

AOSpine North America Community News Summer 2019





Table of Contents

Content	Page
From the Editor	3
AOSpine North America Board and Committees	4
Committee Updates	5
Getting to Know Incoming AOSNA Chair	7
Two New Committee Chairs	8
17th Annual Fellows Forum	9
Global Spine Congress 2020	11
Inaugural “Women in Spine” Event at GSC	12
Upcoming AOSNA Courses	13
Save the Date – NASS Annual Meeting	13
Welcome to the Learning Corner!	14
AOSpine Member Representative for 2020	15
2019 Young Investigator Research Grant Awards	16
Fellow Spotlight	17
Graduating Fellows of 2018-2019	19
Sites Awarded Fellowship Funding	20
Global Spine Journal	21
Quality Improvement in Spine Surgery	22
Job Openings	23



From the Editor

Dear Colleagues:

It's with a little sadness I pen the introduction to the Summer 2019 AOSNA newsletter as this will be my final issue as Chairman for AOSNA Community Development Committee.

March 2019 featured the 17th Annual Fellows Forum in Banff. This marquee event is the highlight of the year for most AOSpine fellows where they have an opportunity to showcase and present their research, and meet other fellows and faculty. This meeting showcases research projects conducted by fellows in the US and Canada during their fellowship year.

In May 2019, the Global Spine Congress was back in North America celebrating its 10th year since the inaugural event in San Francisco back in 2009. This year's event brought together over 1,800 participants from all corners of the world to meet, discuss, and present the latest in spine care. With the high caliber of topics and presenters at the GSC, this meeting is evolving into the premier meeting for spine surgeons globally.

Upcoming events include the 6th Annual AOSNA Reception in Chicago (Sept. 25th, 2019) at the North American Spine Society Meeting.

Please take time to browse through the various sections and find out what your society has been up to this last quarter. AOSpine prides itself on community, camaraderie, and fostering education. If you're not a member, there has never been a better time to join. It has been my privilege and honor to help with Community Development and the AOSNA Community Newsletter over the past 3 years and I will leave you in the hands of Brandon Lawrence, MD, the incoming Chair of Community Development.

Sincerely,

A handwritten signature in white ink that reads "Lali Sekhon". The signature is written in a cursive style and is underlined with a single horizontal stroke.

Lali Sekhon, MD

Chair
AOSNA Community Development Committee



AOSpine North America Board and Committees

AOSNA Board

Darrel Brodke	AOSNA Chairperson
Michael Daubs	Chair Elect
John DeVine	Education Committee Chair
James Harrop	Research Committee Chair
Lali Sekhon	Community Development Committee Chair
Dan Gelb	Fellowship Committee Chair

AOSNA Education Committee

John DeVine	Education Committee Chair
Rick Bransford	Education Chair Elect
Ali Baaj	
Michelle Clarke	
David Gloystein	
Gregory Grabowski	
Michael Lee	
Thomas Mroz	

AOSNA Community Development Committee

Lali Sekhon	Community Development Committee Chair
Brandon Lawrence	Community Development Chair Elect
Gurvinder Deol	
Christina Goldstein	
Eric Massicotte	

AOSNA Research Committee

James Harrop	Research Committee Chair
Daniel Sciubba	Research Chair Elect
Brian Kwon	
Ahmad Nassr	
Justin Smith	
Jefferson Wilson	

AOSNA Fellowship Committee

Daniel Gelb	Fellowship Committee Chair
Ted Choma	Past Chair
Matthew Colman	
Bradley Segebarth	
Ryan Spiker	
Michael Weber	

Committee Updates

AOSpine North America Education Committee

John DeVine, MD

Greetings from the AOSNA Education Committee. First and foremost, I want to congratulate Richard Bransford (Harborview Medical Center, UW). Rick is the Chair-elect of the Education Committee and will serve in this capacity until July 2020, at which time he will assume the role as Chair. Rick served three years on the Committee (2014-2016) and remained engaged after his departure. I look forward to working with Rick for the next few years!

