial Reanimation. St. Andrew's Centre for Plastic Surgery and Burns. Toronto, Essex, United Kingdom. Presenter(s): **Borschel, Gregory H.**
- 2015 Nov 7     **Keynote Speaker.** Corneal reinnervation and cutting edge research developments in facial reanimation. St. Andrew's Centre for Plastic Surgery and Burns. Toronto, Essex, United Kingdom. Presenter(s): **Borschel, Gregory H.**
- 2015 Nov 7     **Keynote Speaker.** Post surgical problems and how to address them. St. Andrew's Centre for Plastic Surgery and Burns. Toronto, Essex, United Kingdom. Presenter(s): **Borschel, Gregory H.**
- 2015 Oct 1     **Invited Speaker.** Corneal neurotization. Department of Ophthalmology and Vision Sciences. University of Toronto. Toronto, Ontario, Canada. Presenter(s): **Borschel GH, Ali A.** Research Seminar Series.
- 2015 Aug       **Invited Speaker.** Novel Approaches to the Study of Speech and Facial Motor Control using MEG. Beijing, Beijing, China. Presenter(s): Cheyne, Douglas; **Borschel, Gregory H.**; Jobst, Cecilia; Alves, Natasha; van Lieshout, Pascal.
- 2015 Jun 7     **Moderator.** Session 1 - Imaging. Sunderland Society Meeting. Ann Arbor, Michigan, United States. Michel Kliot; Michael DiPietro; Jonathan Finnoff; Hemant Parmar.
- 2015 Jun 7     **Moderator.** Session 2 - Adult Brachial Plexus, Peripheral Nerve, Prosthesis. Sunderland Society Meeting. Ann Arbor, Michigan, United States. Paul Cederna; Mariano Socolovsky; Kevin C Chung.
- 2015 Jun 7     **Presenter.** Corneal Neurotization: A minimally invasive surgical approach to treat neurotrophic keratopathy. Sunderland Society Meeting. Ann Arbor, Michigan, United States. **Borschel, Gregory H.**
- 2015 Jun 7     **Presenter.** An engineered biocompatible drug delivery system enhances nerve regeneration after delayed repair. Sunderland Society Meeting. Ann Arbor, Michigan, United States. **Borschel, Gregory H.**
- 2015 May 15    **Moderator.** Plastic Surgery Research Council. Seattle, Washington, United States.

- 2015 May 12     **Invited Speaker.** SickKids experience with Gracillis and the cross face nerve graft. Royal Society of Medicine. London, London, City of, United Kingdom. Presenter(s): **Borschel, Gregory H.**
- 2015 May        **Co-supervisor.** A novel animal model of corneal neurotization in a Thy-GFP+ rat: studying a novel solution to neurotrophic keratitis. The Association for Research in Vision and Ophthalmology Annual Meeting. Denver, Colorado, United States. Presenters: Catapano J, Willand M, Elbaz U, Gordon T, Ali A, **Borschel GH.** Poster Presentation. Published in Investigative Ophthalmology & Visual Science June 2015; 56(7):3073.
- 2015 Apr 17     **Presenter.** Electrical stimulation of the proximal stump. Techniques in Brachial Plexus Symposium. Paris, Paris, France. Presenter(s): **Borschel, Gregory H.**
- 2015 Apr 17     **Presenter.** Electrical stimulation of the proximal stump. Techniques in Brachial Plexus Symposium. Paris, Paris, France. Presenter(s): **Borschel, Gregory H.**
- 2015 Apr 11     **Panelist.** Technology in Plastic Surgery: What's cool, What's Hot and What's not. American Association of Plastic Surgeons. Scottsdale, Arizona, United States. Presenter(s): **Borschel, Gregory H.;** Dayan, Joseph; Selber, Jesse.
- 2015 Apr        **Co-author.** Restoration of Corneal Sensation in Anesthetic Corneas with Regional Nerve Transfers and Nerve Grafts. World Cornea Congress. San Diego, California, United States. Presenter(s): **Ali A,** Elbaz U, Borschel G, Zuker R.
- 2015 Mar 22     **Invited Speaker.** Nerve Transfers and Reconstructions. World Society for Reconstructive Microsurgery. Mumbai, India. Presenter(s): **Borschel, Gregory.**
- 2015 Mar 22     **Conducting a Master Class.** What's new in nerve reconstruction. World Society for Reconstructive Microsurgery. Mumbai, India. Presenter(s): **Borschel, Gregory.**
- 2015 Feb 28     **Presenter.** Multiple Syndactyly Releases: Update. Pediatric Hand Study Group. St. Louis, Missouri, United States. Presenter(s): **Borschel, Gregory.**
- 2014 Nov 21     **Invited Speaker.** Pediatric Microvascular Surgery. Craniomaxillofacial Surgery; Pediatric Reconstructive Surgery. New Orleans, Louisiana, United States. Presenter(s): **Borschel, Gregory H.**
- 2014 Oct 29     **Invited Speaker.** Pharmacologic Rescue of Motor and Sensory Function Following Neonatal Peripheral Nerve Injury. American College of

Surgeons. San Francisco, California, United States. Presenter(s):  
**Borschel, Gregory H.**

- 2014 Sep 20 **Invited Speaker.** Nerve Repair Research - Where are we today. American Society for Surgery of the Hand. Boston, Massachusetts, United States. Presenter(s): **Borschel, Gregory H.**
- 2014 Sep 13 **Invited Speaker.** Neonatal Brachial Plexus injury reconstruction. Dr. Fausto Viterbo / UNESP, Sao Paulo State University. Botucatu, São Paulo, Brazil. Presenter(s): **Borschel, Gregory H.**
- 2014 Sep 13 **Invited Speaker.** Corneal Neurotization. Dr. Fausto Viterbo / UNESP, Sao Paulo State University. Botucatu, São Paulo, Brazil. Presenter(s): **Borschel, Gregory H.**
- 2014 Sep 13 **Chair.** Brachial Plexus and Hand, II and III. Dr. Fausto Viterbo / UNESP, Sao Paulo State University. Botucatu, São Paulo, Brazil. Presenter(s): **Borschel, Gregory H.**
- 2014 Sep 13 **Chair.** Unusual Reinnervations II. Dr. Fausto Viterbo / UNESP, Sao Paulo State University. Botucatu, São Paulo, Brazil. Presenter(s): **Borschel, Gregory H.**
- 2014 Sep 13 **Chair.** Free Flaps II. Dr. Fausto Viterbo / UNESP, Sao Paulo State University. Botucatu, São Paulo, Brazil. Presenter(s): **Borschel, Gregory H.**
- 2014 Sep 12 **Invited Speaker.** Pharmacologic Rescue of Motor and Sensory Function by the Neuroprotective Compound P7C3 Following Neonatal Peripheral Nerve Injury in a Rat Model. Dr. Fausto Viterbo / UNESP, Sao Paulo State University. Botucatu, São Paulo, Brazil. Presenter(s): **Borschel, Gregory H.**
- 2014 Sep 12 **Invited Speaker.** A rat study of side-to side bridging to promote nerve regeneration after delayed surgical repair of transected nerve. Dr. Fausto Viterbo / UNESP, Sao Paulo State University. Botucatu, São Paulo, Brazil. Presenter(s): **Borschel, Gregory H.**
- 2014 Sep 12 **Invited Speaker.** Facial Paralysis in Children. Dr. Fausto Viterbo / UNESP, Sao Paulo State University. Botucatu, São Paulo, Brazil. Presenter(s): **Borschel, Gregory H.**
- 2014 Jul 20 **Presenter.** Aspects of Pediatric Facial Paralysis Reonstruction. Moebius Syndrome Symposium. Washington, Washington, United States. Presenter(s): **Borschel, Gregory H.**
- 2014 Jul 20 **Presenter.** Advances in Nerve Regeneration in Facial Paralysis. Moebius Syndrome Symposium. Washington, Washington, United States. Presenter(s): **Borschel, Gregory H.**

- 2014 Jul 17     **Presenter.** Advances in Nerve Regeneration Research. Moebius Syndrome Symposium. Washington, Washington, United States. Presenter(s): **Borschel, Gregory H.**
- 2014 Jul 11     Outcomes following lower extremity sarcoma resection and reconstruction with vascularized fibula flaps in a paediatric population. European Society of Plastic, Reconstructive and Aesthetic Surgery. Edinburgh, Scotland, United Kingdom. Presenter(s): Sainsbury, David. (Trainee Presentation).
- 2014 Jul 10     **Presenter.** Advances in Nerve Regeneration, Facial Paralysis and Cornea Reinnervation. Asaf Harofeh Medical Center. Kfar Adumim, Kfar Adumim, Israel. Presenter(s): **Borschel, Gregory H.**
- 2014 Jul 10     **Presenter.** Corneal Neurotization. Asaf Harofeh Medical Center / Grand Rounds. Kfar Adumim, Kfar Adumim, Israel. Presenter(s): **Borschel, Gregory H.**
- 2014 May 13     **Presenter.** Brachial Plexus Anatomy 101: A guided tour (book and surgical). Neonatal Brachial Plexus Palsy. Detroit, Michigan, United States. Presenter(s): **Borschel, Gregory H.**
- 2014 Apr 30     **Invited Speaker.** Facial Paralysis in Children. Mexican Association of Plastic, Reconstructive and Aesthetic Surgery. Mexico City, México, Mexico. Presenter(s): **Borschel, Gregory H.** (Trainee Presentation).
- 2014 Apr 30     **Invited Speaker.** Regenerative Medicine Approaches to Nerve Regeneration. Mexican Association of Plastic, Reconstructive and Aesthetic Surgery. Mexico City, México, Mexico. Presenter(s): **Borschel, Gregory H.** (Trainee Presentation).
- 2014 Apr 8     **Presenter.** Restoration of Corneal Sensation with Regional Nerve Transfers and Nerve Grafts: A New, Effective, Minimally Invasive Approach to a Difficult Problem. American Association of Plastic Surgeons. Miami, Florida, United States. Presenter(s): **Borschel, Gregory H.** (Trainee Presentation).
- 2014 Apr 7     **Invited Speaker.** The Great Debate: Be it resolved; There are too many free flaps being done. American Association of Plastic Surgeons. Miami, Florida, United States. Presenter(s): **Borschel, Gregory H.** (Trainee Presentation).
- 2014 Apr 3     **Co-author.** Corneal neurotization in children for the management of corneal anesthesia. World Ophthalmology Congress. Tokyo, Japan. Presenter(s): **Ali A, Elbaz U, Borschel G, Zuker R.**
- 2014 Jan 12     **Invited Speaker.** End to Side Nerve Repair. American Society for Peripheral Nerve. Kauai, Hawaii, United States. Presenter(s): **Borschel, Gregory H; Fausto Viterbo; Ayato Hayashi.** This course will present the scientific basis for the clinical use of end to side nerve repairs. The faculty

will

present clinical cases in which this technique is used, and discuss the risks, benefits, potential complications and outcomes following the use of the technique. (Trainee Presentation).

- 2014 Jan 12     **Co-Moderator.** Scientific Session. American Society for Peripheral Nerve. Kauai, Hawaii, United States. Presenter(s): **Borschel, Gregory H.**; (Trainee Presentation).
- 2014 Jan 12     **Presenter.** End to Side Nerve Repair. American Society for Peripheral Nerve. Kauai, Hawaii, United States. Presenter(s): **Borschel, Gregory H.**; This course will present the scientific basis for the clinical use of end to side nerve repairs. The faculty will present clinical cases in which this technique is used, and discuss the risks, benefits, potential complications and outcomes following the use of the technique. (Trainee Presentation).
- 2014 Jan 11     **Invited Instructor.** Pediatric Microsurgery: Fresh faces, new cases. American Society for Peripheral Nerve. Kauai, Hawaii, United States. Presenter(s): Taghinia, Amir; Tse, Raymon; **Borschel, Gregory H.**; Wu, Liza, Chair. (Trainee Presentation).
- 2013 Nov 22     **Invited Lecturer.** Facial Paralysis in Children, A Novel Compound to Enhance Nerve Regeneration. The Fourth Annual Congress of Hand and Reconstructive Microsurgical Unit of Orthopaedic Department, in Collaboration with Egyptian Society for Surgery of the Hand and Microsurgery. Hurghada, Egypt. Presenter(s): **Borschel, Gregory H.**
- 2013 Nov 22     **Invited Lecturer.** A Novel Compound to Enhance Nerve Regeneration. The Fourth Annual Congress of Hand and Reconstructive Microsurgical Unit of Orthopaedic Department, in Collaboration with Egyptian Society for Surgery of the Hand and Microsurgery. Hurghada, Egypt. Presenter(s): **Borschel, Gregory H.**
- 2013 Sep 15     **Speaker.** P7C3 enhances neuron survival and functional recovery in a model of obstetrical brachial plexus palsy. Sunderland Society. Leiden, South Holland, Netherlands. Presenter(s): **Borschel, Gregory H.**
- 2013 Jun 29     **Speaker.** Functional MRI assessment of cerebral cortical plasticity in children with congenital facial palsy who have undergone dynamic facial reanimation by gracilis muscle transfer. International Facial Nerve Symposium. Boston, Massachusetts, United States. Presenter(s): Swan, Marc C; Simon, T; Donner, Elizabeth; Wang, Frank; **Borschel, Gregory H.**; Zuker, Ronald M.
- 2013 Jun 29     **Speaker.** Update on management of facial palsy in children. International Facial Nerve Symposium. Boston, Massachusetts, United States. Presenter(s): **Borschel, Gregory H.**
- 2013 Jun 29     **Moderator.** Neurorrhaphy and Nerve Regeneration. International Facial Nerve Symposium. Boston, Massachusetts, United States. Presenter(s): **Borschel, Gregory H.**

- 2013 Jun 29     **Moderate presentation of Abstracts.** 1) Botulinum toxin for reestablishment of symmetry in pediatric lower lip paralysis /2) Long-term outcome in peripheral nerve palsy in children /3)- Facial reanimation in pediatric patients /4) Developmental facial paralysis - Stigmata and outcomes. International Facial Nerve Symposium. Boston, Massachusetts, United States. Presenter(s): **Borschel, Gregory H.**
- 2013 Jun 14     **Invited Speaker.** Nerve substitutes; state of the art / Vascularized composite allotransplantation; a specialty in evolution. Dr. Fausto Viterbo / UNESP, Sao Paulo State University. Botucatu, São Paulo, Brazil. Presenter(s): **Borschel, Gregory H.**
- 2013 Jun 14     **Invited Speaker.** Congenital hand surgery - Syndactyly. Dr. Fausto Viterbo / UNESP, Sao Paulo State University. Botucatu, São Paulo, Brazil. Presenter(s): **Borschel, Gregory H.**
- 2013 Jun 14     **Invited Speaker.** Pediatric hand trauma. Dr. Fausto Viterbo / UNESP, Sao Paulo State University. Botucatu, São Paulo, Brazil. Presenter(s): **Borschel, Gregory H.**
- 2013 Jun 14     **Invited Speaker.** Pediatric sarcoma reconstruction. Dr. Fausto Viterbo / UNESP, Sao Paulo State University. Botucatu, São Paulo, Brazil. Presenter(s): **Borschel, Gregory H.**
- 2013 Jun 14     **Invited Speaker.** Use of the ten test in children. Dr. Fausto Viterbo / UNESP, Sao Paulo State University. Botucatu, São Paulo, Brazil. Presenter(s): **Borschel, Gregory H.**
- 2013 Jun 14     **Invited Speaker.** Reconstruction of the anophthalmic orbit. Dr. Fausto Viterbo / UNESP, Sao Paulo State University. Botucatu, São Paulo, Brazil. Presenter(s): **Borschel, Gregory H.**
- 2013 Jun 13     **Invited Speaker.** Facial palsy in children in an oncologic setting. Dr. Fausto Viterbo / UNESP, Sao Paulo State University. Botucatu, São Paulo, Brazil. Presenter(s): **Borschel, Gregory H.**
- 2013 Jun 13     **Invited Speaker.** Nerve injury in children / Obstetrical brachial plexus palsy. Dr. Fausto Viterbo / UNESP, Sao Paulo State University. Botucatu, São Paulo, Brazil. Presenter(s): **Borschel, Gregory H.**
- 2013 Jun 12     **Invited Speaker.** Neuroprotection with P7C3 to rescue neurons from death / Enhancement of nerve regeneration with controlled delivery of neurotrophins / protection of distal nerve stumps with end to side nerve grafts to improve nerve regeneration in the hindlimb and the face. Dr. Fausto Viterbo / UNESP, Sao Paulo State University. Botucatu, São Paulo, Brazil. Presenter(s): **Borschel, Gregory H.**
- 2013 Jun 11     **Invited Speaker.** Outcomes measure in nerve regeneration research / Development of a transgenic rat expressing green fluorescent protein in its nerves and neurons. Dr. Fausto Viterbo / UNESP, Sao Paulo State

