

## Branden J. Medary B.S.

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### Education

Bachelor of Science in Applied Psychology  
Ithaca College, Ithaca, NY  
Neuroscience and Religious Studies dual minor

Awarded May 2020

### Workforce Experience

Research and Education Coordinator, Weill Cornell Medicine, New York, NY June 2020 - August 2020

- Wrote and edited basic science and clinical research publications for academic journals
- Facilitated the organization of educational seminars and courses inc. Zoom & lab demonstrations
- Generating progress reports for donor and institutional review, IRB & IACUC
- Reviewed electronic medical records for research data (EPIC)

Laboratory Assistant, *Ithaca College*, Ithaca, NY

January 2019 - May 2019

Assisted in experimental neuroscience research with a rodent model

- ~10 hours per week in direct experimental tests

Physician's Scribe, *Greater Orlando Neurosurgery and Spine*, Orlando, FL.

May 2018 - August 2018

- Observed over 10 hours of surgery per week
- Wrote 60-75 patient consultations in EMR system per week
- Assisted in scheduling surgeries

President's Host, Department of Admissions, Ithaca College, Ithaca, NY

January 2017 - May 2018

- Showcased Ithaca College to prospective students, and their families
- Worked 10 hours per week as well as special events and showcase weekend events

### Published Peer-reviewed Scholarly Articles

Sommer F, Kirnaz S, Goldberg JL, McGrath LB Jr, Navarro-Ramirez R, **Medary B**, Härtl R. Treatment of Odontoid fractures in elderly patients using C1/2 instrumented fusion supplemented with interbody cervical spacers – A case series. *International Journal of Spine Surgery*. Expected date of publication: June 2022

Sommer F, Waterkeyn F, Hussain I, Goldberg JL, Kirnaz S, Navarro R, Ahmad AA, Balsano M, **Medary B**, Shabani H, Ng A, Gadjradj P, Härtl R. Feasibility of smart glasses in supporting spinal surgical procedures in low- and middle-income countries: experiences from East Africa. *Neurosurgical Focus*. June 2022

Goldberg JL, Wipplinger C, Kirnaz S, Xia J, Sommer F, Meng A, Schwarz J, Giantini-Larsen A, Meaden R, Sugino R, Gadjradj P, **Medary B**, Carnevale J, Navarro R, Tsiouris AJ, Hussain I, Härtl R. Clinical significance of redundant nerve roots in patients with lumbar stenosis undergoing minimally invasive tubular decompression. *World Neurosurgery*. May 2022

Sommer F, McGrath LB Jr, Kirnaz S, Goldberg JL, **Medary B**, Schmidt F, Shtayer L, Gadjradj P, Härtl R. Lumbar Giant Disk Herniations Treated with a Unilateral Approach for Bilateral Decompression. *Operative Neurosurgery*. April 2022

Kirnaz S, Hussain I, Sommer F, Goldberg JL, McGrath LB Jr, **Medary B**, Härtl R. Navigation-Guided Single-Position Lumbar Lateral Interbody Fusion and Minimally Invasive Tubular Decompression. *Operative Neurosurgery (Hagerstown)*. April 2022

Goldberg JL, McGrath LB Jr, Kirnaz S, Sommer F, Carnevale J, **Medary B**, Härtl R. Single-Position Fluoroscopy-Guided Lateral Lumbar Interbody Fusion with Intraoperative Computed Tomography-Navigated Posterior Pedicle Screw Fixation: Technical Report and Literature Review. *International Journal of Spine Surgery*. April 2022

Sommer F, Kirnaz S, Goldberg JL, McGrath LB Jr, Schmidt F, **Medary B**, Härtl R. Safety and feasibility of DTRAX cervical cages in the atlantoaxial join for C1/2 stabilization. *Operative Neurosurgery*. Mar 2022

Melcher C, Hussain I, Kirnaz S, Goldberg JL, Sommer F, Navarro-Ramirez R, **Medary B**, Härtl R. Use of a High-Fidelity Training Simulator for Minimally Invasive Lumbar Decompression Increases Working Knowledge and Technical Skills Among Orthopedic and Neurosurgical Trainees. *Global Spine Journal*. Feb 2022