I would also like to congratulate the newly elected members of the Education Committee: Tom Mroz (Cleveland Clinic) and Greg Grabowski (University of South Carolina). Both have established themselves as leaders in spine education and we are grateful to have them on our committee for the next three years.

The 2019 AOSpine Webinar Series continues to mature and gain momentum. Enrollment continues to exceed our expectations. The Curriculum Work Group met in August and developed the 2019 Webinar Series Agenda—which was approved by the Education Committee in September. Topics covered to date include Failed Back Surgery Syndrome and Spine Infections: Discitis and Osteomyelitis. Future topics in 2019 include Thoracolumbar Burst Fractures: Treatment Controversies, Upper Cervical Trauma, and Multi-level Cervical Myelopathy.

Regarding resident education, the flipped classroom approach continues to be utilized in the Principles Course with positive feedback from the participants and faculty. Additionally, the first 2019 Regional Resident Course took place in Seattle, showcasing a new curriculum for the early learners. Three additional Regional Resident Courses are scheduled for Salt Lake City, Baltimore, and New York City.

The September Fellows Course supplemented with the Practice Essentials component was a huge success. Members of the Education Committee, Fellows Committee and AONA Board conducted official business then served as the primary faculty for the course—and this model has proved successful in the production of this main event. This event will be held in Tampa FL in 2019.

Please join us for an advanced educational offering that will be Co-Chaired by Rick Bransford and Jim Harrop. “Managing Complications: Clinically, Ethically, and Legally” will be held December 6-7 in La Jolla, CA.

AOSNA Community Development Committee

Lali Sekhon, MD

It's been a busy past few months for the AOSpine North America (AOSNA) Community Development Committee, comprising Lali Sekhon, Eric Massicotte, Pat Pritchard and Ripul Panchal. Pat Pritchard and Ripul Panchal have completed 3 years with the committee—we thank them for their thoughtful input and energy and know they will stay engaged with the AO. We welcome Christina Goldstein and Guvinder Deol who joined the committee in 2019. Both bring a youthful and insightful point of view to Community Development. Finally, Brandon Lawrence takes over as the Chair of the Committee, with Lali Sekhon completing his three-year term at the end of July.

Highlights of the past 6 months include the 17th Annual AOSNA Fellows Forum in March 2019 in Banff, Canada, was very well attended with over 50 fellows and faculty as well as the Global Spine Congress, North America, in Toronto, May 15th–19th, 2019. This was another successful meeting, bringing together thousands of spine surgeons from across the continent and has become the go to global spine meeting.

AOSNA continues to have a strong social media presence: Facebook, twitter, and Instagram.

 [facebook.com/aospine-North-America](https://www.facebook.com/aospine-North-America)

 [@aospineNA](https://twitter.com/aospineNA)

 [aospine](https://www.linkedin.com/company/aospine)

 [aospine_NA](https://www.instagram.com/aospine_NA)

Make sure you like!

Many members want to contribute and there are lots of ways to do it. Members have opportunities to get involved in education, research, marketing and promotion, fellowship outreach and professional growth. For those interested in becoming more involved, email Chi Lam at CLam@aospine.org

Finally, mark your calendar for the 6th Annual Reception for AOSNA in Chicago, IL on September 25, 2019. This will be at the annual North American Spine Society meeting. All are welcome. Come along, meet old acquaintances and make new friends. Meet your AO colleagues.

It's been my absolute pleasure to chair this committee for the past 3 years. The AO is the premier community that represents spine surgeons worldwide. The AO Community continues to grow. With over 6000 members worldwide, there has never been a better time to join.

If you have not done so, join now!

Committee Updates

AOSpine North America Research Committee

James Harrop, MD

I want to thank the AO community for their continued support and AOSNA dedication and devotion to continued improving patient care through research. I would like to review the research committee's several functions and active projects:

1. Advancing research—AOSNA is leading the international community in efforts to drive future education through research. We have had the privilege of having AONA's other divisions as well as international AO research programs explore and inquire about our YIRGA (Young Investigator Research Grant Award). AOSNA awarded four YIRGA grants at \$20,000 each for 2019.