University. Botucatu, São Paulo, Brazil. Presenter(s): **Borschel, Gregory H.**

- 2013 Feb 9     **Invited Speaker.** Simultaneous adjacent web syndactyly release: safety and early results. Pediatric Hand Study Group Meeting. Sacramento, California, United States. Presenter(s): **Borschel, Gregory H.**
- 2012 Oct 4     **Invited Speaker.** Update to Board of the Amercian College of Surgeons; C James Carrico Award; Glial-derived neurotrophic factor (GDNF) delivered from microspheres enhances peripheral nerve regeneration after delayed nerve repair. American College of Surgeons. Chicago, Illinois, United States. Presenter(s): **Borschel, Gregory H.**
- 2012 Aug 7     **Visiting Professor.** Advances in Nerve Regeneration. University of Texas Southwestern Medical Center. Dallas, Texas, United States. Presenter(s): **Borschel, Gregory H.**
- 2012 Jul 14     **Invited Speaker.** Advances in Nerve Regeneration Research. Moebius Syndrome Conference. Philadelphia, Pennsylvania, United States. Presenter(s): **Borschel, Gregory H.**
- 2012 Jul 12     **Invited Speaker.** Advances in Nerve Regeneration Research. Moebius Syndrome Conference. Philadelphia, Pennsylvania, United States. Presenter(s): **Borschel, Gregory H.**
- 2011 Oct 25     **Course Faculty.** Update on Peripheral Nerve Regeneration Basic Research and Clinical Application. Instructional Course for Facial Paralysis Reconstruction / Dr. David Chwei-Chin Chuang. Taipei, Taipei, Taiwan, Province Of China. Presenter(s): Gregory H, Borschel MD.
- 2011 Oct 25     **Moderator.** Muscle Transplantation for Facial Paralysis Reconstruction - Four Keys to Success. Instructional Cours for Facial Paralysis Reconstruction / Dr. David Chwei-Chin Chuang. Taipei, Taiwan, Province Of China. Presenter(s): Gregory H, Borschel MD.
- 2011 Aug 25     **Invited Speaker.** New Developments in Peripheral Nerve Regeneration Research. 3rd European Plastic Surgery Research Council Meeting Thursday, 25 - 28 August 2011 at Ship MS Cap San Diego. Hamburg, Hamburg Free State, Germany. Presenter(s): **Gregory H. Borschel.**
- 2011 Jan 15     **Presentation.** "The Motor Nerve to the Masseter Muscle: an Anatomic and Histomorphometric Study to Facilitate its Use in Facial Reanimation". American Society for Peripheral Nerve Annual Scientific Meeting, 2011. Cancun, Quintana Roo, Mexico. Presenter(s): **Borschel, Gregory H.**; Kawamura, David H.; Hunter, Dan; Kasukurthi, Rahul; Woo, Albert.
- 2011 Jan 14     **Invited Speaker.** "Obstetrical Brachial Plexus Palsy and Nerve Transfers" Instructional Course at the American Society for Peripheral Nerve Meeting 2011. American Society for Peripheral Nerve Annual Scientific Meeting, 2011. Cancun, Quintana Roo, Mexico. Presenter(s): **Borschel, Gregory H.**



- 2011 Jan 13     **Invited Speaker.** Nerve Regeneration - "Importance of Structure, and the Limitations of Conduits". American Society for Peripheral Nerve Annual Scientific Meeting, 2011. Cancun, Quintana Roo, Mexico. Presenter(s): **Borschel, Gregory H.**
- 2010 Dec 7     **Invited Speaker.** Neural Tissue Engineering. Tissue Engineering and Regenerative Medicine International Society North America - TERMIS-NA. Orlando, Florida, United States. Presenter(s): **Borschel, Gregory H.**; Sakiyama-Elbert, Shelly.
- 2010 Sep 3     **Invited Speaker.** A transgenic rat expressing green fluorescent protein (GFP) in peripheral nerves: A new model for the study of peripheral nerve injury and regeneration. 6th International Muscle Symposium, University of Vienna. Vienna, Vienna, Austria. Presenter(s): **G. H. Borschel**, A. M. Moore, K. Santosa, R. Kasukurthi, A. Tong, J. Luciano, Y. Yan, S. Mackinnon;. (Presentation to Patients/Public).
- 2010 Aug 25     **Invited Lecturer.** Facial paralysis in children. Tel Aviv Medical Center Division of Plastic and Reconstructive Surgery. Tel Aviv, Tel Aviv, Israel. Presenter(s): **Borschel GH.**
- 2010 Aug 25     **Invited Lecturer.** A novel transgenic rat expressing green fluorescent protein in neurons: a novel tool for peripheral nerve regeneration research. Tel Aviv Medical Center Division of Plastic and Reconstructive Surgery. Tel Aviv, Tel Aviv, Israel. Presenter(s): **G. H. Borschel**, A. M. Moore, K. Santosa, R. Kasukurthi, A. Tong, J. Luciano, Y. Yan, S. Mackinnon;.
- 2010 Jan 9     **Invited Speaker.** Advances in brachial Plexus Paralysis Reconstruction. American Society for Peripheral Nerve Annual Scientific Meeting, 2010. Ft. Lauderdale, Florida, United States.
- 2009 Mar 7     Pediatric brachial plexus injuries. Eastern Missouri Health Information Management Annual Meeting. St. Louis, Missouri. Presenter(s): **Borschel GH.**
- 2009 Mar 7     Facial paralysis in children. Eastern Missouri Health Information Management Annual Meeting. St. Louis, Missouri. Presenter(s): **Borschel GH.**
- 2009 Mar 7     Pediatric extremity reconstruction. Eastern Missouri Health Information Management Annual Meeting. St. Louis, Missouri. Presenter(s): **Borschel GH.**
- 2009 Jan 11     **Course Faculty.** Acellular human allograft nerve grafts and growth factors to enhance functional recovery. "Tissue Engineering for Peripheral Nerve" American Society for the Peripheral Nerve. Maui, Hawaii. Presenter(s): **Borschel GH.**
- 2008 Sep 30     Facial paralysis in children. Department of Neurosurgery Grand Rounds, St. Louis University. St. Louis, Missouri. Presenter(s): **Borschel GH.**

- 2008 Aug 12 Pediatric brachial plexus injuries. Department of Neurosurgery Grand Rounds, St. Louis University. St. Louis, Missouri. Presenter(s): **Borschel GH**.
- 2007 Oct 24 Update in pediatric plastic surgery. Clinical pediatric update. Overview of pediatric plastic surgery. Anderson Hospital Department of Family Practice. Maryville, Illinois. **Borschel GH**, Woo AS, Kane AA.
- 2007 Oct 24 Brachial plexus injury in the neonate. Anderson Hospital Department of Family Practice. Maryville, Illinois. Presenter(s): **Borschel GH**.
- 2007 Oct 5 Brachial plexus injury in the neonate. St. Mary's Health Center Department of Obstetrics and Gynecology Grand Rounds. St. Louis, Missouri. Presenter(s): **Borschel GH**.
- 2007 Sep 29 Update in pediatric plastic surgery. Clinical pediatric update. Overview of pediatric plastic surgery. For pediatricians, family physicians, nurse practitioners, physician assistants, The Abraham Lincoln Presidential Library and Museum. Springfield, Illinois. Presenter(s): Woo AS, **Borschel GH**, Kane AA.
- 2007 Sep 28 Brachial plexus injury in the neonate. St. Louis University Department of Obstetrics and Gynecology and Women's Health Grand Rounds. St. Louis, Missouri. Presenter(s): **Borschel GH**.
- 2007 Sep 14 Facial paralysis in children. Children's Hospital Boston Department of Plastic Surgery Craniomaxillofacial Grand Rounds. Boston, Massachusetts. Presenter(s): **Borschel GH**.
- 2007 Sep 13 Facial paralysis in children. Massachusetts General Hospital Division of Plastic Surgery Grand Rounds. Boston, Massachusetts. Presenter(s): **Borschel GH**.
- 2007 Jun 6 Reconstruction of traumatic pediatric extremity injuries. Pediatric Trauma Lecture Series / Blessing Hospital Pediatric Grand Rounds. Quincy, Illinois. Presenter(s): **Borschel GH**.
- 2007 May 30 Brachial plexus injury in the neonate. St. John's Mercy Department of Obstetrics and Gynecology Grand Rounds. St. Louis, Missouri. Presenter(s): **Borschel GH**.
- 2007 Apr 14 Muscle tissue engineering. Ernest Gutmann Heritage Meeting, 30 Years After the Long-Lasting Denervated Muscle. Terme Euganee, Italy. Presenter(s): **Borschel GH**.
- 2007 Apr 12 Muscle tissue engineering: the in vivo axial-vessel approach. Basic and Applied Myology Padua Muscle Days, Aula Magna, Palazzo del Bo, The University of Padua (Università degli Studi di Padova). Padova (Padua), Italy. Presenter(s): **Borschel GH**.
- 2007 Apr 2 Brachial plexus injury in the neonate. Missouri Pediatric Medical Society. Springfield, Missouri. Presenter(s): **Borschel GH**.

- 2007 Apr 2      Facial paralysis in children. Missouri Pediatric Medical Society. Springfield, Missouri. Presenter(s): **Borschel GH.**
- 2007 Mar 1      Facial paralysis in children. Department of Neurosurgery Grand Rounds, St. Louis University. St. Louis, Missouri. Presenter(s): **Borschel GH.**
- 2007 Mar 1      Brachial plexus injury in the neonate. Department of Neurosurgery Grand Rounds, St. Louis University. St. Louis, Missouri. Presenter(s): **Borschel GH.**
- 2007 Feb 28      Facial paralysis in children. Department of Otolaryngology Grand Rounds, St. Louis University. St. Louis, Missouri. Presenter(s): **Borschel GH.**
- 2007 Feb 22      Brachial plexus injury in the newborn. Ascension Health Second Birth Trauma Counsel Conference. St. Louis, Missouri. Presenter(s): **Borschel GH.**
- 2007 Feb 13      Pediatric facial paralysis. Division of Plastic Surgery Grand Rounds, St. Louis University. St. Louis, Missouri. Presenter(s): **Borschel GH.**
- 2006 Dec 7      Pediatric brachial plexus injuries. ProRehab, P.C. St. Louis, Missouri. Presenter(s): **Borschel GH.**
- 2006 Dec 7      Pediatric facial paralysis. ProRehab, P.C. St. Louis, Missouri. Presenter(s): **Borschel GH.**
- 2006 Nov 5      Pediatric facial paralysis and neonatal brachial plexus injuries. Annual meeting of the Illini Medical Associates. Grafton, Illinois. Presenter(s): **Borschel GH.**
- 2005 Nov      Vascularization and tissue engineering. Division of Plastic Surgery Grand Rounds, University of Pittsburgh Medical Center. Pittsburgh, Pennsylvania. Presenter(s): **Borschel GH.**
- 2005 Apr 22      Vascularization and tissue engineering. Moses Gunn Annual Research Conference, University of Michigan Department of Surgery. Ann Arbor, Michigan. Presenter(s): **Borschel GH.** Invited presentation in acceptance of the James A. Crudup Senior Resident Research Award.
- 2004 Oct      Tissue engineered recellularized small diameter vascular grafts. American Society of Plastic Surgery 73rd Annual Scientific Meeting. Philadelphia, Pennsylvania. **Borschel GH, Huang YC, Dow DE, Lynch JB, Kuzon WM, Dennis RG, Brown DL.** Invited Presentation in Acceptance of Award for First Place, Plastic Surgery Educational Foundation Basic Research Grant.
- 2004 Oct      Tissue engineered recellularized small diameter vascular grafts. American Society of Plastic Surgery 73rd Annual Scientific Meeting. Philadelphia, Pennsylvania. **Borschel GH, Huang YC, Dow DE, Lynch JB, Kuzon WM, Dennis RG, Brown DL.** In Acceptance of Award for First Place, Basic Research Grant.

- 2004 Aug Tissue Engineering of Recellularized Small Diameter Vascular Grafts. University of Washington 8th UWEB Summer Scientific Symposium: Bioengineered Blood Vessels and Valves 2004: Grafts, Stents, Valves and Tissue Engineering. Seattle, Washington. Presenter(s): **Borschel GH**.
- 2004 Aug Tissue engineered recellularized small diameter vascular grafts. University of Washington 8th UWEB Summer Scientific Symposium: Bioengineered Blood Vessels and Valves 2004: Grafts, Stents, Valves and Tissue Engineering. Seattle, Washington. **Borschel GH**, Borschel GH, Huang YC, Dow DE, Lynch JB, Kuzon WM Jr, Dennis RG, Brown DL.
- 2001 Dec Tissue Engineering of Contractile Muscle Tissue. Bernard O'Brien Microsurgery Institute. Melbourne, Victoria, Australia. **Borschel GH**, Dennis RG, Kuzon WM, Jr.

#### Presented Abstracts

- 2014 Mar 8 The Monoclonal Antibody Herceptin Improves Regeneration After Injured Nerves are Repaired Immediately or After a Period of Chronic Denervation. Plastic Surgery Research Council. New York, New York, United States. Presenter(s): Hendry, James Michael. (Trainee Presentation).
- 2014 Jan 11 Axons Preferentially Regenerate Across the Most Proximal Nerve Bridge in a Model of Side-to-Side Bridging for Protection of Denervated Nerves. American Society for Peripheral Nerve. Kauai, Hawaii, United States. Presenter(s): Snyder-Warwick, Alison. (Trainee Presentation).
- 2013 Oct 18 **Co-author**. Corneal neurotization in children for the management of corneal anesthesia. World Ophthalmology Congress. Tokyo, Tôkyô [Tokyo], Japan. Presenter(s): Ali, Asim.
- 2013 May 19 **Supervisor**. Functional motor recovery is improved due to local placement of GDNF microspheres after delayed nerve repair. Blotechnology and Bioengineering \_ Manuscript 12-911.R1. Hoboken, New Jersey, United States. Presenter(s): Matthew Wood. (Trainee Presentation).
- 2013 May 4 **Supervisor**. Neuroprotective Efficacy of Aminopropyl Carbazoles in a Neonatal Rat Model of Nerve Injury. Plastic Surgery Research Council. Santa Monica, California, United States. Presenter(s): Stephen Kemp. (Trainee Presentation).
- 2013 May **Supervisor**. Neuregulin-1 / ErbB2 Signaling Regulates Early Axonal Regeneration following Peripheral Nerve Injury. Plastic Surgery Research Council. Santa Monica, California, United States. Presenter(s): Hendry, James Mike; Placheta, Eva; Gordon, Tessa; **Borschel, Gregory**. (Trainee Presentation).
- 2013 Jan 13 **Presenter**. Functional Outcomes in Facial Animation: Comparison of Innervation Sources. American Society for Reconstructive Microsurgery

- (ASRM). Naples, Florida, United States. Presenter(s): Snyder-Warwick, Alison; Zive, Leanne, Fattah, Adel; Halliday, William; **Borschel, Gregory H.**, Zuker, Ronald M.
- 2013 Jan 11 **Presenter.** The Neuroprotective Compound P7C3 and its Analogue P7C3A20 Enhances Functional Recovery Following Neonatal Nerve Injury in a Dose Dependent Manner. American Society for Peripheral Nerve (ASPN). Naples, Florida, United States. Presenter(s): Kemp, Stephen W. P.; Pieper, Andrew A.; Wood, Matthew D.; Szyndkaruk, Mark; Stanoulis, Krisanne N.; Gordon, Tessa; **Borschel, Gregory H.**
- 2013 Jan 11 **Presenter.** Axons regenerating from an intact donor nerve to a denervated recipient nerve stump through side-to-side bridges improves nerve regeneration after delayed nerve repair in Sprague-Dawley rats. American Society for Peripheral Nerve (ASPN). Naples, Florida, United States. Presenter(s): Gordon, Tessa; Ladak, Adil; LaFontaine, Christine; Wood, Matthew D.; **Borschel, Gregory H.**
- 2013 Jan 11 **Presenter.** Functional Recovery Following Delayed Nerve Repair is Affected by the Duration of GDNF Release. American Society for Peripheral Nerve (ASPN). Naples, Florida, United States. Presenter(s): Wood, Matthew; Gordon, Tessa; Kemp, Stephen W. P.; Liu, Edward H.; Kim, Howard; Shoichet, Molly; **Borschel, Gregory H.**
- 2013 Jan 11 **Presenter.** ErbB2-Receptor Inhibition with Herceptin (Trastuzumab) Reduces Nerve Regeneration after Peroneal Nerve Cut and Repair in the Rat Model. American Society for Peripheral Nerve (ASPN). Naples, Florida, United States. Presenter(s): Placheta, Eva; Wood, Matthew D.; LaFontaine, Christine; Hedward H. Liu; Cecilia Alvarez Veronesi; Manfred Frey; Tessa Gordon; **Gregory H. Borschel, MD.**
- 2013 Jan 11 **Presenter.** Facial Nerve Regeneration through Cross-Face Nerve Grafts Is Improved by End-to-Side Coaptation of Sensory Nerves to the Graft. American Society for Peripheral Nerve (ASPN). Naples, Florida, United States. Presenter(s): Placheta, Eva; LaFontaine, Wood, Matthew D.; Gordon, Tessa; Frey, Manfred; **Borschel, Gregory H.**
- 2012 Oct 4 **Presenter.** Glial-derived neurotrophic factor (GDNF) delivered from microspheres enhances peripheral nerve regeneration after delayed nerve repair. American College of Surgeons, Surgical Forum. Chicago, Illinois, United States. Presenter(s): **Borschel, Gregory H.**
- 2012 Jun 9 **Presenter.** Is socioeconomic status related to wait times for specialized paediatric surgery ? An analysis of 39, 402 cases. Canadian Society of Plastic Surgeons. Toronto, Ontario, Canada. Presenter(s): Szyndkaruk, Mark; Wright, James; **Borschel, Gregory H.**
- 2012 May 24 In-vivo imaging of facial nerve regeneration after crush injury, cut-and-repair and cross-face nerve grafting in the Thy1-GFP rat. European Association of Plastic Surgeons Research Council. Munich, Munich,

Germany. Presenter(s): E. Placheta, C.A. Lafontaine, T. Gordon, **G. H. Borschel**, M. Frey.