Kirnaz S, McGrath LB Jr, Sommer F, Goldberg JL, **Medary B**, Härtl R. Minimally Invasive Resection of an Intradural Extramedullary Spinal Tumor Using 3-Dimensional Total Navigation and Microscope-Based Augmented Reality 2-Dimensional Operative Video. *Operative Neurosurgery (Hagerstown)*. Feb 2022

- Goldberg J, Garton A, Singh S, Kiraz S, Sommer F, Carnevale J, Atalay B, **Medary B**, McGrath L Jr, Härtl R. Challenges in the development of biological approaches for the treatment of degenerative disc disease. *World Neurosurgery*. Jan 2022
- Kirnaz S, Capadona C, Wong T, Goldberg J, **Medary B**, Sommer F, McGrath Jr, Härtl R. Fundamentals of Intervertebral Disc Degeneration. *World Neurosurgery*. Jan 2022
- Kirnaz S, Singh S, Capadona C, Lintz M, Goldberg J, McGrath L Jr, **Medary B**, Sommer F, Bonassar L J, Härtl R. Innovative Biological Treatment Methods for Degenerative Disc Disease. *World Neurosurgery*. Jan 2022
- Sommer F, Goldberg JL, McGrath L Jr, Kirnaz S, **Medary B**, Härtl R. Image Guidance in Spinal Surgery: A Critical Appraisal and Future Directions. *Int J Spine Surg*. 2021 Oct;15(s2):S74-S86
- Goldberg JL, Bustillo M, Usenko JK, Kuo P, Kirnaz S, Carnevale JA, Schwarz JT, McGrath L, Sommer F, **Medary B**, Härtl R. Intraoperative Simulation: Team Training for Resuscitation While Using Intraoperative Computed Tomography: 2-Dimensional Operative Video. *Oper Neurosurg (Hagerstown)*. 2021 Aug 25:opab304.
- Kirnaz S, Capadona C, Lintz M, Kim B, Yerden R, Goldberg JL, **Medary B**, Sommer F, McGrath LB Jr, Bonassar LJ, Härtl R. Pathomechanism and Biomechanics of Degenerative Disc Disease: Features of Healthy and Degenerated Discs. *Int J Spine Surg*. 2021 Apr;15(s1):10-25.
- Kirnaz S, **Medary B**, Härtl R. Commentary on "Robot-Guided Transforaminal Versus Robot-Guided Posterior Lumbar Interbody Fusion for Lumbar Degenerative Disease". *Neurospine*. 2021 Mar;18(1):106-108.

### Textbook Chapters

- Atalay B, Kirnaz S, Sommer F, Goldberg JL, McGrath LB Jr, **Medary B**, Härtl R. Chapter 3: The Six Pillars of Minimally Invasive Spine Surgery. *Technical Advances in Minimally Invasive Spine Surgery: Navigation, Robotics, Endoscopy, Augmented and Virtual Reality*. Etd. Kim JS, Härtl R, Wang M, Elmi-Terander A. June 2022
- Kirnaz S, Atalay B, Goldberg JL, **Medary B**, McGrath LB Jr, Sommer F, Härtl R. Chapter 11: Navigation Guided Tubular Decompression in the Lumbar Spine *Technical Advances in Minimally Invasive Spine Surgery: Navigation, Robotics, Endoscopy, Augmented and Virtual Reality*. Etd. Kim JS, Härtl R, Wang M, Elmi-Terander A. June 2022
- Sommer F, Goldberg JL, Kirnaz S, McGrath LB Jr, Rawanduzy C, Schmidt F, **Medary B**, Härtl R. Chapter 35: MIS-TLIF with 3D Navigation and Augmented Reality Enhanced. *Technical Advances in Minimally Invasive Spine Surgery: Navigation, Robotics, Endoscopy, Augmented and Virtual Reality*. Etd. Kim JS, Härtl R, Wang M, Elmi-Terander A. June 2022