The entire process went extremely well this year, in that the research committee spent considerable effort on reorganizing and reformatting the application process. These changes include targeting clinicians who are doing research in addition to their clinical activity, awarding both clinical and basic science awards and limiting the applicant age to 45. Overall, the committee has been impressed with the continual improvement in the quality of the grant applications each year.

The call for applications for the 2019 YIRGA awards were announced last fall. The committee revised the application to make it easier and less time consuming for applicants. We are working closely with AOVet to provide uniform, ethical and consistent research with animals. Please look out for the call for applications for our 2020 YIRGA awards going out this October.

2019 YIRGA winners:

Christina Cheng (University Hospitals Cleveland Medical Center)—"Protein Kinase Inhibitor Gamma and Spinal Fusion in Age-Related Osteoporosis in a Mouse Model"

Bryan Krueger (University of Cincinnati)—"Cadaveric Feasibility Study for Endoscopic Endonasal Occipitocervical Fusion"

Christopher Witw (Rush University)—"Acute Traumatic Spinal Cord Injury: Variability and Impact of Time to Surgery"

Isaac Karikari (Duke University)—"Investigating the Role of Apolipoprotein E in Pseudoarthrosis Following Spinal Fusion Surgery"

Jeremy Shaw (University of Pittsburgh)—"Investigating Methylene Blue as a Biofilm Disclosing Agent in a Large Animal Spine Infection Model"

2. Focus issues—We thank the AO community and the authors for all their efforts and dedication to this continuing project. The focus issue on Spine Patient Safety and Quality Improvement will be available later this year. The research committee is honored to be able to present a symposium on this topic at the 2019 AO Global Spine Congress in Toronto.

The AOSNA research committee is readapting itself to meet the AOSpine International global mission to improve patient care. **There are numerous avenues that are opening to help provide improved care for our patients and we encourage your input.**

AOSNA Fellowship Committee

Daniel Gelb, MD

The fellowship committee continues to have an ambitious agenda with many ongoing projects.

First and foremost the committee completed another round of fellowship funding. The committee has developed a rigorous evaluation process and many hours of work went into carefully reviewing the many applications that we received. Although difficult decisions always need to be made due to the many excellent programs applying, I feel confident that we have selected the most deserving programs. The amount of money awarded is substantial and the committee takes its charge very seriously. Congratulations to our AOSpine North America designated fellowship sites!


Recent work is focusing on developing an official annual report of the fellowship program. Formalized assessment ensures that the program remains valuable and the money allocated is well spent. Of the 91 fellows sponsored by the program in 2017-2018, 43% went into academics; 38% private practice; and 15% into a second fellowship. There were an average of 31 publications and 27 presentations per site per year. It is clear that we are contributing to the development of the next generation of thought leaders in spine surgery!


March brought the 17th Annual AOSpine North America Fellows Forum. The meeting continues to grow and the quality of the research projects presented were incredible. An excellent time was had by everyone. Sincere gratitude and credit to the AONA staff who make that meeting possible and kudos to all the fellows who worked diligently to complete their projects.

Going forward we have many other exciting projects planned.

I look forward to accomplishing much as I head into the final year of my chairmanship.

Managing Spine Complications Clinically, Ethically and Legally

 December 6 – 7, 2019

 La Jolla, CA

Register Today: aona.org/spinemc

Directly Provided by

 **AO North America**

Co-Chairpersons:
Richard Bransford, MD
James Harrop, MD

Education Advisor:
John DeVine, MD

Getting to Know Incoming AOSNA Chair

Michael D. Daubs, MD

Dr. Michael Daubs is a Professor and Chairman of the Department of Surgery at the UNLV School of Medicine. He is a graduate of the University of Nevada School of Medicine, did his residency training at the University of Arizona and completed a fellowship at the University of Missouri. Dr. Daubs previously held faculty positions at the Washington University Department of Orthopedics in St. Louis as well as at the University of Utah and UCLA. He returned to Las Vegas in 2013 and founded the first orthopedic residency training program in Nevada.