- 2012 Jan 12     **Presenter.** The Duration of GDNF Release Affects Nerve Regeneration Following Delayed Nerve Repair (Winner of Basic Science Award, 2012, American Society for Peripheral Nerve). The American Society for Peripheral Nerve. Las Vegas, Nevada, United States. Presenter(s): Wood, Matthew, Sznkaruk, M, Weber C, Gordon T, Kim H, Shoichet M, **Borschel GH.** (Trainee Presentation).
- 2012 Jan     **Invited Speaker.** The Effect of The Novel Proneurogenic, Neuroprotective Compound P7C3 on Regenerative Properties Following Sciatic Nerve Crush in Neonatal Rats. American Society for Peripheral Nerve. Las Vegas, Nevada, United States. Presenter(s): Kemp, S.WP., Pieper, A.A., Wood, M.D., Szyknaruk, M., Gordon, T., **Borschel, G.H.** (Trainee Presentation).
- 2012 Jan     **Invited Speaker.** TAnatomical, Behavioural and Myological Analysis of the Transgenic Thy1-GFP Rat Following Peripheral Nerve Injury. American Society for Peripheral Nerve. Las Vegas, Nevada, United States. Presenter(s): Kemp, S.WP., Wood, M.D., Phua, P.D., Stanoulis, K.N., Gordon, T., **Borschel, G.H.** (Trainee Presentation).
- 2011 Oct 24     **Invited Speaker.** Controlled Release of Glial Cell Derived Neurotrophic Factor Enhances Nerve Regeneration. American College of Surgeons 97th Annual Clinical Congress. San Francisco, California, United States. Presenter(s): Gregory H. Borschel MD, FACS, FAAP, Matthew D. Wood PHD, Amy M. Moore MD, Shelly Sakiyama-Elbert PHD, Susan E. Mackinnon MD, FACS, FRCSC, Tessa Gordon PHD, Daniel A. Hunter PHD, Molly S. Shoichet PHD.
- 2011 Oct 24     **Invited Speaker.** Controlled Release of Glial Cell Derived Neurotrophic Factor Enhances Nerve Regeneration. American College of Surgeons 97th Annual Clinical Congress. San Francisco, California, United States. Presenter(s): Gregory H. Borschel MD, FACS, FAAP, Matthew D. Wood PHD, Amy M. Moore MD, Shelly Sakiyama-Elbert PHD, Susan E. Mackinnon MD, FACS, FRCSC, Tessa Gordon PHD, Daniel A. Hunter PHD, Molly S. Shoichet PHD.
- 2011 Oct 20     **Presenter.** Axonal Counts in Free Muscle Transfer for Facial Paralysis (Winner, Best Paper Award). Chang Gung Mayo Clinic Symposium in Reconstructive Surgery. Taipei, Taiwan, Province Of China. Presenter(s): Gregory H. Borschel MD, FACS, FAAP, Alison Snyder-Warwick. (Trainee Presentation).
- 2011 May 25     **Presenter.** Does the Range of Motion in Patients with Obstetrical Brachial Plexus Palsy Diminish Over Time ? A Ten Year Analysis. International Confederation for Plastic Reconstructive and Aesthetic Surgery (IPRAS). Vancouver, British Columbia, Canada. Presenter(s): Kattan, AE; Curtis, C; **Borschel, GH**; Clarke, H;. (Trainee Presentation).

- 2011 May 25     **Presenter.** Facial Nerve Injuries in Children. International Confederation for Plastic Reconstructive and Aesthetic Surgery (IPRAS). Vancouver, British Columbia, Canada. Presenter(s): Fattah, A; **Borschel, GH**; Zuker, RM; Bezuhly, M. (Trainee Presentation).
- 2011 May 23     **Presenter.** Epidemiology of Hand Fractures in Children. International Confederation for Plastic Reconstructive and Aesthetic Surgery (IPRAS). Vancouver, British Columbia, Canada. Presenter(s): Alqahtani, SQ; Alsaaran, R; **Borschel, GH**; Zuker, R;. (Trainee Presentation).
- 2011 Jan 13     **Presenter.** "The Motor Nerve to the Masseter Muscle: an Anatomic and Histomorphometric Study to Facilitate its Use in Facial Reanimation". American Society for Peripheral Nerve Annual Meeting, 2011. Cancun, Quintana Roo, Mexico. Presenter(s): **Borschel, Gregory H**; Kasukurthi, Rahul; Kawamura, David; Hunter, Daniel; Woo, Albert S.. (Patients/Public Presentation by Trainee).
- 2011 Jan 12     **Presenter.** "Development of a Microsphere Drug Delivery System to Promote Nerve Regeneration After Peripheral Nerve Injury". American Society for Peripheral Nerve Annual Scientific Meeting 2011. Cancun, Quintana Roo, Mexico. Presenter(s): Wood, Matthew D; Kim, Howard; Bilbily, Alex; Gordon, Tessa; Shoichet, Molly; **Borschel, Gregory H**. (Patients/Public Presentation by Trainee).
- 2011 Jan         **Invited Speaker.** "Enhancing Functional Recovery by Supplementing Acellularized Nerve Grafts with Motor and Sensory Schwann Cells". American Society for Peripheral Nerve Annual Scientific Meeting, 2011. Cancun, Quintana Roo, Mexico. Presenter(s): Santosa, Katherine; Jesuraj, Nithya J.; MacEwan, Matthew; Moore, Amy; Ray, Willson Z.; **Borschel, Gregory H**; Hunter, DA; Johnson, Philip J.; Sakiyama-Elbert, Shelly; MacKinnon, Susan. (Trainee Presentation).
- 2011 Jan         **Invited Speaker.** "Does The Active Range of Motion in Patients with Obstetrical Brachial Plexus Palsy Diminish Over Time?" A Ten Year Analysis. American Society for Peripheral Nerve Annual Scientific Meeting, 2011. Cancun, Quintana Roo, Mexico. Presenter(s): Kattan, Abdullah E.; Curtis, Christine G.; **Borschel, Gregory H**; Clarke, Howard M. (Trainee Presentation).
- 2011 Jan         **Speaker.** "The Development of an Intramuscular Microsphere Drug Delivery System: An In Vivo Safety Study". American Society for Peripheral Nerve Annual Scientific Meeting, 2011. Cancun, Quintana Roo, Mexico. Presenter(s): Ennis, Daniel; Wood, Matthew D.; Gordon, Tess; **Borschel, Gregory H**. (Trainee Presentation).
- 2010 Dec 7       **Invited Speaker.** Schwann Cells Enhance Trophic Factor Levels and Functional Recovery After Injection into Acellular Nerve Grafts. Tissue Engineering and Regenerative Medicine International Society North America; TERMIS-NA. Orlando, Florida, United States. Presenter(s): Nithya J. Jesuraj<sup>1</sup>, Katherine B. Santosa<sup>2</sup>, Amy M. Moore<sup>2</sup>, Daniel

Hunter<sup>2</sup>, Gregory Borschel<sup>2,3</sup>, Philip J. Johnson<sup>2</sup>, Susan E. Mackinnon<sup>2</sup> and Shelly E. Sakiyama-Elbert<sup>1,2</sup>. (Trainee Presentation).

- 2010 Oct 31     **Invited Speaker.** Does the Active Range of Motion in Patients with Obstetrical Brachial Plexus Palsy Diminish over Time? A Ten Year Analysis. 11th Triennial Congress of the International Federation of Societies for Surgery of the Hand(IFSSH), Oct.31.2010 ~ Nov.4.2010. Seoul, Korea, Republic Of. Presenter(s): Abdullah Kattan, Christine Curtis, **Gregory Borschel**, Howard Clarke. (Trainee Presentation).
- 2010 Oct 4     **Speaker.** Controlled Neurotrophic Factor Delivery To Promote Functional Peripheral Nerve Regeneration. American Society of Plastic Surgeons. Toronto, Ontario, Canada. Presenter(s): Wood, Matthew D.; MacEwan, Matthew R.; French, Alexander R.; Moore, Amy M.; Hunter, Daniel A.; Mackinnon, Susan E.; Moran, Daniel W.; Sakiyama-Elbert, Shelly E.; **Borschel, Gregory H.** American Society of Plastic Surgeons; Plastic Surgery 2010, October 2010. (Patients/Public Presentation by Trainee).
- 2010 Oct 4     **Speaker.** Pediatric Traumatic and Obstetrical Brachial Plexus Palsy: Triceps to Axillary Nerve Transfers to Restore Shoulder Abduction
- Plastic & Reconstructive Surgery. 126():91, October 2010. American Society of Plastic Surgeons. Toronto, Ontario, Canada. Presenter(s): McRae, Matthew; Walsh, Catherine; **Borschel, Gregory H.** American Society of Plastic Surgeons; Plastic Surgery 2010, October 2010. (Trainee Presentation).
- 2010 May 24     **Speaker.** Processed allograft versus cold-preservation on nerve regeneration: a comparison study. 55th Annual Meeting of the Plastic Surgery Research Council. San Francisco, California, United States. Presenter(s): Moore AM, Nicoson MC, Chenard K, Santosa KB, Kasukurthi R, Hunter DA, Johnson PJ, Mackinnon SE, **Borschel GH.** (Trainee Presentation).
- 2010 May 24     **Speaker.** Visualization of peripheral nerve regeneration in a novel transgenic rat using common surgical paradigms. 55th Annual Meeting of the Plastic Surgery Research Council. San Francisco, California, United States. Presenter(s): Santosa KB, Moore AM, Flagg ER, Yan Y, Tong A, Kasukurthi R, Kale S, Nicoson M, Ray WZ, Johnson PJ, Mackinnon SE, **Borschel GH.** (Trainee Presentation).
- 2010 Jan 9     **Speaker.** Processed allograft versus cold preservation on nerve regeneration: a comparison study. American Association for Hand Surgery / American Society for Peripheral Nerve / American Society for Reconstructive Microsurgery (AAHS/ASPN/ASRM). Ft. Lauderdale, Florida, United States. Presenter(s): Nicoson MC, Moore AM, Chenard K, Santosa KB, MacEwan M, Kasukurthi R, Hunter DA, Johnson PJ, Mackinnon SE, **Borschel GH.** (Trainee Presentation).



- 2010 Jan 9      **Speaker.** Evaluation of Schwann cell expression profiles after implantation into cold-preserved nerve allografts. American Association for Hand Surgery / American Society for Peripheral Nerve / American Society for Reconstructive Microsurgery (AAHS/ASPN/ASRM). Ft. Lauderdale, Florida, United States. Presenter(s): Santosa KB, Jesuraj NJ, Moore AM, Kasukurthi R, Ray WZ, Hunter DA, Flagg ER, Johnson PJ, Mackinnon SE, **Borschel GH**, Sakiyama-Elbert SE. (Trainee Presentation).
- 2010 Jan 9      **Speaker.** Injection of motor and sensory Schwann cells into cold preserved nerve allografts to enhance nerve regeneration. American Association for Hand Surgery / American Society for Peripheral Nerve / American Society for Reconstructive Microsurgery (AAHS/ASPN/ASRM). Ft. Lauderdale, Florida, United States. Presenter(s): Santosa KB, Jesuraj NJ, Moore AM, Kasukurthi R, Ray WZ, Hunter DA, Flagg ER, Johnson PJ, **Borschel GH**, Sakiyama-Elbert SE, Mackinnon SE. (Patients/Public Presentation by Trainee).
- 2009 Nov 1      **Presenter.** Validation of the use of the “Ten Test” in pediatric population. 18th Sunderland Society Meeting. Shanghai, Shanghai Province, China. Presenter(s): **Borschel GH**. (Presentation to Patients/Public).
- 2009 Nov 1      **Presenter.** Should we abandon the term “obstetrical brachial plexus palsy”? 18th Sunderland Society Meeting. Shanghai, Shanghai Province, China. Presenter(s): **Borschel GH**. (Presentation to Patients/Public).
- 2009 Oct 17      Whole Mount Muscle Imaging in a Novel Transgenic Rat Expressing GFP in Neural Tissue. Neuroscience 2009. Chicago, Illinois, United States. Alice Y. Tong, Amy M. Moore, Rahul Kasukurthi, Ying Yan, **Gregory H. Borschel**, Susan E. Mackinnon. October 17-21, 2009.
- 2009 Oct 1      A new face in nerve research: axonal expression of green fluorescent protein in a rat model. American Association of Facial Plastic and Reconstructive Surgeons Annual Fall Meeting 2009, San Diego Hilton Bayfront. United States. Magill CK, Kasukurthi R, Moore AM, Tong AY, Luciano J, Mackinnon SE, **Borschel GH**. October 1-3, 2009. (Trainee Presentation).
- 2009 Sep 2      **Invited Speaker.** Controlled Delivery of Glial Cell Line-Derived Neurotrophic Factor Enhances Motor Nerve Regeneration. American Society for Surgery of the Hand (ASSH), Basic Science Investigators Workshop. San Francisco, California. Moore AM, Sakiyama-Elbert, S; Mackinnon, SE; **Borschel GH**.
- 2009 Aug 21      A Transgenic Rat Expressing Green Fluorescent protein (GFP) in Peripheral Nerves: A New Model for the Study of Peripheral nerve Injury and Regeneration. 1st Annual Meeting of the European Plastic Surgery Research Council. Hamburg, Germany. Moore AM, Kasukurthi R, Tong AY, Solowski N, Luciano J, Yan Y, Ray WZ, Mackinnon SE, **Borschel GH**.

- 2009 Jun 18 A comparison of processed nerve allografts. James Barrett Brown 13th Annual Resident Research Day, Division of Plastic and Reconstructive Surgery, Washington University in St. Louis. St. Louis, Missouri. Moore AM, Chenard KE, Santosa K, Kasukurthi R, MacEwan MR, Hunter DA, Mackinnon SE, **Borschel GH**.
- 2009 Jun 18 A Transgenic Rat Expressing Green Fluorescent protein (GFP) in Peripheral Nerves: A New Model for the Study of Peripheral nerve Injury and Regeneration. James Barrett Brown 13th Annual Resident Research Day Award for Best Clinical Science Paper; Division of Plastic and Reconstructive Surgery, Washington University in St. Louis. St. Louis, Missouri. Moore AM, Kasukurthi R, Tong AY, Solowski N, Luciano J, Yan Y, Ray WZ, Mackinnon SE, **Borschel GH**.
- 2009 Jun 18 Validation of the use of the "Ten Test" in a pediatric population. James Barrett Brown 13th Annual Resident Research Day, Division of Plastic and Reconstructive Surgery, Washington University in St. Louis. St. Louis, Missouri. Oswald TM, Sun H, Sachanandani NS, **Borschel GH**.
- 2009 Jun 18 The nerve to the masseter: an anatomic and histologic study. James Barrett Brown 13th Annual Resident Research Day Award for Best Clinical Science Paper; Division of Plastic and Reconstructive Surgery, Washington University in St. Louis. St. Louis, Missouri. Kawamura DH, Borschel GH, Kasukurthi R, Hunter DA, Woo AS. Faculty mentor: **Gregory H. Borschel** and Albert S. Woo.
- 2009 Jun 18 Nerve injuries in pediatric missile wounds: a new paradigm. James Barrett Brown 13th Annual Resident Research Day, Division of Plastic and Reconstructive Surgery, Washington University in St. Louis. St. Louis, Missouri. Stoebner AA, Sachanandani NS, **Borschel GH**.
- 2009 Jun 18 Pediatric traumatic and obstetrical brachial plexus palsy: triceps to axillary nerve transfers to restore shoulder abduction. James Barrett Brown 13th Annual Resident Research Day, Division of Plastic and Reconstructive Surgery, Washington University in St. Louis. St. Louis, Missouri. Walsh CA, **Borschel GH**.
- 2009 Jun 12 A novel transgenic model for facial nerve research: the Thy1-GFP transgenic rat. The Department of Otolaryngology - Head & Neck Surgery 23rd Annual Resident Research Day, Washington University in St. Louis. St. Louis, Missouri. Magill CK, Kasukurthi R, Moore AM, Tong AY, Luciano J, Mackinnon SE, **Borschel GH**.
- 2009 May 27 A novel transgenic rat expressing green fluorescent protein (GFP) in peripheral nerve. Winner of the Clifford C. Snyder, M.D. Past Chairman's Award (Presented to the plastic surgery resident or fellow presenting the best paper at the annual meeting of the Plastic Surgery Research Council). 54th Annual Meeting of the Plastic Surgery Research Council. Pittsburgh, Pennsylvania. Presenter(s): Moore AM, Kasukurthi R, Tong

AY, Solowski N, Luciano J, Yan Y, Ray WZ, Mackinnon SE, **Borschel GH**. (Patients/Public Presentation by Trainee).

- 2009 Mar 24     Controlled Release of Glial Cell Line-Derived Neurotrophic Factor (GDNF) in a Fibrin Based Delivery System to Enhance Sciatic Nerve Regeneration. American Association of Plastic Surgeons 88th Annual Meeting, Rancho Mirage / Westin Mission Hills. California. Presenter(s): **Borschel GH**.
- 2009 Mar 7     Pediatric brachial plexus injuries. Eastern Missouri Health Information Management Annual Meeting. St. Louis, Missouri. Presenter(s): **Borschel GH**.
- 2009 Mar 7     Facial paralysis in children. Eastern Missouri Health Information Management Annual Meeting. St. Louis, Missouri. Presenter(s): **Borschel GH**.
- 2009 Mar 7     Pediatric extremity reconstruction. Eastern Missouri Health Information Management Annual Meeting. St. Louis, Missouri. Presenter(s): **Borschel GH**.
- 2009 Jan 11     **Course Faculty**. Acellular human allograft nerve grafts and growth factors to enhance functional recovery. "Tissue Engineering for Peripheral Nerve" American Society for the Peripheral Nerve. Maui, Hawaii. Presenter(s): **Borschel GH**.
- 2009 Jan 11     Characterization of a novel transgenic rat line over-expressing green fluorescent protein (GFP). American Society for the Peripheral Nerve. Maui, Hawaii. Kasukurthi R, Moore AM, Tong AY, Solowski N, Luciano J, Yan Y, Ray WZ, Mackinnon SE, **Borschel GH**.
- 2009 Jan 11     The controlled release of GDNF from a fibrin based delivery system enhances motor nerve regeneration. American Society for the Peripheral Nerve. Maui, Hawaii. Moore AM, Wood MD, Ray WZ, Magill CM, Solowski NL, Whitlock EL, Hunter DA, Mackinnon SE, Sakiyama-Elbert S, **Borschel GH**.
- 2009 Jan 11     Acellular human allograft nerve grafts and growth factors to enhance functional recovery. Part of course: "Tissue Engineering for Peripheral Nerve" at American Society for the Peripheral Nerve. Maui, Hawaii. Presenter(s): **Borschel GH**.
- 2008 Dec 17     Brachial plexus injury nomenclature: a new survey. Department of Obstetrics and Gynecology Grand Rounds, Washington University in St. Louis. St. Louis, Missouri. Presenter(s): **Borschel GH**.
- 2008 Nov 18     Facial paralysis in children. St. Louis East American Academy of Professional Coders Local Chapter Meeting. St. Louis, Missouri. Presenter(s): **Borschel GH**.

