

2023 ASNM Elections Information Form

Name (as you would like it to appear on the ballot): **Miriam L. Donohue**

Credentials: PhD

Position and Organization:

1. Associate Professor of Anatomy and Cell Biology, Burrell College of Osteopathic Medicine
2. Adjunct Instructor of Neurodiagnostic Technology at Baptist Health Sciences University

Education:

2012-2013	SUNY Upstate Medical University, Postdoctoral Fellowship. Neurosurgery
2006-2012	SUNY Upstate Medical University, Ph.D. Anatomy and Cell Biology
2002-2006	New Mexico State University, B.S. Animal Science

Professional Affiliations:

- ASNM – American Society of Neurophysiological Monitoring
- ASET – the Neurodiagnostic Society
- HAPS – Human Anatomy and Physiology Society
- AAA – American Association of Anatomists
- USAT – USA Triathlon (Level 1 Certified Coach)
- USMS – US Masters Swim Certified Coach

Publications, Awards & Appointments:

Selected Peer-Reviewed Publications, Abstracts and Posters:

1. W.B. Wilent., J. Ney., J. Balzer., Donohue, M.L., J. Gertsch., R. Holdefer., F.R. Jahangiri., k. Overzet., J. Shils., R. Vogel. Letter to the Editor. Intraoperative Neurophysiological Monitoring and ACDF. Journal of Neurosurgery: Spine, Oct 4:1-2.19-641, 2019.
2. Donohue, M.L., Rollag, M.D., Ketchum, R.J., Selinfreund, R.H., Ontiveros, S.J., Galin, C.M., Howell, S.J., Minugh-Purvis, N., Developing Essential Anatomical Competencies in an Osteopathic Medical Curriculum Without Cadaver Dissection. Exp Biology 2016 Poster.
3. Ontiveros, S.J., Rollag, M.D., Ketchum, R.J., Donohue, M.L., Howell, S.J., Vilchis, H., Minugh- Purvis, N. Reinforcement of Medical Spanish through Bilingual Presentation of Anatomical Terminology using Dual Language Labeling of Virtual Anatomical Images. Exp Biology 2016 Poster.
4. Donohue, M.L., Vilburn, M.J., Steencken, A.C., Stearns, S.B. iPads in the cadaver lab – A complement to dissection and study. Exp Biology 2015 Poster.
5. Donohue, M.L., Moquin, R.R., Singla, A., and Calancie, B. Is In-Vivo Manual Palpation for Thoracic Pedicle Screw Instrumentation Reliable? J of Neurosurgery: Spine. 20(5):492-6, 2014

6. Calancie, B., Donohue, M.L., Moquin, R.R. Neuromonitoring with pulse-train stimulation for implantation of thoracic pedicle screws: A blinded and randomized clinical study. Part 2: The role of feedback. *J of Neurosurgery: Spine*. 20(6):692-704, 2014.
7. Calancie, B., Donohue, M.L., Harris, C., Canute, G., Singla, A., Wilcoxon, K., and Moquin, R.R. Neuromonitoring with pulse-train stimulation for implantation of thoracic pedicle screws: A blinded and randomized clinical study. Part 1: Methods and alarm criteria. *J of Neurosurgery: Spine*. 20(6):675-91, 2014.
8. Donohue, M.L., Moquin, R.R., Singla, A., and Calancie, B. Intraoperative Neuromonitoring: Can the Results of Direct Stimulation of Titanium-Alloy Pedicle Screws in the Thoracic Spine Be Trusted? *J of Clin Neurophys*. 29(6).502-8, 2012.
9. Donohue, M.L., Allot, G., Calancie, B., False-negative Transcranial Motor-Evoked Potentials during Scoliosis Surgery Causing Paralysis [Letter to the Editor]. *Spine*. 35(6):722-3, 2010.
10. Donohue, M.L., Murtagh-Schaffer, C., Basta, J., Moquin, R.R. and Calancie, B. Pulse-Train Stimulation for Detecting Medial Malpositioning of Thoracic Pedicle Screws. *Spine*. 33:E378- 85, 2008.