Dr. Daubs is a member of many national and international research education organizations and enjoys the privilege of instructing his fellow surgeons at medical conferences around the world. He has gained recognition for the publication of over 100 scientific journal articles and medical book chapters related to the treatment of the spine.

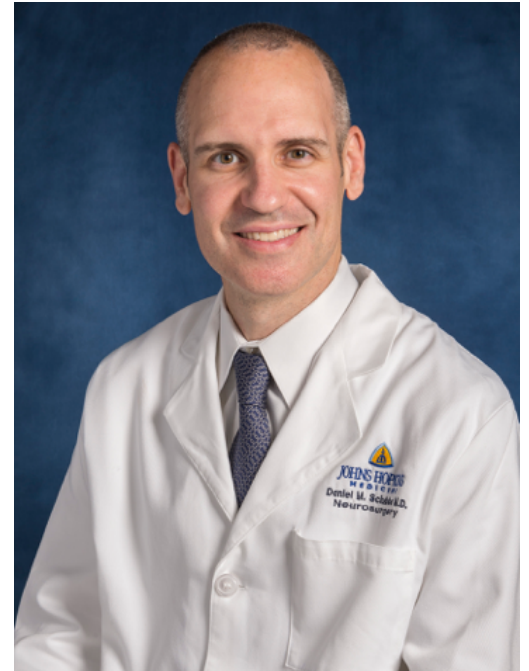
"I have witnessed AOSpine grow into a major organization due to its leadership in research and education", Dr. Daubs said. "The lifelong friendships that I have developed in AOSpine are the most important in my career. With a genuine respect for the organization's history and basis for membership, I am fully committed to the organization's goals for the future and honored to serve as the Chair of AOSpine North America."



AOSNA Welcomes Two New Committee Chairs on August 1

Dr. Daniel Sciubba will take over from Dr. James Harrop as the new Chair of the AOSNA Research Committee. Dr. Sciubba is a Professor of Neurological Surgery, Oncology, and Orthopaedic surgery at the Johns Hopkins University School of Medicine. He serves as Director of Spine Tumor and Spinal Deformity Research and specializes in the surgical treatment of complex spinal conditions including tumors, degenerative spine diseases, spinal deformities, and scoliosis, employing minimally invasive techniques when possible. Dr. Sciubba received his B.S. in biology from Duke University and his M.D. from the Columbia University College of Physicians and Surgeons.

Dr. Sciubba's research efforts focus on patients with complex spinal conditions, most notably spinal tumors and spinal deformity. He directs a laboratory specifically examining animal models of spinal tumors, both primary and metastatic, with the goal of applying his findings to new treatments for patients. Dr. Sciubba's contributions have earned him numerous awards, including several multi-year research grants. He has served as principal investigator or co-investigator on multiple clinical trials, has published more than 160 peer-reviewed articles, 40 book chapters, and has presented his research at dozens of national and international conferences.



Dan Sciubba, MD



Brandon Lawrence, MD

Dr. Brandon Lawrence will also start his official 3-year term as the Community Development Chair on August 1, 2019. The position is currently held by Dr. Lali Sekhon who will move to the Past-Chair position. Dr. Lawrence serves as an Assistant Professor in the Department of Orthopedic Surgery at the University of Utah. His primary clinical interests are cervical and lumbar spine disorders, complex spinal deformity reconstructive surgery, minimally invasive surgery and microscopic spine surgery. Dr. Lawrence's research interests are centered on spinal biomechanics, improving fusion technologies through stem cell research and patient outcome related research.