- 2008 Oct 11 Pediatric brachial plexus injuries. St. Louis brachial plexus awareness group 1st annual picnic, Creve Coeur Lake Park. St. Louis, Missouri. Presenter(s): **Borschel GH**.
- 2008 Sep 30 Facial paralysis in children (clinical update). Department of Neurosurgery Grand Rounds, St. Louis University. St. Louis, Missouri. Presenter(s): **Borschel GH**.
- 2008 Sep 20 **Symposium Faculty**. Nerve repair and regeneration. 2008 Duke Facial Paralysis and Reanimation Symposium, Duke University School of Medicine. Durham, North Carolina. Presenter(s): **Borschel GH**.
- 2008 Sep 20 **Symposium Faculty**. Nerve tissue engineering. 2008 Duke Facial Paralysis and Reanimation Symposium, Duke University School of Medicine. Durham, North Carolina. Presenter(s): **Borschel GH**.
- 2008 Aug 12 Pediatric brachial plexus injuries. Department of Neurosurgery Grand Rounds, St. Louis University. St. Louis, Missouri. Presenter(s): **Borschel GH**.
- 2008 Jul 16 Reconstruction of the injured pediatric upper extremity. Washington University Division of Pediatric General Surgery Grand Rounds, St. Louis Children's Hospital. Presenter(s): **Borschel GH**.
- 2008 Jun 13 A study of modality specific regeneration in the rat. James Barrett Brown Visiting Professor 12th Annual Resident Research Day, Division of Plastic and Reconstructive Surgery, Washington University in St. Louis. St. Louis, Missouri. Kawamura DH, **Borschel GH**, Hunter DA, Mackinnon SE, Tung THH. Award for best basic science paper.
- 2008 Jun 13 Affinity-based release of glial cell line-derived neurotrophic factor (GDNF) from fibrin matrices enhances sciatic nerve regeneration. James Barrett Brown Visiting Professor 12th Annual Resident Research Day, Division of Plastic and Reconstructive Surgery, Washington University in St. Louis. St. Louis, Missouri. Moore AM, Wood MD, Tuffaha SH, Hunter DA, Mackinnon SE, **Borschel GH**, Sakiyama SE.
- 2008 May 29 Controlled release of glial cell line-derived neurotrophic factor (GDNF) in a fibrin based delivery system to enhance sciatic nerve regeneration. 53rd Annual Meeting of the Plastic Surgery Research Council. Springfield, Illinois. Moore AM, Wood M, Hunter DA., Sakiyama SE, **Borschel GH**. May 29-31, 2008.
- 2008 May 29 Sodium hyaluronate carboxymethylcellulose membranes do not cause deleterious effects in non-injured or injured nerve models. 53rd Annual Meeting of the Plastic Surgery Research Council. Springfield, Illinois. Magill CK, Tuffaha SH, Hunter DA, **Borschel GH**, Mackinnon SE. May 29-31, 2008.
- 2008 May 13 Obstetrical brachial plexus palsy (a surgeon's view). Obstetrical brachial plexus palsy mini-symposium at St. Louis Children's Hospital, sponsored

by the Dept. of Therapy Services, St. Louis Children's Hospital. **Borschel GH**, Shaffer K, Kisslinger S.

- 2008 Apr 30 Upper extremity injuries in children. St. Louis Children's Hospital Hospitalist Grand Rounds. Presenter(s): **Borschel GH**.
- 2008 Apr 28 Biomedical engineering and the peripheral nerve: from bench to bedside and back. Biomedical Engineering Workshop, Department of Biomedical Engineering, Uncas A. Whitaker Hall for Biomedical Engineering, Washington University in St. Louis. Presenter(s): **Borschel GH**.
- 2008 Apr 18 Brachial plexus injury in the neonate. Department of Pediatrics Grand Rounds, St. Louis Children's Hospital / Washington University in St. Louis. St. Louis, Missouri. Presenter(s): **Borschel GH**.
- 2008 Apr 6 Controlled release of glial cell line-derived neurotrophic factor (GDNF) in a fibrin based delivery system to enhance sciatic nerve regeneration. Executive Committee Meeting at the American Association of Plastic Surgeons 87th Annual Meeting & Aesthetic Symposium. Boston, Massachusetts. **Borschel GH**, Wood M, Moore AM, Hunter DA., Myckatyn TM, Milbrandt J, Sakiyama SE, Mackinnon SE.
- 2008 Mar 14 Chondroitinase-treated decellularized nerve allograft supports axonal regeneration. Millesi Symposium: Present state of peripheral nerve surgery and how to achieve further improvement. Vienna, Austria. **Borschel GH**, Tuffaha SH, Whitlock E, Hunter DA, Yan Y, Luciano JP, Mackinnon SE. General Hospital Vienna / Austrian Cluster for Tissue and Ludwig Boltzmann Institute for Clinical and Experimental Traumatology. March 14-16, 2008.
- 2008 Jan 12 A study of modality specific regeneration in the rat femoral nerve. American Society for the Peripheral Nerve. Beverly Hills, California. Kawamura DH, **Borschel GH**, Hunter DA, Mackinnon SE, Tung THH.
- 2008 Jan 12 Regeneration in an enzyme treated decellularized nerve autograft. American Society for the Peripheral Nerve. Beverly Hills, California. Tuffaha SH, Whitlock E, Hunter DA, Yan Y, Luciano JP, Mackinnon SE, **Borschel GH**.
- 2008 Jan 12 The effects of Seprafilm on peripheral nerves in an injury and non-injury model. American Society for the Peripheral Nerve. Beverly Hills, California. Magill C, Tuffaha SH, Luciano JP, Hunter DA, Mackinnon SE, **Borschel GH**.
- 2008 Jan 11 Delivery strategy significantly affects the number and phenotype of Schwann cells in seeded decellularized autografts. American Society for the Peripheral Nerve. Beverly Hills, California. Moradzadeh, A., Tuffaha SH, Luginbuhl RD, Gustin J, **Borschel GH**, Tong AY, Milbrandt J, Mackinnon SE, Myckatyn TM.

- 2007 Oct 24 Update in pediatric plastic surgery. Overview of pediatric plastic surgery. Anderson Hospital Department of Family Practice. Maryville, Illinois. **Borschel GH**, Woo AS, Kane AA.
- 2007 Oct 24 Brachial plexus injury in the neonate. Anderson Hospital Department of Family Practice. Maryville, Illinois. Presenter(s): **Borschel GH**.
- 2007 Oct 17 Update on pediatric peripheral nerve injury: Facial paralysis in children. Department of Obstetrics and Gynecology Grand Rounds, Washington University in St. Louis. St. Louis, Missouri. Presenter(s): **Borschel GH**.
- 2007 Oct 5 Brachial plexus injury in the neonate. St. Mary's Health Center Department of Obstetrics and Gynecology Grand Rounds. St. Louis, Missouri. Presenter(s): **Borschel GH**.
- 2007 Sep 29 Update in pediatric plastic surgery. Clinical pediatric update. Overview of pediatric plastic surgery. For pediatricians, family physicians, nurse practitioners, physician assistants, The Abraham Lincoln Presidential Library and Museum. Springfield, Illinois. Presenter(s): Woo AS, **Borschel GH**. , , Illinois, September 29, 2007.
- 2007 Sep 28 Brachial plexus injury in the neonate. St. Louis University Department of Obstetrics and Gynecology and Women's Health Grand Rounds. St. Louis, Missouri. Presenter(s): **Borschel GH**.
- 2007 Sep Impact of sensory and motor nerve architecture in nerve regeneration. American Academy of Facial Plastic and Reconstructive Surgery, Inc. Washington, District of Columbia. Morazadeh A, **Borschel GH**, Nichols CM, Koob J, Hunter DA, Mackinnon SE.
- 2007 Jun 8 A study of modality specific nerve regeneration in a rat model. James Barrett Brown Visiting Professor 11th Annual Resident Research Day, Division of Plastic and Reconstructive Surgery, Washington University in St. Louis. St. Louis, Missouri. Kawamura DH, **Borschel GH**, Hunter DA, Mackinnon SE, Tung TH.
- 2007 Jun 8 Radial nerve branching patterns to the supinator muscle: a new potential donor nerve for transfer. James Barrett Brown Visiting Professor 11th Annual Resident Research Day. Division of Plastic and Reconstructive Surgery, Washington University in St. Louis. St. Louis, Missouri. Rovak JR, **Borschel GH**.
- 2007 Jun 8 A paradigm shift from sensory to motor nerve grafting to improve nerve regeneration. James Barrett Brown Visiting Professor 11th Annual Resident Research Day. Division of Plastic and Reconstructive Surgery, Washington University in St. Louis. St. Louis, Missouri. Moradzadeh A, **Borschel GH**, Nichols CM, Luciano JP, Koob JW, Hunter DA, Mackinnon SE.
- 2007 Jun 8 The effects of sodium hyaluronate and carboxymethylcellulose on peripheral nerves. James Barrett Brown Visiting Professor 11th Annual

Resident Research Day, Division of Plastic and Reconstructive Surgery, Washington University in St. Louis. St. Louis, Missouri. Tuffaha S, Kenney C, Perlyn C, Luciano JP, Hunter DA, Mackinnon SE, **Borschel GH**.

- 2007 Jun 6      Reconstruction of traumatic pediatric extremity injuries. Pediatric Trauma Lecture Series / Blessing Hospital Pediatric Grand Rounds. Quincy, Illinois. Presenter(s): **Borschel GH**.
- 2007 May 30      Brachial plexus injury in the neonate. St. John's Mercy Department of Obstetrics and Gynecology Grand Rounds. St. Louis, Missouri. Presenter(s): **Borschel GH**.
- 2007 May 24      Facial paralysis in children. Department of Pediatrics Grand Rounds / St. Louis Children's Hospital Lecture Series, Washington University in St. Louis. St. Louis, Missouri. Presenter(s): **Borschel GH**.
- 2007 May 9      Update on pediatric peripheral nerve injury: Facial paralysis in children. Department of Neurological Surgery Grand Rounds, Washington University in St. Louis. St. Louis, Missouri. Presenter(s): **Borschel GH**.
- 2007 Apr 14      Muscle tissue engineering. Ernest Gutmann Heritage Meeting, 30 Years After the Long-Lasting Denervated Muscle. Terme Euganee, Italy. Presenter(s): **Borschel GH**.
- 2007 Apr 12      Muscle tissue engineering: the in vivo axial-vessel approach. Basic and Applied Myology Padua Muscle Days, Aula Magna, Palazzo del Bo, The University of Padua (Università degli Studi di Padova). Padova (Padua), Italy. Presenter(s): **Borschel GH**.
- 2007 Apr 2      Brachial plexus injury in the neonate. Missouri Pediatric Medical Society. Springfield, Missouri. Presenter(s): **Borschel GH**.
- 2007 Apr 2      Facial paralysis in children. Missouri Pediatric Medical Society. Springfield, Missouri. Presenter(s): **Borschel GH**.
- 2007 Mar 29      Brachial plexus injury in the neonate. Department of Pediatrics Grand Rounds, St. Louis Children's Hospital / Washington University in St. Louis. St. Louis, Missouri. Presenter(s): **Borschel GH**.
- 2007 Mar 1      Facial paralysis in children. Department of Neurosurgery Grand Rounds, St. Louis University. St. Louis, Missouri. Presenter(s): **Borschel GH**.
- 2007 Mar 1      Brachial plexus injury in the neonate. Department of Neurosurgery Grand Rounds, St. Louis University. St. Louis, Missouri. Presenter(s): **Borschel GH**.
- 2007 Mar 1      Brachial plexus injury in the neonate. Division of Newborn Medicine Grand Rounds, Washington University in St. Louis. St. Louis, Missouri. Presenter(s): **Borschel GH**.

- 2007 Feb 28 Facial paralysis in children. Department of Otolaryngology Grand Rounds, St. Louis University. St. Louis, Missouri. Presenter(s): **Borschel GH.**
- 2007 Feb 22 Brachial plexus injury in the newborn. Ascension Health Second Birth Trauma Counsel Conference. St. Louis, Missouri. Presenter(s): **Borschel GH.**
- 2007 Feb 13 Pediatric facial paralysis. Division of Plastic Surgery Grand Rounds, St. Louis University. St. Louis, Missouri. Presenter(s): **Borschel GH.**
- 2006 Dec 7 Pediatric brachial plexus injuries. ProRehab, P.C. St. Louis, Missouri. Presenter(s): **Borschel GH.**
- 2006 Dec 7 Pediatric facial paralysis. ProRehab, P.C. St. Louis, Missouri. Presenter(s): **Borschel GH.**
- 2006 Nov 11 Update on pediatric peripheral nerve surgery: Pediatric facial paralysis and neonatal brachial plexus injuries. Greater St. Louis Area "Early Bird" Rounds. St. Louis, Missouri. Presenter(s): **Borschel GH.**
- 2006 Nov 5 Pediatric facial paralysis and neonatal brachial plexus injuries. Annual meeting of the Illini Medical Associates, Pere Marquette State Park. Grafton, Illinois. Presenter(s): **Borschel GH.**
- 2006 Nov 1 Facial Paralysis in Children. Department of Otolaryngology Grand Rounds, [Toggle screen reader support](#) Washington University in St. Louis. St. Louis, Missouri. Presenter(s): **Borschel GH.**
- 2006 Nov 1 Brachial plexus injuries in the newborn. Department of Obstetrics and Gynecology Grand Rounds, Washington University in St. Louis. St. Louis, Missouri. Presenter(s): **Borschel GH.**
- 2006 Sep 11 Vascularization and tissue engineering. Cell and Tissue Mechanics Group, Washington University in St. Louis. St. Louis, Missouri. Presenter(s): **Borschel GH.**
- 2005 Nov 30 Vascularization and tissue engineering. Division of Plastic Surgery Grand Rounds, University of Pittsburgh Medical Center. Pittsburgh, Pennsylvania. Presenter(s): **Borschel GH.**
- 2005 Nov 10 Tissue engineering of an implantable bioartificial hemofilter. American Society of Nephrology's (ASN) 38th Annual Meeting and Scientific Exposition (Renal Week 2005). Philadelphia, Pennsylvania, United States. Tiranathanagul K, Dhawan V, Lou L, **Borschel GH**, Tziampazis E, Buffington D, Brown DL, Humes HD. November 10 – November 13, 2005.
- 2005 Jun 11 Renal tissue engineering. 17th Annual Reed O. Dingman Meeting, Section of Plastic Surgery, University of Michigan. **Borschel GH**, Dhawan V, Buffington D, Tziampazis E, Humes HD, Brown DL. Micrins Microsurgical award for outstanding basic science presentation.



- 2005 May 16 Vascularized engineered cardiac tissue. Mayo Research Lecture Resident Presentation, University of Michigan Department of Surgery. Ann Arbor, Michigan. **Borschel GH**, Birla RK, Brown DL.
- 2005 Apr 22 Self-organization of primary neonatal cardiac myocytes to form contractile 3-dimensional cardiac muscle in vitro. Moses Gunn Annual Research Conference, University of Michigan Department of Surgery. Ann Arbor, Michigan. Birla RK, **Borschel GH**, Dennis RG.
- 2005 Mar 17 Vascularization and Tissue Engineering of Cardiac Muscle Constructs. 2005 ASPS/PSEF Plastic Surgery Senior Residents Conference. Houston, Texas. **Borschel GH**, Birla RK, Dennis RG, Brown DL. March 17-19, 2005. Best Research Paper Award.
- 2005 Mar 17 Use of the "square" technique for optimal facial reconstruction. 2005 ASPS/PSEF Plastic Surgery Senior Residents Conference. Houston, Texas. Jejurikar SJ, **Borschel GH**, Johnson TJ, Lowe L, Brown DL. March 17-19, 2005.
- 2004 Oct Vascularization and tissue engineering of cardiac and skeletal muscle. 50th Clinical Meeting of the Frederick A. Collier Society. Nashville, Tennessee. **Borschel GH**, Birla RK, Dennis RG, Lynch JB, Kuzon WM, Brown DL.
- 2004 Oct In vivo, vascularized, functional 3-dimensional cardiac tissue engineering. American College of Surgeons 90th Annual Clinical Congress. New Orleans, Louisiana. Birla RK, **Borschel GH**, Brown DL, Dennis RG.
- 2004 Jul 7 Mandibular distraction osteogenesis does not cause muscle damage and denervation. British Association of Plastic Surgeons / The Royal College of Surgeons Summer Meeting. Dublin, Ireland. Lynch JB, Cavaliere CM, **Borschel GH**, Urbanchek MG, Buchman SR, Kuzon WM. July 7-9, 2004.
- 2004 Jul Vascularization and tissue engineering of cardiac and skeletal muscle. Michigan Academy of Plastic Surgeons. Mackinac Island, Michigan. **Borschel GH**, Birla RK, Dennis RG, Lynch, JB, Kuzon, WM, Brown DL. Award for outstanding basic science paper.
- 2004 Jul The use of the "square" technique for AJMH. Michigan Academy of Plastic Surgeons. Mackinac Island, Michigan. Jejurikar SJ, **Borschel GH**, Brown DL.
- 2004 Jul Effect of hydrogels on axonal regeneration in acellular nerve. British Association of Plastic Surgery Meeting. Dublin, Ireland. Lynch JB, **Borschel GH**, Heckler AM, Hill EE, Mooney DJ, Cederna PS, Dennis RG, Kuzon WM.
- 2004 May Myocardial engineering in vivo: formation of vascularized, functional, 3-dimensional cardiac tissue. 49th Annual Meeting of the Plastic Surgery