## Articles in Press

- McGrath LB Jr, Kirnaz S, Goldberg JL, Hussain I, Sommer F, **Medary B**, Härtl R. Ten-Step-3D-Navigated Tubular Resection of Extramedullary Spinal Tumors. *Operative Neurosurgery*. Expected date of publication: Aug 2022
- Sommer F, Hussain I, Kirnaz S, Goldberg JL, Navarro R, McGrath LB Jr, Schmidt F, **Medary B**, Gadjradj P, Härtl R. Augmented Reality to Improve Surgical Workflow in Minimally Invasive Transforaminal Lumbar Interbody Fusion with Total Navigation. *Neurospine*. Expected date of publication: Aug 2022

## Acknowledgements

- Sommer et al. Safety and Feasibility of Augmented Reality assisted Resection of Benign Intradural Extramedullary Tumors. *Neurospine*. Expected date of publication: Aug 2022

## Presentations, Courses, and Awards

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|--|---------------|
| 8 <sup>th</sup> Annual Neurotrauma Course Organizing Committee Member                    | March 2022    |
| 15 <sup>th</sup> New York Minimally Invasive Spine Symposium Organizing Committee Member | December 2021 |
| Tanzania Neurosurgery Project Scoliosis Surgery Course Organizing Committee Member       | March 2021    |
| 14 <sup>th</sup> New York Minimally Invasive Spine Symposium Organizing Committee        | December 2020 |
| 7 <sup>th</sup> Annual Neurotrauma Course Organizing Committee Member                    | November 2020 |

## Certifications and Proficiencies

- CITI Good Clinical Practice
- CITI Animal Handling Certification
- Microsoft Office Proficient (Word, PowerPoint, Excel, Access, OneDrive, SharePoint, and Outlook)
- Adobe Creative Cloud Proficient (Reader Pro, Photoshop, Premier)
- Full Stack Web Development (Git, HTML, CSS, JS, API, OOP)
- Data Analysis Software (IBM: SPSS, R)
- Electronic Medical Record Software Use and Development (Epic, Access, OnCore, Encompass)

## Extracurricular Experiences

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|--|-------------------------------|
| Ithaca College Fencing Club E-board Member   | Spring 2017- Spring 2019      |
| <ul style="list-style-type: none"><li>- Directed practices and exercise regimen</li><li>- Liaison for tournaments with local colleges and universities</li></ul>   |                               |
| Blackwatch Membership and Leadership Academy   | Summer 2014- School Year 2016 |
| Blackwatch training at Outdoor Odyssey, Roaring Run, Pennsylvania  | Summer 2014                   |
| <ul style="list-style-type: none"><li>- Overseen by 2-star Major General James L. Jones</li><li>- 1-week intensive training on leadership and character ethics in the 21<sup>st</sup> century</li></ul>  |                               |
| Student Mentor and Counseling, <i>Lake Highland Preparatory School</i> , Orlando, FL   | Winter 2014 to Winter 2015    |
| <ul style="list-style-type: none"><li>- Mentored high school students on ethics and morality in their daily lives</li><li>- Met weekly with students about both personal planning and guidance</li></ul>   |                               |
| Senior Teacher Assistant: French I, Biotech Research, Biology Honors, Anatomy and Physiology Honors, and Advanced Marine Research Honors, <i>Lake Highland Preparatory School</i> , Orlando, FL.   | 2015-2016                     |
| <ul style="list-style-type: none"><li>- Lectured classes of 30 high school students in their respective subject with teacher supervision</li><li>- Held tutor session for students</li><li>- Aided in class with handouts, and grading</li><li>- Live dissection demonstrations for elementary, middle, and high school students</li><li>- Over 100 hours each year across the combined courses.</li></ul> |                               |
| National Youth Leadership Forum: Defense, Intelligence, and Diplomacy, Quantico, <i>Washington D.C.</i>  | Spring 2014                   |
| <ul style="list-style-type: none"><li>- Finalized education on the defense systems of the United States</li><li>- Interned at the Department of Defense, Quantico, VA, and the Saudi Arabian Embassy</li></ul>   |                               |
| Scottish History Study, International Summer Programme, University of St. Andrews, Fife, Scotland  | Summer 2015                   |