Dr. Lawrence grew up in Vermont and attended medical school at the University of Vermont College of Medicine and was inducted into the Alpha Omega Alpha Medical Honor Society. He completed his residency in Orthopedic Surgery at Yale University School of Medicine in New Haven, Connecticut and completed his fellowship training in Spinal Surgery at the University of Utah School of Medicine.

17th Annual Fellows Forum a Huge Success



The 17th Annual AOSNA Fellows Forum took place on March 28-30, 2019 in the beautiful Banff Springs Hotel in Alberta, Canada. The AOSNA Board welcomed 70 AOSNA Fellows, and 45 Fellowship Directors/Faculty from around the United States and Canada.

The Fellows Forum provided the Fellows an opportunity to interact with other fellows and Fellowship Directors as well as exchange ideas and knowledge that centered on the advancement of disciplinary spine care. The scientific program consisted of lectures and fireside case conferences. The highlights of the program were the presentations given by each Fellow focusing on his/her research at their institution.

Each Fellows' presentation was evaluated in a peer-reviewed process by the Faculty and Fellowship Directors. Awards were given to the fellows with the best clinical abstract, basic abstract, and best poster.

The 2019 Fellows Forum Awards were presented to Jamie Wilson, MD (University of Toronto) for the best clinical abstract, Andrew Jack, MD (Swedish Neurosciences Institute) for the best basic science abstract, and Shaleen Vira, MD (Cleveland Clinic) for the best poster presentation. These three winners will be invited to participate as Faculty in the 2020 Fellows Forum.

17th Annual Fellows Forum a Huge Success



In addition, the top six Fellows with the highest scoring Clinical, Basic Science, and Poster presentations were also invited to present at the 2019 Global Spine Congress in Toronto. Many thanks to the following Fellows for their presentations at the GSC 2019: Andrew Jack, Joseph Snavelly, Alisson Teles, Jamie Wilson, Zack Witte, and Shaleen Vira.

Congratulations to our Award Winners as well as the rest of the Fellows for their hard work and outstanding research presentations.

Save the Date for the Global Spine Congress 2020 as it heads to Rio de Janeiro

The Global Spine Congress (GSC 2020) will be held in **Rio de Janeiro** from **May 20 – 23, 2020**, bringing together worldwide leaders from the spine community in a unique and multidisciplinary event.

Why should you attend the GSC?

- Provides the opportunity for you to meet, network and learn from Key Opinion Leaders in spine surgery
- Learn the latest research, techniques, and technologies in spine surgery
- Be part of GSC's esteemed scientific program and community

Call for abstracts is open **June 1 – September 16, 2019**. Don't forget to submit your abstract for an opportunity to present your research in front of leading spine experts from around the world. For more information, check in regularly at www.gsc2020.org.



Submit your abstract

[CLICK HERE](#)

We look forward to seeing you in Rio in 2020!

Inaugural “Women in Spine” Event at GSC 2019 a Success



AOSpine organized the first Women in Spine Networking Event at the Global Spine Congress in Toronto to celebrate extraordinary women in spine from around the globe. Female and Male participants alike were invited to join this networking event focused on female leadership, maintaining balance, and tips for younger surgeons going into the spine profession. Speakers included Serena Hu, MD (Stanford University), Christina Goldstein, MD (University of Missouri), and Yu-Mi Ryang, MD (Helios Klinikum Berlin-Buch, Germany).



Left to Right:

Yu-Mi Rang, Serena Hu,
and Christina Goldstein lead the
discussions during the Women
in Spine breakfast

Upcoming AOSNA Courses

AOSNA Webinar—Upper Cervical Trauma
June. 26, 2019

AOSNA Course: Principles and Treatment of Spinal Disorders for Residents
Aug. 16-17, 2019 in Las Vegas, NV

AOSNA Course: Principles and Treatment of Spinal Disorders for Residents
Oct. 4-5, 2019 in Las Vegas, NV