- Research Council. Ann Arbor, Michigan. Brown DL, Birla RK, **Borschel GH**, Dennis RG.
- 2004 May      Mandibular distraction osteogenesis does not cause muscle damage and denervation. 49th Annual Meeting of the Plastic Surgery Research Council. Ann Arbor, Michigan. Lynch JB, Cavaliere CM, **Borschel GH**, Urbanchek MG, Buchman SR, Kuzon WM Jr.
- 2004 May      Mandibular distraction osteogenesis and the effect on muscles of mastication. Irish Association of Plastic Surgery. Cork, Ireland. Lynch JB, Cavaliere CM, **Borschel GH**, Urbanchek MG, Kuzon WM.
- 2004 Apr      Vascularization and tissue engineering of cardiac and skeletal muscle. Moses Gunn Annual Research Conference, University of Michigan Department of Surgery. **Borschel GH**, Birla RK, Dennis RG, Brown DL.
- 2004 Apr      Formation of vascularized 3-dimensional cardiac tissue. 40th Anniversary of Biomedical Engineering at Michigan. Ann Arbor, Michigan. Birla RK, **Borschel GH**, Brown DL, Dennis RG.
- 2004 Jan      Contractile tissue engineered skeletal muscle incorporating a vascular pedicle. American Society for Peripheral Nerve Annual Meeting. Palm Springs, California. **Borschel GH**, Dow DE, Huang YC, Dennis RG, Brown DL. Award for outstanding paper.
- 2003 Dec      Axially-vascularized contractile skeletal muscle engineered in vivo. The Sixth Annual Tissue Engineering Society International (TESI) Conference and Exposition. Orlando, Florida. **Borschel GH**, Dow DE, Huang YC, Dennis RG, Brown DL.
- 2003 Dec      Mandibular distraction osteogenesis and the effects on the rat anterior digastric muscle. The British Association of Plastic Surgery. London, United Kingdom. Lynch JB, Cavaliere CM, **Borschel GH**, Urbanchek MG, Buchman SR, Kuzon WM.
- 2003 Nov      Myocardial engineering in vivo: formation of vascularized 3-dimensional cardiac tissue. The Fourth Annual Conference for Regenerative Medicine. Washington, District of Columbia. Birla RK, **Borschel GH**, Brown D, Dennis RG.
- 2003 Oct      Skeletal muscle construct in vascularized cylindrical chamber. Proceedings of IEEE EMBS Asian-Pacific Conference on Biomedical Engineering. Osaka, Japan. Dow DE, Dennis RG, Brown DL, **Borschel GH**.
- 2003 Oct      Microvascular tissue engineering using recellularized arterial grafts. American College of Surgeons 89th Annual Clinical Congress. Chicago, Illinois. **Borschel GH**, Huang YC, Dow DE, Lynch JB, Kuzon WM Jr, Dennis RG, Brown DL.
- 2003 Oct      Total peripheral margin control of facial atypical junctional melanocytic hyperplasia using the "square" technique. American Society of Plastic

- Surgery 72nd Annual Scientific Meeting. San Diego, California. **Borschel GH**, Johnson TM, Lowe L, Brown DL.
- 2003 Sep      Effect of hydrogels on axonal regeneration in acellular nerve. The 28th Sir Peter Freyer meeting. Galway, Ireland. Lynch JB, **Borschel GH**, Heckler AM, Hill EE, Mooney DJ, Cederna PS, Dennis RG, Kuzon WM Jr.
- 2003 Jun      Tissue engineered muscle: strategies for vascularization. 15th Annual Reed O. Dingman Meeting, Section of Plastic Surgery, University of Michigan. Ann Arbor, Michigan. Presenter(s): **Borschel GH**. Micrins Microsurgical award for best basic science presentation.
- 2003 May      Tissue engineering of recellularized small diameter vascular grafts. Center for Organogenesis Research Symposium, University of Michigan. Ann Arbor, Michigan. **Borschel GH**, Huang YC, Dow DE, Lynch JB, Kuzon WM, Dennis RG, Brown DL.
- 2003 May      Tissue engineered axially-vascularized contractile skeletal muscle. Center for Organogenesis Research Symposium, University of Michigan. Ann Arbor, Michigan. **Borschel GH**, Huang YC, Dennis RG, Brown DL.
- 2003 May      Self-organization of neonatal cardiac myocytes to form a functional 3-dimensional tissue construct. Center for Organogenesis Research Symposium, University of Michigan. Ann Arbor, Michigan. Birla RK, Baar K, Boluyt MO, **Borschel GH**, Arruda EA, Dennis RG.
- 2003 May      Mandibular distraction osteogenesis and the effect on muscles of mastication. XXXVIII Congress of the European Society for Surgical Research. Ghent, Belgium. Lynch JB, Cavaliere CM, **Borschel GH**, Urbanek MG, Kuzon WM Jr.
- 2003 Apr      Self-Organization Of Neonatal Cardiac Myocytes To Form A Functional 3-Dimensional Tissue Construct. Institute of Gerontology Research Symposium, University of Michigan. Ann Arbor, Michigan. Birla RK, Baar K, Boluyt MO, **Borschel GH**, Arruda EA, Dennis RG.
- 2003 Apr      Tissue engineering of recellularized small diameter vascular grafts. Institute of Gerontology Research Symposium, University of Michigan. Ann Arbor, Michigan. **Borschel GH**, Huang YC, Dow DE, Lynch JB, Kuzon WM, Dennis RG, Brown DL.
- 2003 Apr      Tissue engineering of recellularized small diameter vascular grafts. Moses Gunn Annual Research Conference, University of Michigan Department of Surgery. **Borschel GH**, Huang YC, Dow DE, Lynch JB, Kuzon WM, Dennis RG, Brown DL.
- 2003 Apr      Tissue engineered recellularized small diameter vascular grafts. 48th Annual Meeting of the Plastic Surgery Research Council. Las Vegas, Nevada. **Borschel GH**, Huang YC, Dow DE, Lynch JB, Kuzon WM Jr, Dennis RG, Brown DL.

- 2003 Apr      The effect of hemimandibular distraction osteogenesis on single permeabilized muscle fibers in the sheep digastric muscle. 48th Annual Meeting of the Plastic Surgery Research Council. Las Vegas, Nevada. Van der Meulen JH, **Borschel GH**, Nicklin S, Ho KCK, Gianoutsos MP, Walsh WR, Kuzon WM Jr.
- 2003 Apr      Mandibular distraction osteogenesis and the effect on muscles of mastication. 48th Annual Meeting of the Plastic Surgery Research Council. Las Vegas, Nevada. Lynch JB, Cavaliere CM, **Borschel GH**, Urbanchek MG, Longaker MT, Kuzon WM Jr.
- 2003 Apr      Effect of hydrogels on axonal regeneration in acellular nerve. 48th Annual Meeting of the Plastic Surgery Research Council. Las Vegas, Nevada. **Borschel GH**, Lynch JB, Heckler AM, Hill EE, Mooney DJ, Cederna PS, Dennis RG, Kuzon WM Jr.
- 2003 Apr      A vascularized tissue engineering platform supports survival of transplanted myoblasts in vivo. 48th Annual Meeting of the Plastic Surgery Research Council. Las Vegas, Nevada. **Borschel GH**, Huang YC, Dennis RG, Brown DL.
- 2003 Mar      Self-organization of neonatal cardiac myocytes to form a functional 3-dimensional tissue construct. Engineering Tissue Growth International Conference and Exposition. Pittsburgh, Pennsylvania. Birla RK, Baar K, Boluyt MO, **Borschel GH**, Arruda EA, Dennis RG. Recipient of award for outstanding paper.
- 2003 Mar      Tissue engineering of recellularized small diameter vascular grafts. Engineering Tissue Growth International Conference and Exposition. Pittsburgh, Pennsylvania. **Borschel GH**, Huang YC, Dow DE, Lynch JB, Kuzon WM, Dennis RG, Brown DL.
- 2003 Feb      'Slow-Mohs:' the square technique for management of atypical junctional melanocytic hyperplasia. Aesthetic Facial Reconstruction in Adults and Children Plastic Surgery Educational Foundation Symposium 2003. Phoenix, Arizona. **Borschel GH**, Johnson TM, Lowe L, Brown DL.
- 2003 Jan      Effect of hydrogels on axonal regeneration in acellular nerve. American Society for the Peripheral Nerve Annual Meeting. Poipu, Hawaii. **Borschel GH**, Lynch JB, Heckler AM, Hill EE, Mooney DJ, Cederna PS, Dennis RG, Kuzon WM Jr.
- 2002 Oct      Tissue engineering of contractile skeletal muscle tissue using acellular muscle. American College of Surgeons 88th Annual Clinical Congress. San Francisco, California. **Borschel GH**, Dennis RG, Kuzon WM Jr.
- 2002 Jul      Exercise treadmill associated injuries in children. Michigan Academy of Plastic Surgeons. Mackinac Island, Michigan. **Borschel GH**, Wolter KG, Cederna PS, Franklin GA. Award for outstanding clinical paper.

- 2002 Jun Tissue engineering of contractile skeletal muscle tissue using acellular muscle. 14th Annual Dingman Lecture. Ann Arbor, Michigan. **Borschel GH**, Dennis RG, Kuzon WM Jr.
- 2002 May Tissue engineering of contractile muscle tissue using acellular skeletal muscle. Moses Gunn Annual Research Conference, University of Michigan Department of Surgery. **Borschel GH**, Dennis RG, Kuzon WM Jr.
- 2002 Apr Biomechanical properties of engineered peripheral nerve. Institute of Gerontology Research Symposium, University of Michigan. Ann Arbor, Michigan. **Borschel GH**, Kia KF, Kuzon WM, Jr, Dennis RG.
- 2002 Apr Biomechanical properties of engineered peripheral nerve. 47th Annual Meeting of the Plastic Surgery Research Council. Boston, Massachusetts. **Borschel GH**, Kia KF, Kuzon WM, Jr, Dennis RG.
- 2002 Apr Tissue engineering of contractile muscle tissue using acellular skeletal muscle. 47th Annual Meeting of the Plastic Surgery Research Council. Boston, Massachusetts. **Borschel GH**, Dennis RG, Kuzon WM Jr.

#### Media Appearances

- 2022 July 27 Invited Speaker. Sirenomelia (Mermaid Syndrome) Interviewer: Debby Knox CBS4 Indiana. Presenter: **Borschel, Gregory H**. Beating the odds: Carmel girl born with Mermaid Syndrome takes first steps <https://cbs4indy.com/indiana-news/beating-the-odds-carmel-girl-born-with-mermaid-syndrome-takes-first-steps/>
- 2017 Dec 17 News article. 'Miracle on University Avenue' thrives, six years later. Six-year-old Kaito was born with a tumour larger than his head. Though doctors told his parents abortion was the only option, a team of Toronto specialists saved his life. By Emma McIntosh, Toronto Star Staff Reporter. Toronto, Canada. <https://www.thestar.com/news/gta/2017/12/26/miracle-on-university-avenue-thrives-six-years-later.html>
- 2017 July 18 Invited Speaker. Double Hand Transplant Surgery. Interviewer: Caitlin Johannesson. CBC's The National News. Toronto, Ontario, Canada. Presenter: **Borschel, Gregory H**. SickKids to consider expanding their transplant service.

2015 Mar 5      **Invited Speaker.** New Eye Surgery – Corneal Neurotization. Interviewer: Marci Ien. Canada AM, CTV. Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory H.** Doctors at Toronto's Hospital for Sick Children have pioneered a new surgery that restores lost feeling in the eye. They have been able to successfully transfer a nerve from the patient's leg into the eye. It's a new approach to a medical problem that experts have been unable to solve for years. Abby Messner was the first person to have the new procedure in 2012.

2015 Feb      **Speaker.** Hepatic Artery Anastomosis Technique Video. Interviewer: Paul Kelly. Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory H.**

#### Broadcast

2015 Mar 5      **Speaker.** Restoring nerve sensations – Corneal Neurotization. CTV, CP24. Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory H.;** Zuker, Ronald; Ali, Assim. Doctors at Toronto's Hospital for Sick Children have pioneered a new surgery that restores lost feeling in the eye. They have been able to successfully transfer a nerve from the patient's leg into the eye. It's a new approach to a medical problem that experts have been unable to solve for years. Abby Messner was the first person to have the new procedure in 2012.

2015 Mar 5      **Speaker.** Eye Innovation – Corneal Neurotization. CBC The National. Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory H.;** Zuker, Ronald; Ali, Assim. Doctor's at Toronto's SickKids Hospital have carried out a world first. Doctors have pioneered a new surgery that restores lost sensation and can help prevent blindness...For 18 year old Abby Messner feeling is believing. When Abby was 11, doctors snipped a nerve to remove a cancerous brain tumor. She lost something in the process, all sensation in her left eye.

2015 Mar 5      **Speaker.** Pioneering eye surgery – Corneal Neurotization. CBC News Network and CBC Toronto; CHEX Peterborough. Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory H.;** Zuker, Ronald; Ali, Assim. Doctors are calling it a pioneering technique to restore sensation to the eye. It is an innovation that could prevent blindness. A new nerve graft transplant has been used on several patients at Toronto's Hospital for Sick Children...What doctors have done is fairly remarkable. Imagine having no feeling in one eye, you would be able to see but you wouldn't be able to feel wind, dust or an infection. This leads to scratching and scarring of the cornea and eventually blindness. That was the scenario.

2015 Mar 5      **Speaker.** Canadian doctors pioneer new technique that restores sensation to eye – Corneal Neurotization. Global National. Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory H.;** Zuker, Ronald; Ali, Assim. You know when you have that feeling that there is something in your eye? It's the feeling that Abby Messner took for granted until she lost that feeling...It's a rare condition called corneal anaesthesia where a

nerve in the eye doesn't work...Surgeons at SickKids hospital have pioneered a new surgery to restore that feeling by taking a nerve graft from the leg into the eye.

2015 Mar 5     **Speaker.** Canadian doctors pioneer new technique that restores sensation to eye – Corneal Neurotization. Global Toronto. Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory H.**; Zuker, Ronald; Ali, Assim. SickKids surgeons pioneer new surgery that restores lost feeling in eye. Carey Marsden reports.

2015 Mar 5     **Speaker.** New surgery proves it's good to have "a lot of nerve". City TV. Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory H.**; Zuker, Ronald; Ali, Assim. You've heard the saying 'eye for an eye,' but from a medical perspective that could be further from the truth. A radical new surgery that restores feeling in the eye, by taking a small nerve from a patient's leg...Eighteen year old Abby has a new nerve in her eye that was once in her calf. Exciting because she is the first one to undergo this new technique called corneal neurotization. It allows those with no feeling in their eye to regain sensation.

#### Instructional Course

2013 Jan 13     **Presenter.** Tissue Engineering and Regenerative Medicine. American Society for Peripheral Nerve (ASPN). Naples, Florida, United States. Presenter(s): **Borschel, Gregory H.**; Midha, Rajiv. This course will discuss new ideas of bioengineering for the construction of improved artificial nerve conduits by the use of skin-derived precursor cells, adult autologous Schwann cells and cytokine/drug delivery.

#### Media Print

2015 Mar 5     **Article Feature: MetroNews, Hamilton Spectator, MyKawthra.com, Yahoo Canada News , News Locker, WesterlyNews.ca, Parksville Qualicum Beach, Fort Fra.** Nerve from leg restores lost feeling in eye. Canadian Press – CTV. Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory**; Zuker, Ronald; Ali, Assim. Canadian pediatric surgeons have pioneered a technique to restore missing feeling in the eye — and prevent subsequent vision loss — using a nerve taken from a patient's leg and grafting it onto an existing healthy nerve in the face. The minimally invasive operation brings sensation back to children born without feeling in one or both eyes, or to those who have lost feeling due to injury or surgery to remove a brain tumour. Called corneal anaesthesia...relatively rare – SickKids sees a handful of.

#### News Paper Article

2015 Sep 3     **Invited Speaker.** Nerve Injury. Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory H.** This girl's leg was 95% severed in a boating accident. How doctors saved her life — and her limb  
Augusta's left leg was 95% severed at the mid-thigh, and left hanging by some threads of skin and muscle, bleeding profusely. A metal fin on the

boat's hull had sheered through the bone, the blood vessels and the sciatic nerve. Dr. Gregory Borschel, a nerve specialist at Sick Kids, reconnected Augusta's sciatic using nerve grafting, a tried and true technique. But to bring it back to life he reached into his medical bag of tricks, zapping it with an electric current in 30 volt bursts by using a machine that, in his words, "looks like something straight out of the 1950s."

#### Online Media Print

2015 Mar 5 **Speaker.** Canadian doctors pioneer new technique that restores sensation to eye. GlobalNews.ca. Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory**; Zuker, Ronald; Ali, Assim. Canadian doctors pioneer new technique that restores sensation to eye

Abby Messner tried injections to her eye, wearing specialized hard contact lenses, surgeries to remove scarring and even stitching part of her eye closed. Years ago, the 18-year-old lost feeling in her left eye – a condition called corneal anaesthesia after she had a brain tumour removed...Canadian scientists out of the Hospital for Sick Children say they've pioneered an innovative surgery that restores feeling in the eye by t.

2015 Mar 5 **Speaker.** Eye nerve graft restores sensation. CBC.ca. Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory**; Zuker, Ronald; Ali, Asim. Loss of sensation in the eye that gradually leads to blindness has been prevented with an innovative technique, Canadian surgeons say. Abby Messner, 18, of Stouffville, Ont., lost feeling in her left eye after a brain tumour was removed, along with a nerve wrapped around it, when she was 11. Messner said she didn't notice the loss of feeling until she scratched the eye. Messner wasn't able to feel pain in the eye, a condition called corneal anaesthesia... Over time, ophthalmology surgeon Dr. Asim.

2015 Mar 5 **Speaker.** Corneal Anastasia. lask.ca. Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory**; Zuker, Ronald; Ali, Asim.

#### Panel

2013 Jan 13 **Presenter.** Nerve and Technology. American Society for Peripheral Nerve (ASPN) and American Society for Regenerative Medicine (ASRM). Naples, Florida, United States. Presenter(s): **Borschel, Gregory H**; Midha, Rajiv; Gordone, Tessa.

2013 Jan 13 **Participant.** Facial Reanimation in the Oncologic Setting. American Society for Regenerative Medicine (ASRM). Naples, Florida, United States. Presenter(s): **Borschel, Gregory H**; Smith, Mark; Labbe, Daniel; Chunag, David.

#### Poster Presentation

2013 May 23 **Supervisor.** The Neuroprotective Compound P7C3 Enhances Functional and Behavioral Recovery Following Neonatal Nerve Injury in a Dose Dependent Manner. Canadian Association for Neuroscience.



Toronto, Ontario, Canada. Presenter(s): Stephen Kemp. (Trainee Presentation).

#### Radio

2015 Mar 5     **Speaker.** Restoring nerve sensations – Corneal Neurotization. CBC Radio One; Metro Morning. Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory H.**; Zuker, Ronald; Ali, Asim. Doctors at Toronto's Hospital for Sick Children have not only saved a teen agers vision, they've made a made medical breakthrough and the procedure is now being picked up by other surgeons. It involves a unique nerve transplant. If eyes are indeed windows into the soul eighteen year old Abbey Messner has been reinvigorated. Seven years ago she had major surgery she was left with no feeling in her left eye... Doctor Asim Ali talked to plastic surgeons and together they came up with a procedure tha.