Presentations and Continuing Education Lectures:

1. **2022. Virtual Presentation.** Pedicle Screw Testing: Controversies. American Society of Neurophysiological Monitoring. Clearwater Beach, FL.
2. **2021. Virtual Presentation.** Thoracic Pedicle Screw Stimulation. NuVasive Clinical Services.
3. **2021. Virtual Presentation.** Thoracic Pedicle Screw Stimulation. AXIS Neuromonitoring Annual Intraoperative Neuromonitoring Workshop and Symposium.
4. **2021. Virtual Presentation.** Pedicle Screw Stimulation – What have we learned? University of Michigan, Intraoperative Neuromonitoring Career Fair.
5. **2021. Virtual Presentation.** Thoracic Pedicle Screw Stimulation. American Society of Neurophysiological Monitoring Winter Symposium.
6. **2019. Webinar Presentation.** Thoracic Pedicle Screw Stimulation – Over 2 Decades Worth of Variables. Real Time Neuromonitoring Associates. Nashville, TN.
7. **2019. Presentation.** Thoracic Pedicle Screw Stimulation – Over 2 Decades Worth of Variables. American Society of Neurophysiological Monitoring. Boston, MA
8. **2016. Presentation.** Pulse train Stimulation for Thoracic Pedicle Screw Placement. American Society of Electroneurodiagnostic Technologists. Pittsburgh, PA.
9. **2016. Presentation.** Pulse train Stimulation for Thoracic Pedicle Screw Placement. American Society of Neurophysiological Monitoring. Boston, MA.
10. **2016. Webinar Presentation.** Pulse train Stimulation for Thoracic Pedicle Screw Placement. Canadian Association of Neuromonitorists.

Appointments, Awards, Honors and Grants

- 2019-present Appointed to Chair of ASNMM Research Committee
- 2016 Intramural Grant Awarded – Burrell College of Osteopathic Medicine, NM
- 2013 Scientific Achievement Award – ASNMM
- 2012 Graduated with Distinction – SUNY Upstate Medical University, NY
- 2008 Scientific Achievement Award – ASNMM
- 2006 Graduated with Highest Honors – New Mexico State University, NM

1. How do you feel you can contribute to the leadership of ASNMM? What strengths/passions/talents do you hold that would benefit ASNMM?

I am incredibly passionate about intraoperative neuromonitoring and specifically education within the field as well as educating others about this field, particularly those who are in the medical field but aren't well-informed about IONM. My training as an educator, as well as my time serving as a Department Chair in a medical school have helped me gain insight into medical education that coupled with my training in IONM, and research help me translate that knowledge into effective teaching, presentations and publications.

My education as an anatomist/neuroanatomist allows me to approach IONM from a slightly different vantage point than many of the neurophysiologists, surgeons, anesthesiologists, etc. in the room and the more perspectives we can bring to the table, the greater overall clinical/scientific picture we can ultimately put together. My anatomical strengths and my educational passions, together with my work ethic and commitment to IONM make me a very strong addition to ASNMM and, I believe I could contribute in even greater ways as a member of the Board of Directors.

2. With changes in health care service delivery and reimbursement, what and how do you feel you can contribute to keep ASNMM moving forward in the right direction?

My direct involvement in health care education consistently involves discussions of the evolving medical field and the legal implications as well as advocacy efforts taking place from a medical education standpoint. This allows me to better understand how to approach research and educational topics that could help address outstanding questions in the field. While I don't directly deal with reimbursement, I do believe my experiences working with medical education system and its interweavings with the medical education legal system allow me to bring unique insight to ASNMM with regards to moving forward in the collective right direction.

3. ASNMM constantly seeks ideas of how to better serve our membership through education, resources, representation to other professional entities, connections and networking or other means of advancement. What do you think ASNMM could offer its members that would provide value?

I would really like to put out some surveys looking at the educational needs that various sites and individuals in the field have. Getting updated direct feedback on how many sites have access to online databases of literature, as well as how many sites do on-the-job journal clubs, case studies, continuing education, etc. and then maybe at the next annual meeting present that anonymized data as well as the anonymized data on webinar attendance, past webinar purchases, etc. would give a better sense of how well our current approach is meeting needs and what types of changes might be beneficial.

Additionally, Dr. Wilent and I have been discussing how to better utilize LinkedIn, through the Research Committee, as LinkedIn has been shown to be the most networked site for members of ASNM. This would give us an avenue to post a variety of different educational or informative items, although we're still in development on this idea.

4. How do you see the role of the ASNM in advocating for the profession on intra-operative neuromonitoring?

ASNM plays a vital role in advocating for the profession. Some advocacy is more formal, in terms of ASNM committees taking the lead on writing Letters to the Editor in response to articles that have been published with information we feel is misleading or invalid in some way, or publishing guidelines and position statements as well as listing specific risks/recommendations under the advocacy tab in the ASNM website.