AOSNA Webinar—Multilevel Cervical Myelopathy
Oct. 16, 2019

AOSNA Webinar—Correction of Cervical Deformity
Nov. 6, 2019

AOSNA Seminar—Managing Complications: Clinically, Ethically, and Legally
Dec. 6-7, 2019 in La Jolla, CA

AOSNA Course: Principles and Treatment of Spinal Disorders for Residents
Jan. 31 – Feb. 1, 2020 in Las Vegas, NV

For more information or to register:

[CLICK HERE](#)

Did You Know

The AOSpine Knowledge Forum (KF) Tumor recently validated the first spine oncology-specific patient-report outcome (PRO) tool, the SOSGOQ2.0. The PRO allows you to define whether your patients are improving and will serve to improve their quality of life.

For more information:

[CLICK HERE](#)

Save-the-Date

Join us for the AOSpine North America reception at the NASS Annual Meeting.

Wednesday September 25 • from **5:30pm – 8:00pm**

Location **Chicago**

Welcome to the Learning Corner!

Welcome to the first of many articles we will be bringing to you to share all the efforts in learning that AO North America staff and faculty are involved in. These include evidence based best practices to promote the development of a community that *“learns with and from each other”*, and advances quality surgical care.

Our first article in the series:



Chitra Subramaniam, PhD
AONA's Chief Learning Officer

A Paradigm Shift from “Education (Instructionism) to Learning”

The turn of the twentieth century saw formal schooling take shape in all industrialized countries. During this time there was not much awareness on how people learn. By the 1920s schools became large bureaucratic organizations that delivered instruction without much knowledge on the process of learning and the learners. As a result schools and organizations that delivered education were built on several assumptions made by teachers and authorities that scientifically did not have evidence. The premise of all schooling was

- Knowledge is a collection of facts and procedures to solve problems
- People were considered educated when they accumulated large amount of such facts and procedures
- Teachers knew what these facts and procedures were that needed to be taught
- Simple facts should be learned first before complex facts were introduced
- Teachers defined what was simple and complex and the sequence in which facts were presented
- Success was defined as recall of these facts and procedures

Papert (1993), called this phenomenon Instructionism. This was based on the need to prepare people for the industrial world and work environment. However, today all the fields of study are complex, multidimensional and influenced by technology, advances in the social and medical sciences, arts and humanities, competition, new purveyors and consumers that require us to prepare people

differently for a new kind of society. Instructionism does not work effectively. Economists and those in organizational development (Bereiter and Drucker, 2002), describe that we live in a *“knowledge economy”* today. To survive in this economy, mere accumulation of facts is not enough. Facts need to be applied and adapted as needed depending on the context in which they function. People need a deep understanding of the concepts and frameworks, and the ability to create new ideas, new theories, new products and hence new knowledge. They also need to be able to integrate what they learn into what they already know, critically evaluate what is presented and validate its use. They need to be responsible for continuous learning and adapt to situations that they are presented with. Thus, in the 1970's there was a significant interest in how people learned and Learning Science as a discipline first took shape. Focus shifted from the teacher to the learner. The process of learning and how people learn became the area of focus.

By the 1990's the following core principles on learning were released

- Deeper conceptual understanding and application to the real world is critical
- Focus needs to be on the learner
- A learning environment that supports learning and deeper understanding, application and evaluation is a must
- We need to build on the learner's prior knowledge
- Reflection is necessary for learning

Welcome to the Learning Corner!

The learning sciences is an interdisciplinary field that pulls from the behavioral and social sciences, anthropology, education and computer science. Today we talk about the cognitive sciences, the learning processes and the need for teachers to adapt their delivery methods to facilitate such learning. The AO's adult learning principles that we have adopted as core tenants reflect the fundamental principles derived from the learning sciences. Learner centered instruction, active learning, scaffolding, and other terms have become the norm in effective teaching today. If you want to give it a healthcare spin, here is something to think about. There are similarities in how we identify needs, develop a plan and deliver it. **Food for thought!**

Learning	Patient Care
Needs Assessment	Patient demographics, presentation, symptoms
Gaps, levels of motivation, learning needs	Diagnosis
Design of goals and objectives, content, instructional elements	Treatment plan
Learning gains, outcomes	Patient satisfaction, outcomes
Post event follow up	Post-operative care
Feedback and coaching and continuous learning	Continuous monitoring and follow up

Until our next article!!