2015 Mar 5     **Speaker.** Restoring nerve sensations – Corneal Neurotization. 900 CHML Hamilton; Zoomer Radio AM740 Toronto – Health and Lifestyle report. Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory H.**; Zuker, Ronald; Ali, Assim. Canadian pediatric surgeons have pioneered a new technique to restore missing feeling in the eye using a nerve taken from the patient's leg. The nerve is grafted to an existing healthy nerve in the face the minimally invasive operation bring sensation back to children born without feeling in one or both eyes or to those who have lost feeling due to injury or surgery. A team at Toronto's Hospital for Sick Children developed the procedure and the hospital has so far performed the operation on eig.

2015 Mar 5     **Speaker.** Restoring nerve sensations – Corneal Neurotization. Winnipeg's Morning News; CJOB 68 Winnipeg and on CFRA 580 Ottawa. Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory H.**; Zuker, Ronald; Ali, Asim. Canadian pediatric surgeons have pioneered a brand new technique to restore missing feeling in the eye and they're doing it by using a nerve taken from a person's leg. The nerve is grafted onto an existing healthy nerve in the face. The minimally invasive operation brings sensation back to children who were born without feeling and one or both eyes or to those who have lost feeling because of injury or surgery. It's called cornmeal anesthesia. The condition leaves patients unable to feel pain.

#### Social Media – SickKids Tweets

2015 Mar 5     **Invited Speaker.** New Eye Surgery – Corneal Neurotization. The Hospital for Sick Children. Toronto, Ontario, Canada. Presenter(s): Borschel, Gregory H. Zuker, Ronald; Asim, Ali. #SickKids surgeons 1<sup>st</sup> to use nerve grafts from patient's own leg to restore sensation in eye <http://ow.ly/JXYNk>  
(27 Retweets, 27 Favorites)

Abby is the first patient to undergo a corneal neurotization - a novel #surgery done at #SickKids. Watch her story: <http://ow.ly/JYYME> (4

Retweets, 3 Favorites)

#SickKids surgeons 1st to use nerve grafts from patient's own leg to restore sensation in eye <http://ow.ly/JXYNk>  
(27 Retweets, 27 Favorites)

### Visiting Professor

2016 Jan 20 **Visiting Professor.** Corneal Neurotization: Treating Blindness with Nerve Transfers and Grafts. Cincinnati Children's Hospital Medical Center. Cincinnati, Ohio, United States. Presenter(s): Borschel, Gregory H.

## 2. National

### Invited Lectures and Presentations

2014 Mar 7 **Moderator.** Best Papers - Session 2. Plastic Surgery Research Council. New York, New York, United States. Presenter(s): **Borschel, Gregory H.** (Trainee Presentation).

2012 Nov 2 **Supervisor.** Microspheres releasing GDNF within fibrin gels improve peripheral nerve regeneration after delayed nerve repair. McMaster University. Burlington, Ontario, Canada. Presenter(s): Liu, Edward. McMaster University Neurosciences Residents' Research Day. (Trainee Presentation).

2012 Sep 21 **Supervisor.** Microspheres releasing GDNF within fibrin gels improve peripheral nerve regeneration after delayed nerve repair. McMaster University. Burlington, Ontario, Canada. Presenter(s): Liu, Edward. McMaster University Plastic Surgery Residents' Research Day. (Trainee Presentation).

2012 Jun 12 **Supervisor.** Microspheres releasing GDNF within fibrin gels improve peripheral nerve regeneration after delayed nerve repair. Canadian National Medical Student Research Symposium. Winnipeg, Manitoba, Canada. Presenter(s): Liu, Edward. Received: Best New Trainee Poster Presentation. (Trainee Presentation).

### Presented Abstracts

2012 Jun 8 **Presenter.** Expert consensus on assessment of pediatric upper extremity function using Delphi methodology. Canadian Society of Plastic Surgeons. Toronto, Ontario, Canada. Presenter(s): MCrae, Matthew; Ho, Emily; Hao, Yumiko; Bala, Katie; **Borschel, Gregory H.**

### Media Appearances

2014 Jun 26 **Invited Speaker.** Paediatric Faecal Transplantation. Interviewer: Beverly Thomson. Canada AM, CTV News. Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory H.** End date: 2014 Jun 26.

### 3. Local

#### Invited Lectures and Presentations

- 2016 Jun 1     **Invited Speaker.** Management of facial palsy in children. The Hospital for Sick Children. Toronto, Ontario, Canada. Presenter(s): Borschel, Gregory H.
- 2016 May 6     **Invited Speaker.** New use for an old drug: locally delivered FK506 (Tacrolimus) markedly improves nerve regeneration. Pediatric Hand Study Group Meeting, The Hospital for Sick Children. Toronto, Ontario, Canada.
- 2016 Mar 30     **Invited Speaker.** Management of Extremity Sarcomas in Children. The Hospital for Sick Children. Toronto, Ontario, Canada. Presenter(s): Borschel, Gregory H.
- 2016 Jan 26     **Invited Speaker.** Corneal neurotization: An unusual application of nerve transfers. The Hospital for Sick Children, Neuroscience Day. Toronto, Ontario, Canada. Presenter(s): Borschel, Gregory H.
- 2015 Oct 1     **Invited Speaker.** Nerve regeneration as related to corneal neurotization. University of Toronto, Department of Ophthalmology and Vision Sciences. Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory H.**
- 2015 Sep 18     **Invited Speaker.** Management of sarcoma in children. The Hospital for Sick Children. Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory H.**; Hopyan, Sevan.
- 2015 Jul 29     **Speaker.** Corneal Neurotization. The Hospital for Sick Children, Plastic and Reconstructive Surgery Rounds. Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory H.**
- 2015 Apr 29     **Speaker.** To Learn about classic and more recent aspects of the management of the hand in Apert Syndrome. The Hospital for Sick Children; Plastic and Reconstructive Surgery Rounds. Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory H.**
- 2015 Apr 27     **Invited Speaker.** Management of sarcoma in children. The Hospital for Sick Children. Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory H.**; Hopyan, Sevan.
- 2015 Jan 14     **Invited Speaker.** Nerve Transfers; use in nerve injury and spinal cord injury. The Hospital for Sick Children; Neurology Rounds. Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory H.**
- 2014 Dec 18     **Invited Speaker.** Facial transplantation. The Hospital for Sick Children; Bioethics Grand Rounds. Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory H.**
- 2014 Dec 5     **Invited Speaker.** New Approaches to Enhance Recovery After Nerve Injury. University of Toronto; Department of Surgery Grand Rounds. Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory H.** To

identify barriers to successful nerve regeneration

To become familiar with new investigational and clinically available methods of enhancing nerve regeneration.

- 2014 Nov 5     **Invited Speaker.** Brachial Plexopathy. The Hospital for Sick Children; Neurology Grand Rounds. Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory H.**
- 2014 Nov 5     **Invited Speaker.** Nerve Transfers. The Hospital for Sick Children; Plastic and Reconstructive Surgery Rounds. Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory H.**
- 2014 Oct 18     **Lecturer.** Surgical Skills Workshop. The Hospital for Sick Children; Pediatric Interventional Radiologist Symposium. Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory H.**
- 2014 Jul 23     **Invited Speaker.** Pediatric hand trauma. The Hospital for Sick Children, Plastic and Reconstructive Rounds. Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory H.**
- 2014 Jun 19     **Speaker.** The Toronto Western Hospital; Hand Rounds. Toronto, Ontario, Canada. Presenter(s): Gregory Borschel H.
- 2014 Jun 18     **Speaker.** Facial Reanimation. The Hospital for Sick Children; Plastic and Reconstructive Surgery Rounds. Toronto, Ontario, Canada. Presenter(s): Gregory Borschel H.; Zuker, Ronald.
- 2014 Jun 16     **Speaker.** Hand Transplant. The Hospital for Sick Children, Nursing Education Day. Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory H.**
- 2014 Jun 13     **Invited Speaker.** Vascularized Composite Allotransplantation in Children. The Hospital for Sick Children, Transplant Center. Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory H.**
- 2014 May 12     **Speaker.** Hand Transplant. The Hospital for Sick Children, Nursing Education Day. Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory H.**
- 2014 May 9     **Session Chair.** Gallie-Bateman and McMurrich Research Presentations. University of Toronto. Toronto, Ontario, Canada. (Trainee Presentation).
- 2014 Feb 21     **Invited Speaker.** The monoclonal antibody herceptin improves regeneration after Injured nerves are repaired Immediately or after a period of chronic denervation. The University of Toronto, Research Day. Toronto, Ontario, Canada. Presenter(s): Mike James Hendry. (Trainee Presentation).
- 2014 Feb 21     **Invited Speaker.** Prevention of post-injury motor and sensory neuron death using P7C3 in a rat model of obstetrical brachial plexus injury. The

University of Toronto, Research Day. Toronto, Ontario, Canada.  
Presenter(s): Joseph Catapano. (Trainee Presentation).

- 2013 Oct 23     **Invited Speaker.** Nerve Injury and Regeneration Update. The Hospital for Sick Children / Neurology Grand Rounds. Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory H.**
- 2013 Oct 17     **Invited Speaker.** The Ten Test in Children. The Toronto Western Hospital / Dr. Jing Zhang. Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory H.**
- 2013 Oct 17     **Invited Speaker.** Simultaneous Multiple Syndactyly Release. The Toronto Western Hospital / Dr. Jing Zhang. Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory H.**
- 2013 Oct 2     **Presenter.** Research Update: To understand recent findings in nerve regeneration research. The Division of Plastic and Reconstructive Surgery. Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory H.**
- 2013 May 10     **Facilitator.** Gallie Day / University of Toronto Department of Surgery. Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory H.** (Trainee Presentation).
- 2013 Apr 24     **Speaker.** Nerve Regeneration Research at Sickkids. The Hospital for Sick Children, Division of Plastic and Reconstructive Surgery. Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory H.**; Gorden, Tessa; Kemp, Stephen; Hendry, Mike.
- 2013 Apr 5     **Invited Speaker.** Sarcoma Reconstruction at SickKids. The Hospital for Sick Children, 10th Annual Lindsay-Thomson Symposium / Vale Pediatric Research Day. Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory H.**
- 2013 Apr 5     **Invited Speaker.** P7C3 - a new agent for treatment of peripheral nerve injuries. The Hospital for Sick Children, 10th Annual Lindsay-Thomson Symposium / Vale Pediatric Research Day. Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory H.**
- 2013 Apr 4     **Speaker.** Hand Transplant. The Hospital for Sick Children, Division of Nephrology. Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory H.**
- 2012 Nov 1     **Speaker.** Vascularized Composite Allotransplantation. The Hospital for Sick Children. Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory H.**; Zuker, Ronald. Educational Session for Nursing staff regarding Vascularized Composite Allotransplantation.
- 2012 Nov 1     **Speaker.** Vascularized Composite Allotransplantation Program. The Hospital for Sick Children. Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory H.**; Zuker, Ronald. Educational session regarding Vascularized Composite Allotransplantation. (Trainee Presentation).

- 2012 Oct 25     **Speaker.** Hand and Face Transplantation. The Hospital for Sick Children. Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory H;** Zuker, Ronald. Educational Session on Vascularized Composite Allotransplantation.
- 2012 Oct 18     **Speaker.** Hand and Face Transplantation. The Hospital for Sick Children. Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory H;** Zuker, Ronald. Educational Session on Vascularized Composite Allotransplantation.
- 2012 Oct 12     **Invited Speaker.** Hand Transplantation - Past Successes and Future Challenges / Considerations in Pediatrics. University of Toronto. Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory H;** Zuker, Ronald; Levin, Scott. 11th Annual Ralph T. Manktelow Lectureship in Hand Surgery.
- 2012 Jul 25     **Invited Speaker.** Potential clinical use of nerve bridges to augment cross face nerve grafts. Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory H.**
- 2012 Jun 12     **Invited Speaker.** Syndactyly release of Adjacent web spaces in non-Apert patients, safety, outcomes and financial implications. The Hospital for Sick Children. Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory H.**
- 2012 Apr 20     **Invited Speaker.** Advances in Treatment of Peripheral Nerve Injury. Toronto Rehabilitation - Rumsey Centre. Toronto, Ontario, Canada. Presenter(s): **Gregory H. Borschel.**
- 2011 Sep 9     **Presenter.** "Decellularized Nerve Allografts and How They Might be a Useful Scaffold for Stem Cell Based Approaches to this Problem". SickKids Transplant Centre. Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory H.;** Farhat, Walid; Propst, Evan; Keeley, Fred.
- 2011 Jun 23     **Presenter.** Improving Outcomes Following Nerve Injury: An Interdisciplinary Approach. Institute of Biomaterials and Biomedical Engineering (IBBME). Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory H.**
- 2011 Jun 22     **Presenter.** Achieving Consensus on Pediatric Upper Extremity Functional Evaluation. University of Toronto, Thelma Cardwell Research Day 2011. Toronto, Ontario, Canada. Presenter(s): Hao, Yumiko., Bala, Katie, Erenburg, Eugenia., Ho, Emily., McRae Matthew., **Borschel Gregory.** (Trainee Presentation).
- 2011 Jun 8     **Invited Speaker.** "Nerve Regeneration Research: Methods and Outcomes". Physiology and Experimental Medicine, The Hospital for Sick Children. Toronto, Ontario, Canada. Presenter(s): Borschel, Gregory. H.

- 2011 May 12 **Invited Speaker.** Paediatric Hand Trauma: Initial Management and the Role of Plastic and Reconstructive Surgery. The Hospital for Sick Children. Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory H.**
- 2011 May 6 **Presenter.** Controlled Release of GDNF From Microspheres Promotes Peripheral Nerve Regeneration. Gallie Day / University of Toronto Department of Surgery. Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory H.**, Wood, Matthew D. (Trainee Presentation).
- 2011 Feb 25 **Presenter.** Division of Plastic and Reconstructive Surgery Professor's Rounds 2011: "What's New In Peripheral Nerve Surgery". Princess Margaret Hospital. Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory H.**
- 2011 Jan 26 **Speaker.** Nerve Regeneration, part II. Plastic Surgery Grand Rounds / The Hospital for Sick Children. Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory H.** (Trainee Presentation. Continuing Education).
- 2010 Dec 17 **Speaker.** Nerve Regeneration, part I. Plastic Surgery Grand Rounds / The Hospital for Sick Children. Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory H.** (Trainee Presentation. Continuing Education).
- 2010 Oct 14 **Speaker.** Upper Extremity Nerve Transfers in Kids ;. First Annual paediatric Upper Extremity Symposium. Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory H.** (Presentation to Patients/Public).
- 2010 Jun 11 **Presenter.** "Controlled Neurotrophic Factor Delivery to Promote Functional Peripheral Nerve Regeneration." Annual Perioperative Services Research Rounds Competition. SickKids Perioperative Services. Toronto, Ontario, Canada. Presenter(s): Wood MW, Sakiyama SE, Moore AM, Mackinnon SE, Jesuraj N, **Borschel GH.** (Patients/Public Presentation by Trainee).
- 2009 Nov 1 **Speaker.** Nerve regeneration. Plastic Surgery Grand Rounds / The Hospital for Sick Children. Toronto, Ontario, Canada. (Continuing Education).

#### Presented Abstracts

- 2010 Nov 4 **Presenter.** The Motor Nerve to the Masseter Muscle: an Anatomic and Histomorphometric Study to Facilitate its Use in Facial Reanimation. 7th Annual Lindsay-Thomson Symposium in Pediatric Plastic Surgery. Toronto, Canada. Presenter(s): **Borschel, Gregory H.**, Rahul Kasukurthi, David Kawamura, Daniel Hunter, Albert S. Woo. Arts and Letters Club. (Patients/Public Presentation by Trainee).
- 2010 Nov 4 **Speaker.** Does the Active Range of Motion of Patients with Obstetrical Brachial Plexus Palsy Diminish over Time? A Ten Year Analysis. 7th Annual Lindsay-Thomson Symposium in Pediatric Plastic Surgery. Toronto, Ontario, Canada. Presenter(s): Kattan A, Curtis CE, **Borschel GH**, Clarke HM. Arts and Letters Club. (Patients/Public Presentation by Trainee).

2006 May 12 Tissue engineering of an implantable bioartificial hemofilter. The Hospital for Sick Children 2006 Annual Surgical Services Laboratory and Clinical Science Research Competition. Toronto, Canada. **Borschel GH**, Tiranathanagul K, Dhawan V, Lytle I, Zhang W, Tziampazis E, Buffington DA, Brown DL, Humes HD. Josie Walther Memorial Award for Basic Science Research.

2006 Mar 8 Vascularization and tissue engineering. Division of Plastic Surgery Grand Rounds, The Hospital for Sick Children, University of Toronto. Toronto, Canada. Presenter(s): **Borschel GH**.

#### 5A Nursing Education Day

2013 May 16 **Presenter**. Sarcomas in the Pediatric Population. The Hospital for Sick Children. Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory H.** The biology of sarcoma. Updates in surgical management of sarcoma. Updates in Sarcoma Reconstruction.

#### Plastic and Reconstructive Surgery Rounds

2012 Nov 14 **Presenter**. Sarcomas in the Pediatric Population. The Hospital for Sick Children. Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory H.**; Hopyan, Sevan. The biology of sarcoma. Updates in surgical management of sarcoma. Updates in Sarcoma Reconstruction.

#### Plastic Reconstructive Surgery Rounds

2014 Apr 16 **Presenter**. Sarcomas in the Pediatric Population. The Hospital for Sick Children. Toronto, Ontario, Canada. Presenter(s): **Borschel, Gregory H.**; Hopyan, Sevan. The biology of sarcoma. Updates in surgical management of sarcoma. Updates in Sarcoma Reconstruction.

#### Poster Presentation

2013 Aug 15 **Supervisor**. Neuronal Death and Persistence of Functional Deficits Beyond Postnatal Day 5 (P5) Following Neonatal Nerve Injury in the Rat. Institute of Medical Sciences / Undergraduate Research Day. Toronto, Ontario, Canada. Presenter(s): Chiang, Cameron D. (Trainee Presentation).

#### Poster Submission

2013 May **Supervisor**. The Neuroprotective Compound P7C3 Enhances Functional and Behavioral Recovery Following Neonatal Nerve Injury in a Dose Dependent Manner. Canadian Association for Neuroscience. Toronto, Ontario, Canada. Presenter(s): Stephen Kemp. (Trainee Presentation).