Other advocacy is less formal, but no less important, and takes the form of webinars and continuing education in conferences that infuse educational advocacy throughout the opportunities ASNM invests in for its members and the profession. I think it's vital that the IONM field has established statements and standards from a national organization, like ASNM, to turn to as a resource.

5. Describe your academic or professional contributions to the field of intra-operative neuromonitoring (this can include publications, reviews, research contributions, creating or advancing professionalism in a service that is dedicated to intra-operative neuromonitoring, education, outreach, presentations, running or organizing meetings (in-house, local, national, international), societal contributions ...)

I became involved in ASNM as a graduate student of Dr. Blair Calancie, in 2008. In that same year, I was first author on my first IONM published article, was awarded the ASNM Scientific Achievement Award. As Dr. Calancie's graduate student, I worked to collect the data and support his successful submission and completion of the first NIH R01 grant to ever be awarded to an intraoperative neuromonitoring study. Studying under Dr. Calancie was an incredible honor and taught me such a respect and admiration for this field.

I have been part of significant publications within the field, specifically with regards to pedicle screws and thoracic pedicle screw instrumentation and have served as an ad hoc journal article reviewer. I have given many platform presentations at ASNM from 2008-2022 and have also given IONM presentations at the Canadian Association of

Neuromonitorists, the University of Michigan Intraoperative Neuromonitoring Career Fair, and the Axis Neuromonitoring Annual Intraoperative Neuromonitoring Workshop and Symposium.

I began serving as the Chair of the Research Committee of ASNMM in 2019. In addition to overseeing the annual poster competition and recommending ASNMM members for specific research-related rewards each year, this committee reviews any recently published literature in the field that could warrant a response, in the form of an official Letter to the Editor (in which case, the committee would then draft and submit that letter). I take this charge very seriously because while we can't always impact what is/isn't published, we can take steps to make sure that the neuromonitoring perspective on data, safeguards, reliability, etc. are published alongside articles whenever we have well-founded, clearly established concerns.

In my capacity as a medical educator, I give an annual lecture to the summer dissection students on Intraoperative Neuromonitoring to help bring awareness to the field to medical students at the end of their first year (particularly those who are more interested in surgically related fields). I also became an adjunct Instructor of Neurodiagnostic Technology last year, under Dr. Maggie Marsh-Nation, to help design a series of neuroanatomy courses specifically to meet the needs of students training in Neurodiagnostics. These students are oftentimes minority students already working in the field looking for certifications or a degree to advance in their careers.

I am incredibly passionate about education in the field of neuromonitoring and very committed to doing my part in helping make high-quality neurodiagnostic/IONM education more accessible whenever and however I can.

6. Personal Statement: Please provide any additional information to the members.

My path in IONM has made me feel incredibly fortunate. Having gotten to study under Dr. Calancie and seeing his commitment, firsthand, to excellence in research, education, and training in the field and now, getting to work with Dr. Marsh-Nation and seeing her passion for taking those same qualities/traits and making them more accessible in the educational system for Neurodiagnostics/IONM has been so inspiring to me.

IONM has brought incredible friends into my life over the years – some of which I even have the honor of running against in this current election cycle. Getting to come to conferences and hear them share their knowledge as they talk about the coolest/weirdest cases they saw, or the about the programs they've developed, or the devices they've literally designed from scratch, all because we're collectively in ASNMM wanting to achieve a better outcome for patients is really powerful, to me.

I feel very honored to be nominated to the Board and I thank you for your consideration of my nomination.

2023 Nominees Conflict of Interest Disclosure categories

- Disclosures
 - **Scientific advisory board:** No disclosures
 - **Scientific research:** No disclosures
 - **Speakers bureau:** No disclosures
 - **Stock holder (only if >5% in the company):** No disclosures
 - **Stock options:** No disclosures
 - **Company leadership/board of directors:** No disclosures
 - **Product Royalties:** No disclosures
 - **Travel (paid for by other than your employer):** No disclosures
 - **Society leadership and IONM related boards:** ASNM Chair of Research Committee (2019-present)
 - **Patents:** I do not have any patents to disclose
 - **Employed by:** Associate Professor of Anatomy and Cell Biology, Burrell College of Osteopathic Medicine; Adjunct Instructor of Neurodiagnostic Technology at Baptist Health Sciences University