Congratulations to Alexander Vaccaro Elected as the AOSpine Member Representative for 2020



Left to right: Norman Chutkan, AOSpine International Community Development Chair; Alexander Vaccaro, AOSpine Member Representative-elect; Shanmuganathan Rajasekaran, AOSpine International Board Chair

On Friday, May 17th, 2019, the voting members of AOSpine that were present at the Global Spine Congress democratically elected Alexander Vaccaro as their member representative for 2020. The Member Representative will serve for two years—one year with member elect status (guest without voting rights), and one year as a full member of the AOSpine International Board with voting rights.

Vaccaro commented: "One of my greatest aspirations was to climb the ladder in the AO so I could contribute more to a society that made me who I am today. I am who I am because the AO taught me how to do research, how to operate, how to think about problems, and how to collect my results. And now, I have the honor to be the Member Representative of the International Board, I couldn't be happier, and I am going to serve it with 100% of my efforts."

AOSNA is pleased to announce the results of the 2019 Young Investigator Research Grant Awards



For the 12th year, the AOSpine North America Research Committee has established the Young Investigator Research Grant Award (YIRGA), funding new investigators who have a desire to perform high-quality, clinically relevant spinal or spinal cord research in basic or clinical science.

The applicants (all AOSNA subscribed members), sent in a significant number of applications to be evaluated in a blinded peer review process by the Research Committee members.

The following investigators will each be awarded a one-year grant of up to \$20,000 to help with their research.

Christina Cheng (University Hospitals Cleveland Medical Center)

"Protein Kinase Inhibitor Gamma and Spinal Fusion in Age-Related Osteoporosis in a Mouse Model"

Bryan Krueger (University of Cincinnati)

"Cadaveric Feasibility Study for Endoscopic Endonasal Occipitocervical Fusion"

Christopher Witw (Rush University)

"Acute Traumatic Spinal Cord Injury: Variability and Impact of Time to Surgery"

Isaac Karikari (Duke University)

"Investigating the Role of Apolipoprotein E in Pseudoarthrosis Following Spinal Fusion Surgery"

Jeremy Shaw (University of Pittsburgh)

"Investigating Methylene Blue as a Biofilm Disclosing Agent in a Large Animal Spine Infection Model"

The projects will be carried out during 2019 and 2020 and the investigators will be invited to present their results at the 2020 Fellows Forum in Banff. Congratulations to the winners—they certainly represent a significant contribution to the quality of research being performed in North America. For AOSNA, it is a pleasure to be able to invest in promising projects like these and to incentivize the members to actively take part in the scientific development of the region.

Fellow Spotlight

Matthew Goodwin, MD, PhD



1) Tell us about yourself.

I am currently a spine fellow in the department of Neurosurgery at Johns Hopkins, working mainly with Dr. Dan Sciubba.

I grew up in South Carolina, where I went to college for my bachelor's in Exercise Science and master's degree in Education (Furman University). I was a runner and was interested in metabolism, so I ended up getting my PhD studying metabolism with L. Bruce Gladden at Auburn University. From there I became interested in tumor metabolism, so I headed to New York City for medical school at Cornell. I then was fortunate enough to match into Orthopedics at the University of Utah, where I did my surgical training (and developed my specific interest in tumors of the spine). I also was able to continue my scientific endeavors, working in the lab of Dr. Kevin B. Jones, pursuing answers to questions on tumor metabolism. I am humbled and grateful for the opportunity I have now with Dr. Sciubba, and I am looking forward to continuing my career as a spine tumor surgeon who attempts to answer questions in the lab as well.