#### 4. Other

##### Presented Abstracts

2001 Jun Endoscope-assisted male and female Poland syndrome reconstruction. 13th Annual Dingman Lecture. Ann Arbor, Michigan. **Borschel GH**, Cederna PS.



- 1997 Apr      Histologic effects of static magnetic fields on brain and dura. 42nd Annual Meeting of the Plastic Surgery Research Council. Galveston, Texas. **Borschel GH**, Girotto JA, Crain B, Vander Kolk CA.
- 1991 Aug      Thermodynamic properties of Buckminsterfullerene. Lawrence Livermore National Laboratory Undergraduate Research Symposium in Applied Science. Livermore, California. **Borschel GH**, Kam R, Siekhaus W.
- 1991 Aug      Statistical analysis of fracture patterns in graphite. Lawrence Livermore National Laboratory Undergraduate Research Symposium in Applied Science. Livermore, California. Kam R., **Borschel GH**.

#### Presented and Published Abstracts

- 2013 Oct 18      Corneal neurotization in children for the management of corneal anesthesia.

##### Publication Details:

Ali, Asim; Elbaz, Uri; **Borschel, Gregory H**. Corneal neurotization in children for the management of corneal anesthesia. 2013 Oct 18. **Co-Principal Author**.

- 2012 Sep      Glial-derived neurotrophic factor (GDNF) delivered from microspheres enhances peripheral nerve regeneration after delayed nerve repair. .

##### Publication Details:

**Borschel, Gregory H.**; Wood, Matthew D.; Kim H; Kemp, Stephen W.P; Szyntkaruk, Mark; Phua, Peter; Lafontaine, Christine; Shoichet, Molly S.; Gordon, Tessa. Glial-derived neurotrophic factor (GDNF) delivered from microspheres enhances peripheral nerve regeneration after delayed nerve repair. Journal of the American College of Surgeons. Conference: 98th Annual Clinical Congress of the American College of Surgeons, Surgical Forum 2012 Clinical Congress Chicago, IL United States. Conference Start: 20120930 Conference End: 20121004. Conference Publication: (var.pagings). 215 (3 SUPPL. 1) (pp S90), 2012. Date of Publication: September 2012.

##### Publisher

Elsevier Inc. **Senior Responsible Author**.

- 2010 Oct 3      Controlled Neurotrophic Factor Delivery To Promote Functional Peripheral Nerve Regeneration.

##### Publication Details:

Wood, Matthew D.; MacEwan, Matthew R.; French, Alexander R.; Moore, Amy M.; Hunter, Daniel A.; Mackinnon, Susan E.; Moran, Daniel W.; Sakiyama-Elbert, Shelly E.; **Borschel, Gregory H**. Controlled Neurotrophic Factor Delivery To Promote Functional Peripheral Nerve Regeneration. Plastic & Reconstructive Surgery. 126():55, October 2010. **Senior Responsible Author**.

- 2010 Sep 3      A transgenic rat expressing green fluorescent protein (GFP) in peripheral nerves: A new model for the study of peripheral nerve and regeneration.
- Publication Details:  
**Borschel GH**, Moore AM, Santosa K, Kasukurthi R, Tong A, Luciano J, Yan Y, Mackinnon SE. A transgenic rat expressing green fluorescent protein (GFP) in peripheral nerves: A new model for the study of peripheral nerve and regeneration. Proc. 6th International Muscle Symposium 2010, Vienna. The International Society for Science in Plastic Surgery, Vienna, Austria. **Principal Author**.
- 2009 May      A novel transgenic rat expressing green fluorescent protein (GFP) in peripheral nerve. We describe a novel model for evaluation of nerve injury.
- Publication Details:  
 Moore AM, Kasukurthi R, Tong AY, Solowski N, Luciano J, Yan Y, Ray WZ, Mackinnon SE, **Borschel GH**. A novel transgenic rat expressing green fluorescent protein (GFP) in peripheral nerve. Plastic and Reconstructive Surgery 2009 May; 123, 6 (Supplement): 41. Winner of the Clifford C. Snyder, M.D. Past Chairman's Award. **Senior Responsible Author**.
- 2008 Jun      Controlled release of glial cell line-derived neurotrophic factor (GDNF) in a fibrin based delivery system to enhance sciatic nerve regeneration.
- Publication Details:  
 Moore AM, Wood M, Hunter DA, Sakiyama SE, **Borschel GH**. Controlled release of glial cell line-derived neurotrophic factor (GDNF) in a fibrin based delivery system to enhance sciatic nerve regeneration. Plastic and Reconstructive Surgery 2008 June; 121(65S): 22. **Senior Responsible Author**.
- 2008 Jun      Sodium hyaluronate carboxymethylcellulose membranes do not cause deleterious effects in non-injured or injured nerve models.
- Publication Details:  
 Magill CK, Tuffaha SH, Hunter DA, **Borschel GH**, Mackinnon SE. Sodium hyaluronate carboxymethylcellulose membranes do not cause deleterious effects in non-injured or injured nerve models. Plastic and Reconstructive Surgery 2008 June; 121(65S): 76. **Coauthor or Collaborator**.
- 2008      Green fluorescent protein transgenic rat: a new model for peripheral nerve research.
- Publication Details:  
 Tong AY, Solowski N, Moore AM, Yan Y, Luciano JP, Mackinnon SE,

**Borschel GH.** Green fluorescent protein transgenic rat: a new model for peripheral nerve research. American Society for Peripheral Nerve Newsletter, Fall, 2008. **Senior Responsible Author.**

2007 Aug      Motor nerve architecture and peripheral nerve regeneration.

Publication Details:

Moradzadeh A, **Borschel GH**, Nichols CM, Koob J, Hunter DA, Mackinnon SE. Motor nerve architecture and peripheral nerve regeneration. Otolaryngology – Head and Neck Surg. 137, 2, S1. Aug 2007, p 213. **Coauthor or Collaborator.**

2006 Sep      An implantable bioartificial hemofilter: ultrafiltrate volume depends on vascular density and collecting fiber surface area.

Publication Details:

Lytle IF, Dhawan V, Tiranathanagul K, Lou L, **Borschel GH**, Tziampazis E, Buffington D, Zhang WX, Humes HD, Brown DL. An implantable bioartificial hemofilter: ultrafiltrate volume depends on vascular density and collecting fiber surface area. J Am Coll Surg Sept 2006, 203, 3, S91. **Coauthor or Collaborator.**

2004      In vivo, vascularized, functional, 3-dimensional cardiac tissue engineering.

Publication Details:

Birla RK, **Borschel GH**, Dennis RG, Brown DL. In vivo, vascularized, functional, 3-dimensional cardiac tissue engineering. J Am Coll Surg 199(3): S26, 2004. **Coauthor or Collaborator.**

2003      What's new in skeletal muscle tissue engineering.

Publication Details:

**Borschel GH**, Dennis RG, Kuzon WM Jr. What's new in skeletal muscle tissue engineering. ASPN Newsletter, 6 (2), 2003. **Principal Author.**

2003      Microvascular tissue engineering using recellularized arterial grafts.

Publication Details:

**Borschel GH**, Huang YC, Dow DE, Lynch JB, Kuzon WM Jr, Dennis RG, Brown DL. Microvascular tissue engineering using recellularized arterial grafts. J Am Coll Surg 197(3): S60, 2003. **Principal Author.**

2002      Tissue engineered skeletal muscle using recellularized whole muscle.

Publication Details:

**Borschel GH**, Dennis RG, Kuzon WM Jr. Tissue engineered skeletal muscle using recellularized whole muscle. J Am Coll Surg 195: S46, 2002. **Principal Author.**

## H. Teaching and Design

### 1. Innovations and Development in Teaching and Education

2018 May 3 Facial Palsy. Faculty of Medicine, Dept of Surgery, Plastic Surgery, University of Toronto, The Hospital for Sick Children. Resident, Fellow, Occupational Therapy, Physio Therapy and Speech Therapy Teaching.

2018 Feb 14 The Congenital Hand. Faculty of Medicine, Dept of Surgery, Plastic Surgery, University of Toronto. The Hospital for Sick Children. Resident and Fellow Teaching

2017 July – 2017 July 17 Microsurgery, Graduate Education, Faculty of Medicine, Dept of Surgery, Plastic Surgery, University of Toronto

2011 Feb 4 Microsurgical skills, Graduate Education, Faculty of Medicine, Dept of Surgery, Plastic Surgery, University of Toronto  
*Faculty Facilitator. Resident were taught microsurgical skills in the skills lab at Mt Sinai Hosp.*

2010 Oct - 2010 Oct 30 Microsurgical skills, Graduate Education, Faculty of Medicine, Dept of Surgery, Plastic Surgery, University of Toronto  
*Faculty Facilitator. I initiated a program in October 2010, in which resident were taught microsurgical skills in the skills lab at Mt Sinai Hosp.*

## I. Research Supervision

### 1. PRIMARY OR CO-SUPERVISION

#### Multilevel Education

2022 May - 2024 Apr **Primary Supervisor.** Arif Hussain, MD. Indiana Center for Regenerative Medicine and Engineering. Indiana University. Project: Neurotrophic keratopathy and the role of mesenchymal cells in corneal epithelial wound healing

2022 Aug - 2024 Jul **Primary Supervisor.** Chilando Mulenga, BS. Indiana Center for Regenerative Medicine and Engineering. Indiana University. Project: (1) Neurotrophic keratopathy and the role of stem cells in corneal epithelial wound healing; (2) Blink reconstruction in Moebius syndrome

- 2022 Jun - 2023 June      **Primary Supervisor.** Katelyn Stevens, BS. Indiana Center for Regenerative Medicine and Engineering. Indiana University. Project: Neurotrophic keratopathy and the role of Schwann cells in corneal epithelial wound healing
- 2019 Mar - 2019 June      **Primary Supervisor.** Stephen Sammut, Mary Margaret Scheunert, Alanna Bateman, Simeon Wong, Maryam Nejatian, Bruce Oathsman Thevakumaran. Institute of Biomaterials and Biomedical Engineering. University of Toronto. Clinical Engineering Students.
- 2019 Jan - 2019 June      **Primary Supervisor.** Edem Afenu, Jason baek, Ester Carrasco, Yiyang Chen, Ryan Chu, Amailia Gil, David Lee, Firdious Hadj-Moussa, Jessica Henley, Brian Hyung, Rafath Kazimi, Steven Lancefield, Cherryl Li, Claudia Lutfallah, Alexandria Michelini, Hettige Perera Jayatunga, Muhammad Sheikh, Mingyang Tao, Simeon Wong. Medical Students. University of Toronto.
- 2016 Sep - 2017 July      **Primary Supervisor.** Rachel Dadouch, Medical Science. Supervisee Position: Student Researcher, Supervisee Institution: The Hospital for Sick Children. Brachial Plexus Injuries; The restoration of elbow flexion.
- 2010 Jun      **Primary Supervisor.** Wood Matthew, Finalist, 2010. Supervisee Position: Post Doctorial Fellow, Supervisee Institution: The Hospital for Sick Children. *"Controlled Neurotrophic Factor Delivery to Promote Functional Peripheral Nerve Regeneration."* Completed 2010.

#### Other Education

- 2018 Aug - Aug 2019      **Primary Supervisor.** Jenny Cheung. Supervisee Position: Student Researcher, Supervisee Institution: The Hospital for Sick Children. *FK506 laboratory experiments in injury models.*
- 2019 Mar – Sep 2021      **Primary Supervisor.** Kiana Tajdaran. Supervisee Position. Research Student. Supervisee Institution: The Hospital for Sick Children. *Learn lab techniques and assist in the corneal innervation project. Project will be focusing on some aspects of innervation-induced activation of limbal stem cells. Novel treatments for blindness caused by neurotrophic keratopathy: role of stem cells, innervation, and therapeutics (role of corneal innervation on maintenance and activity of limbal stem cells)*

2019 Mar - Sep 2021	<b>Primary Supervisor.</b> Seyed Kaveh Mirmoeini. Supervisee Position. Research Student. Supervisee Institution: The Hospital for Sick Children. <i>Determine the mechanism of innervation regulated corneal epithelium maintenance and recovery.</i>
2019 Jan - Sep 2021	<b>Primary Supervisor.</b> Marina Manoraj. Supervisee Position. Research Student. Supervisee Institution: The Hospital for Sick Children. <i>Effects of combined FK506 and electrical stimulation treatment on neurite extension</i>
2019 Jan - Sep 2021	<b>Primary Supervisory.</b> Golsa Shafa. Supervisee Position. Research Student. Supervisee Institution: The Hospital for Sick Children. <i>Electrical Stimulation as a means of increasing axon regeneration and motor function after facial reanimation with cross face nerve grafts and free gracilis transfer.</i>
2018 Feb - Sep 2021	<b>Primary Supervisor.</b> Martina Heinelt. Supervisee Institution: The Hospital for Sick Children.
2016 Sep – Aug 2019	<b>Primary Supervisor.</b> B. Sc. Kira Antonyshyn, Medical Science. Supervisee Position: Student Researcher, Supervisee Institution: The Hospital for Sick Children. <i>Corneal neurotisation; Studying a novel solution for corneal anesthesia and neurotrophic keratitis.</i> Supervisor(s): Borschel, Gregory H.
2013 Aug – 2018 Aug	<b>Primary Supervisor.</b> B. Sc. Kasra Tajdaran, Medical Science, Biomedical Engineering. Supervisee Position: Student Researcher, Supervisee Institution: The Hospital for Sick Children.
2016 Jun - 2017 Sep	<b>Primary Supervisor.</b> B. Sc. Mark Shafarenko, Medical Science. Supervisee Position: Student Researcher, Supervisee Institution: <i>The Hospital for Sick Children.</i> <i>Morbidity following sural nerve harvest in pediatric patients.</i>
2016 Jun - 2016 Aug	<b>Primary Supervisor.</b> B. Sc. Sara Yumeen, Medical Science. Supervisee Position: Student Researcher, Supervisee Institution: The Hospital for Sick Children. <i>Publication rates of resident Research Day abstracts.</i>
2016 May - 2017 Aug	<b>Primary Supervisor.</b> MASc student. Katelyn Chan, Chemical Engineering and Applied Chemistry. Supervisee Position: Student Researcher, Supervisee Institution: The Hospital for Sick Children. <i>Research localized and sustained delivery of Tacrolimus (FK506) for peripheral nerve regeneration.</i>

- 2015 Jun - 2016 Sep      **Primary Supervisor.** B. Sc. Steve Hanna, Medical Science. Supervisee Position: Student Researcher, Supervisee Institution: The Hospital for Sick Children. x.
- 2014 Jan - 2014 Aug      **Primary Supervisor.** David Scholl. Supervisee Position: Student Researcher, Supervisee Institution: The Hospital for Sick Children. *Enhancement of Nerve Regeneration following Neonatal Nerve Injury.*
- 2012 Jun - 2012 Aug      **Primary Supervisor.** B. Sc. Krisanne Stanoulis. Supervisee Position: Neuroscience student, Dalhousie University, Supervisee Institution: The Hospital for Sick Children. *P7C3 to enhance nerve regeneration.* Awards: Summer Undergraduate Research Program 2012 Presentation Day (SURP), Undergraduate Research Summer Student, Outstanding Poster Awardee. Collaborator(s): Gordon, Tessa (co-supervisor). Completed 2012.
- 2011 Jun - 2011 Aug      **Primary Supervisor.** BSc. Krisanne Stanoulis. Supervisee Position: Neuroscience student, Dalhousie University, Supervisee Institution: The Hospital for Sick Children. *P7C3 to enhance nerve regeneration.* Collaborator(s): Gordon, Tessa (co-supervisor).
- 2010 Jun - 2010 Sep      **Primary Supervisor.** Health Sciences. Alexander Bilbily. Supervisee Position: Summer Research Student, Supervisee Institution: The Hospital for Sick Children. *Use of microspheres to enhance regeneration following nerve injury.* Collaborator(s): Gordon, Tessa (co-supervisor). Completed 2010.
- 2010 Jun - 2010 Sep      **Primary Supervisor.** BM Sc. Daniel Ennis. Supervisee Position: Summer Research Student, Supervisee Institution: The Hospital for Sick Children. *Use of microspheres to enhance neuromuscular junction formation following nerve injury.* Collaborator(s): Gordon, Tessa (co-supervisor). Completed 2010.

## Graduate Education

- 2023 May - 2025 May      **Primary Supervisor.** Master's in Clinical Research (CITE). Jordan Crabtree. Supervisee Position: Masters student, Supervisee Institution: Indiana University. *Development of tacrolimus releasing nerve wraps for nerve regeneration.* Collaborator(s): Konstantin Feinberg Completed 2025.

- 2019 Sep - 2021 Sep     **Primary Supervisor.** MSc. Kaveh Mirmoeini. Supervisee Position: MSc student, Supervisee Institution: University of Toronto. *The effect of Schwann cells in corneal wound healing* Awards: Collaborator(s): T Gordon; David Kaplan. Completed 2021.
- 2019 Sep - 2021 Sep     **Primary Supervisor.** MSc. Kiana Tajdaran Supervisee Position: MSc student, Supervisee Institution: University of Toronto. *The role of NGF and trka and p75NTR signaling in corneal wound healing.* Awards: Collaborator(s): T Gordon; David Kaplan. Completed 2021.
- 2019 Jul - 2020 Jun     **Co-Supervisor.** Clinical Fellow. Jyh Haur Woo.
- 1) *Sensory outcomes after corneal neurotization.*
  - 2) *Keratoplasty after corneal neurotization.*
- 2018 Feb - Sep 2021     **Primary Supervisor.** Kevin Zuo Supervisee Institution: The Hospital for Sick Children. MSc. student. Electrical stimulation and FK506 in nerve regeneration.
- 2017 Jul - 2018 Jun     **Co Supervisor.** Clinical Fellow. Simon Fung.  
*In vivo microscopy reveals corneal reinnervation after treatment of neurotrophic keratopathy with corneal neurotization*
- 2011 Sep -     **Primary Supervisor.** MSc. Cecilia Alvarez Veronesi. Supervisee Position: MSc student, Supervisee Institution: University of Toronto. *The effect of delivery of neurotrophic factors combined with surgical protection on recovery of function following nerve injury.* Awards: 2012-2013 Ontario Graduate Scholarship (OGS), Ontario, Canada Graduate student funding award. Total Amount: 15,000 CAD. Collaborator(s): T Gordon. Completed 2014.
- 2010 Jun - 2010 Sep     **Primary Supervisor.** MSc. Colin Nguyen. Supervisee Position: Summer Research Student, Supervisee Institution: The Hospital for Sick Children. *Use of a tissue engineered nerve graft to improve nerve regeneration.* Completed 2010.

#### Undergraduate MD

- 2012 Jan - 2013 Jan     **Primary Supervisor.** Year 2. Edward Liu. Supervisee Position: Medical Student, McMaster Univ, Supervisee Institution: The Hospital for Sick Children. *1. Application of exogenous neurotrophic factors to enhance nerve*



*regeneration 2. clinical outcomes research.* Awards: Outstanding poster award by new trainee, Faculty supervisor, Awardee Name: Edward Liu. 4th Canadian National Medical Student Research Symposium June 12-14, 2012 at the University of Manitoba, Canada  
 BDNF and GDNF for treatment of nerve injury. CIHR. CIHR Health Professional Student Research Award. Collaborators: Edward Liu, McMaster University. 4,251 CAD. Collaborator(s): T Gordon. Completed 2013.

2011 Jan - 2012 Sep

**Primary Supervisor.** CREMS 20 month student. Mark Szyndkaruk. Supervisee Position: CREMS 20 Month Research Student, Supervisee Institution: The Hospital for Sick Children. *1. P7C3 to enhance nerve regeneration, 2. A transgenic rat expressing GFP in peripheral nerve, 3. Surgical wait times at SickKids.* Awards: Basic Science Poster Award, Supervisor, Awardee Name: Szyndkaruk, Mark, BSc. Comprehensive Research Experience for Medical Students (CREMS) at the University of Toronto Faculty of Medicine, Toronto, Ontario, Canada  
 Anatomical, Behavioural and Myological Analysis of the Transgenic Thy1-GFP Rat Following Peripheral Nerve Injury. Collaborator(s): Gordon, Tessa (co-supervisor). Completed 2012.

2011 Jan - 2012 Jan

**Primary Supervisor.** Year 2. Peter Phua. Supervisee Position: Medical Student, McMaster Univ, Supervisee Institution: The Hospital for Sick Children. *Side to side nerve grafting: Role of Neuregulin.* Awards: "How do side-to-side nerve grafts promote recovery after nerve injury?". CIHR. CIHR Health Professional Student Research Award. Collaborators: Peter Phua, McMaster University. 4,251 CAD. Collaborator(s): Gordon, Tessa (co-supervisor). Completed 2012.

## Postgraduate MD

2019 July – 2021 Jul **Primary Supervisor.** Simeon Christian Daschler: Supervisee Position: Research Fellow, Surgical Resident and Postdoctoral Researcher. Supervisee Institution: The Hospital for Sick Children. *Project 1: Novel local delivery systems for FK506 to the nerve repair site.*

*Project 2: The role of corneal nerve fibers in limbal stem cell regulation and epithelial homeostasis. Project 3: Neuroprotective drugs to prevent distal nerve fiber loss in diabetic neuropathy*

2018 Sept - present      **Primary Supervisor.** Konstantin Feinberg. Supervisee Position. Supervisee Institution: The Hospital for Sick Children. *Project 1: The role of corneal nerve fibers in limbal stem cell regulation and epithelial homeostasis. Project 2 Neuroprotective drugs to prevent distal nerve fiber loss in diabetic neuropathy.*

2014 Jul - 2016 Jun      **Primary Supervisor.** Core Program. Daniel Demsey. Supervisee Institution: The University of British Columbia. *Reversibility of age-related effects on nerve regeneration.*

2012 Jul - 2014 Jun      **Primary Supervisor.** Core Program. Michael James Hendry. Supervisee Position: Surgeon Scientist Program, Supervisee Institution: The Hospital for Sick Children. *Protection of denervated peripheral nerve stumps using a novel surgical paradigm: molecular and mechanistic basis.* Awards: Clinical Investigator Program of the Royal College of Physicians and Surgeons of Canada – awarded full salary support and benefits for first year of study.  
James F. Crothers Family Fellowship Award  
John Edward De Toro Scholarship  
Mentor Medical Systems Scholarship  
William S. Fenwick Fellowship  
Joseph M. West Family Memorial Fund. Collaborator(s): T Gordon. Completed 2014.

2011 Jul - 2013 Jun      **Primary Supervisor.** Clinical Fellow. Snyder-Warwick, Alison. Supervisee Position: Assistant Professor of Surgery, Supervisee Institution: Washington University in St. Louis. *Functional outcomes in facial reanimation: Comparison of innervation sources.* Awards: Best Basic Science Research Paper of the 2011 Chang Gung Memorial Hospital Symposium in Reconstructive Surgery 2012  
Best paper award, Faculty supervisor, Awardee Name: Dr. Alison Snyder-Warwick. Canadian Society of Plastic Surgeons 2012. Collaborator(s): Ronald Zuker. Completed 2012.

2010 Jun - 2010 Aug      **Primary Supervisor.** MD. Rasha Alsaaran. Supervisee Position: Research Student. *Paediatric Upper Extremity Function Questionnaire.* Completed 2010.

2007 Jul - 2009 Jun      **Primary Supervisor.** Postdoctoral MD research fellow. Moore, Amy M. Supervisee Position: Assistant Professor of Surgery, Supervisee Institution: Washington University in St. Louis. *Functional outcomes in facial reanimation: Comparison*

*of innervation sources*. Awards: Invited speaker, Meeting of the European Plastic Surgery Research Council, Hamburg 2009

James Barrett Brown 13th Annual Award for Best Basic Science Paper 2009

Finalist, The 32nd Annual James L. O'Leary Prize for Research in Neuroscience, Department of Neurology 2009

Clifford C. Snyder, M.D. Past Chairman's Award for Best Resident Presentation, Plastic Surgery Research Council, Pittsburgh PA 20. Collaborator(s): Susan Mackinnon. Completed 2012.

2006 - 2008

**Primary Supervisor.** Core Program. Amy Moore. Supervisee Position: Postdoctoral Research Fellow, Supervisee Institution: Washington University. *A novel transgenic rat expressing green fluorescent protein in neurons*. Awards: 1. Clifford Snyder Past Chairman's Award for Best Research Paper, Plastic Surgery Research Council 2009  
2. Finalist, Washington University Best Research Paper Award  
3. Best Basic Science Paper, Washington University Division of Plastic Surgery Resident Research Day 2009. Collaborator(s): Susan Mackinnon. Completed 2009.

Postdoctoral Research Fellow (PhD)

2018 Jan - 2021 Sep

**Primary Supervisor.** Konstantin Feinberg, PhD. Corneal wound healing, NGF, Stem cells and Schwann cells. Supervisor(s): Borschel, Gregory H. Completed 2021

2015 Jan - 2017 Jan

**Primary Supervisor.** Tommy Nai-Jen Chang. (1) The effect of NAC on neonatal nerve regeneration (2) 1. Slow Release Bupivacaine with Hyaluronan Methylcellulose (HAMC) For Sciatic Nerve Block in Rats (3) 2. Compare the Response of Sciatic Nerve Block in Different Aged Rat to Slow Release Bupivacaine with Hyaluronan Methylcellulose. Supervisor(s): Borschel, Gregory H. Completed 2017.

2015 Jan - 2017 Jan

**Primary Supervisor.** Tommy Nai-Jen Chang. The use of partially injured donor nerve to restore elbow flexion. Supervisor(s): Borschel, Gregory H. Completed 2017.

2013 Jul - 2018 Jun

**Primary Supervisor.** Joseph Catapano. Supervisee Institution: University of Toronto.

- 2012 Sep - 2017 Mar      **Primary Supervisor.** Michael Willand. Supervisee Position: Postdoc, Borschel Laboratory, Supervisee Institution: The Hospital for Sick Children. *Electrical stimulation of nerve and muscle to improve outcomes following peripheral nerve injury.* Collaborator(s): Tessa Gordon (Co Supervisor). Completed 2014.
- 2011 Apr - 2012 Jun      **Primary Supervisor.** Eva Placheta. Supervisee Position: Plastic Surgery Resident, Supervisee Institution: Medical University of Vienna. *Enhancement of cross facial nerve grafts by protecting the denervated stump using end to side transfer of the occipital nerves.* Awards: Outstanding paper chosen to speak at EURAPS clinical meeting, Plastic and reconstructive surgery, Supervisor, Awardee Name: Eva Placheta. EURAPS (European Association of Plastic Surgeons) Research Council, Germany. Collaborator(s): Manfred Frey, Tessa Gordon. Completed 2012.
- 2010 Aug - 2013 Jul      **Primary Supervisor.** Stephen W. Kemp, PhD. Supervisee Position: Postdoctoral fellow, Supervisee Institution: The Hospital for Sick Children. *1. Characterization of a transgenic rat expressing GFP in peripheral nerves; 2. A novel proneurogenic neuroprotective compound, P7C3, protects neonatal neurons from cell death.* Awards: IAMGold fellowship (University of Toronto)  
Trainee startup fund award (TSUF)  
RestraComp award x2. Collaborator(s): Tessa Gordon. Completed 2013.
- 2009 Aug - 2012 Sep      **Primary Supervisor.** Matthew Wood, Ph.D. Supervisee Position: Postdoctoral Research Fellow, Supervisee Institution: University of Toronto. *Neurotrophin delivery to enhance peripheral nerve regeneration.* Awards: 1. Restracom Fellowship Award, The Research Training Centre, funded 2009, 2010 and 2011;  
2. Exceptional Trainee Award 2010, Research, Postdoctoral Fellow, Awardee Name: Matthew D. Wood. The Hospital for Sick Children Research Institute,  
3. Ontario Ministry of Innovation. Post Doctoral Fellowship (PDF) Program.  
4. Best Basic Science Research Paper of the 2012 Annual Meeting of the American Society for Peripheral Nerve. Collaborator(s): T Gordon, M Shoichet. Completed 2012.
- 2009 Aug - 2011 Jun      **Primary Supervisor.** Matthew Wood, Ph.D. Supervisee Position: Postdoctoral Research Fellow, Supervisee Institution: University of Toronto. *Microsphere based delivery of neurotrophic factors to enhance nerve regeneration.* Awards: 1. Finalist, Best research paper by trainee (The

Hospital for Sick Children Annual Research Rounds, 201)  
2. Best Trainee Award, The Hospital for Sick Children  
Research Institute 2010.

#### Other

2013 Aug - 2014 Jan      **Primary Supervisor.** 4. Holliday Cartar. Supervisee  
Position: Student Researcher. *Peripheral Nerve Regeneration.*

2013 Jan - 2014 Jan      **Primary Supervisor.** 4. Cameron Chiang. Supervisee  
Position: Student Researcher. *Peripheral Nerve Regeneration.*

## 2. OTHER SUPERVISION

### Multilevel Education

*Judge for the 2009-2010 Alan Wu Poster Competition, Institute of Medical Science*

### Undergraduate Education

2008 - 2009      Yewande Alimi. Supervisee Position: Biomedical  
Engineering Undergraduate Students, Biomedical Engineering  
401 and 402, Supervisee Institution: Washington University.

2008 - 2009      Lauren Brilli. Supervisee Position: Biomedical Engineering  
Undergraduate Students, Biomedical Engineering 401 and  
402, Supervisee Institution: Washington University.

2008 - 2009      Zoe Julian. Supervisee Position: Biomedical Engineering  
Undergraduate Students, Biomedical Engineering 401 and  
402, Supervisee Institution: Washington University.

2006 - 2007      Sami Tuffaha. Supervisee Position: Elective Undergraduate  
Research Students, Supervisee Institution: Washington  
University.

2006 - 2007      Kristofer Chenard. Supervisee Position: Elective  
Undergraduate Research Students, Supervisee Institution:  
Washington University.

2003 Jul - 2004 Jun      Arrash Fard. Supervisee Institution: University of Michigan.  
*Effect of Hydrogels on Axonal Regeneration in Acellular  
Nerve.*

2002 - 2003      Adrienne Heckler. Supervisee Institution: University of  
Michigan. *Effect of Hydrogels on Axonal Regeneration in  
Acellular Nerve.*

2002      Kevin F. Kia. Supervisee Position: undergraduate research  
opportunity program (UROP) student, Supervisee Institution:  
University of Michigan. *Biomechanical Properties of  
Engineered Peripheral Nerve.*

### Graduate Education

*Thesis Committee Member*

2024 July	<b>PhD Thesis Committee Member.</b> Louis van der Elst. Primary Supervisor: Alexander Gummenik, PhD. Indiana University, Bloomington.
2023 Aug	<b>Master of Medicine in Orthopedic Surgery.</b> Lukmaan Sherman. Thesis advisory committee, external reviewer. Supervisee institution: Moi University College of Medicine. Eldoret, Kenya
2022 Jul 14	<b>PhD.</b> Marissa Suchyta. Thesis advisory committee. Supervisee institution: Mayo Clinic, Rochester MN
2019 Oct 17	<b>PhD.</b> Matthew Carr. Committee Member. Supervisee Institution: University of Toronto.
2018 June 20	<b>MASc..</b> Kevin Zuo. Primary Supervisor. Thesis Committee Member. Supervisee Institute: University of Toronto.
2018 Sept 6	<b>MASc.</b> Kira Antonyshyn. Primary Supervisor. Committee Member. Supervisee Institute: Institute of Medical Science, Collaborative Program in Neuroscience, University of Toronto.
2018 Aug 30	<b>PhD.</b> Emily Ho. Committee Member. Supervisee Institution: University of Toronto.
2018 Aug 28	<b>MASC.</b> Katelyn Chan. Committee Member. Supervisee Institution: University of Toronto.
2018 Jul 25	<b>PhD.</b> Matthew Carr. Committee Member. Supervisee Institution: University of Toronto.
2018 Jun 28	<b>PhD.</b> Emily Ho. Committee Member. Supervisee Institution: University of Toronto.
2018 April 4	<b>MASc..</b> Kevin Zuo. Thesis Committee Member. Supervisee Institute: University of Toronto.
2018 Jan 30	<b>MASc.</b> Kira Antonyshyn. Committee Member. Supervisee Institute: Institute of Medical Science, Collaborative Program in Neuroscience, University of Toronto.
2017 Nov 30	<b>PhD.</b> Matthew Carr. Committee Member. Supervisee Institution: University of Toronto
2017 Nov 2	<b>PhD.</b> Mitchell Caprelli. Committee Member. Supervisee Institution: University of Toronto.
2017 July 18	<b>MASc.</b> Ilan Vonderwalde. Committee Member. Supervisee Institution: University of Toronto.
2017 June 13	<b>PhD.</b> Joseph Catapano. Primary Supervisor. Committee Member. Supervisee Institution: University of Toronto.

2017 May 18	<b>PhD.</b> Emily Ho. Committee Member. Supervisee Institution: University of Toronto.
2017 Apr 13	<b>PhD.</b> Mitchell Caprelli. Committee Member. Supervisee Institution: University of Toronto.
2017 Mar 9	<b>PhD.</b> Joseph Catapano. Committee Member. Supervisee Institution: University of Toronto.
2017 Feb 14	<b>PhD.</b> Matthew Carr. Committee Member. Supervisee Institution: University of Toronto.
2017 Jan 20	<b>MASc.</b> Matthew Kang. Committee Member. Supervisee Institution: University of Toronto.
2017 Jan 24	<b>PhD.</b> Kasra Tajdaran. Committee Member. Supervisee Institution: University of Toronto.
2016 Nov 30	<b>PhD.</b> Joseph Catapano. Committee Member. Supervisee Institution: University of Toronto.
2015 Dec 3	<b>PhD.</b> Matthew Carr. Committee Member. Supervisee Institution: University of Toronto.
2015 July 22	<b>PhD.</b> Ranjan Kumar. Committee Member. Supervisee Institution: University of Calgary.
2015 June 12	<b>MASc.</b> Kasra Tajdaran. Committee Member. Primary Supervisor. Supervisee Institution: University of Toronto.
2014 Sept 22	<b>MSc.</b> Gray Moonen. Committee Member. Supervisee Institution: University of Toronto. <i>Development and Characterization of an Acute Impact-Compression Lumbar Spinal Cord Injury Model in the Rat</i>
2014 May 15	<b>MSc.</b> James Michael Hendry. Committee Member. Supervisee Institution: University of Toronto. <i>The Role of the ErB2/Neuregulin Signaling Network in Regulating Acute or Chronic Nerve Regeneration and its application to the Protection Provided by Side-to-side Nerve 'Bridges'</i>
2012 Oct 09	<b>MASc.</b> Cecilia Alvarez Veronesi. Primary Supervisor. Committee Member. Supervisee Institution: University of Toronto.
2010 - 2011	<b>PhD.</b> Tatiana Cypel. Supervisee Position: Postdoctoral Research Fellow, Supervisee Institution: University of Toronto. <i>In Vitro Assessment of Osteoblast Behaviour in Craniosynostosis.</i> Completed 2011.
2006 - 2009	<b>PhD.</b> Nancy Solowski. Supervisee Position: Postdoctoral Research Fellow, Supervisee Institution: Washington University.

#### Undergraduate MD

2008 - 2009

**MD. Rahul Kasukurthi.** Supervisee Position: Elective Research Medical Students, Supervisee Institution: Washington University.

2008 - 2009

**MD. Hanny Al-Samkari.** Supervisee Position: Elective Research Medical Students, Supervisee Institution: Washington University.

2007 - 2008

**MD. Elizabeth Whitlock.** Supervisee Position: Elective Research Medical Students, Supervisee Institution: Washington University.

#### Postgraduate MD

2007 - 2008

**Postdoctoral Studies.** Nancy Solowski. Supervisee Position: Postdoctoral Research Fellow, Supervisee Institution: Washington University.

2006 - 2007

**Postdoctoral Studies.** Christina Magill. Supervisee Position: Postdoctoral Research Fellow, Supervisee Institution: Washington University.

2006 - 2007

**Postdoctoral Studies.** Arash Moradzadeh. Supervisee Position: Postdoctoral Research Fellow, Supervisee Institution: Washington University.

#### Other

2009 Jul - 2010 Jun