On a personal note, I am married and have two energetic children. I met my wife 16 years ago at Grant Village in Yellowstone National Park, and our kids are named Grant and Madison. They have been incredibly supportive despite the long hours!

2) Why did you decide to go into spine?

Honestly, it was a lot like deciding between "medicine" or "surgery" as a third-year medical student. It just fit me best. I still remember doing a C5 Corpectomy in a young man with an incomplete spinal cord injury with Dr. Brandon Lawrence when I was a third-year resident at Utah. He pulled me aside later and asked if I had thought about pursuing a career in spine. I was torn because of my longstanding interest in Orthopedic Oncology, but at the end of the day caring for spine patients simply fit me better. I enjoyed the clinics, the surgeries, the case conferences, the literature, and the people (patients and providers). Even the hard parts of the job often did not feel like work to me, which I think is a good sign. I like long surgeries and I also really enjoyed the team atmosphere in the OR during spine cases as well as the ownership we take of our patients as spine providers. I also enjoy interacting with spine patients. Many patients have heard a whole range of options for treating their spine condition, and I enjoy the challenge of trying to help them navigate that. We are also at a critical time in spine care where industry is critical to our development as providers and our efforts to provide the best care possible. But that involvement must be tempered with appropriate disclosures and safeguards to help us steer clear of bias in our thinking and practice when we can, and help us acknowledge potential bias when it might exist. I think most patients have some understanding of the critical role industry has in what we do, and the more transparent we can be in that regard, the better.

My main lab interest is in tumor metabolism, so originally I had planned on an orthopedic spine fellowship and an orthopedic oncology fellowship. A mentor in the field pointed out that many orthopedic oncology fellowships do not do a lot of spine, and many spine fellowships do not do a lot of tumor. Instead, the recommendation was to try to create a more mentored one-on-one experience with one of the handful of spine tumor experts in the country. Drs. Brodke and Lawrence connected me to Dr. Sciubba at Johns Hopkins, and I was fortunate enough to be accepted to do a fellowship with him, focusing on tumors of and about the spine.

3) Who inspires you?

That is a hard question! Of course every day that I get up early and come home late and am gone on weekends speaking at various places, my wife takes care of our kids and basically everything else! So on many levels she provides my inspiration, as she makes it possible for me to do the things I do for patients and in the lab.

I have also been incredibly fortunate in that every step of my training I have had truly great mentors. Mentors that care about my development as a person in addition to my development as a surgeon and scientist. I think that inspires me to keep doing my best to be a complete person, both at home and at work. I finished my PhD when I was 27, so L. Bruce Gladden at Auburn had a huge influence on me as a scientist and person. I recall as a young doctoral student getting frustrated because there were two valid but slightly different ways to curve-fit the kinetics in some of my metabolism experiments. I felt like it was dishonest because I could theoretically pick whichever method gave me the best results. I still recall him looking at me and saying (paraphrasing as it was many years ago), "Well that's the point of all this training. That's why you do a PhD. The point is that you are going to do the method you think gets you closest to the truth, regardless of what that is. If we were here working this hard just to get answers we liked or we thought were easier to publish, what would be the point?" He also stressed the importance of careful control and not worrying about the number of papers, but instead focusing on the quality of question you were asking and answering. I often try to live by both of those, and have been very fortunate in the departmental support I have had in answering what we think are meaningful and hopefully important questions.

During my surgical training I was inspired most by Dr. Kevin B. Jones and Dr. Darrel Brodke. Dr. Jones was starting his career as a surgeon-scientist when I arrived as a resident, so I watched first hand as he worked toward excellence in clinic, in the lab, in writing grants, and at home and in his community. This obviously inspired me on my path, and I lean heavily on him for advice even today as I move toward taking those same steps in my own life. Dr. Brodke inspires me for many of those same reasons. He has multiple high profile roles, yet still manages to make time for any resident

or fellow or patient who needs him. As I decided on next steps in my training, he was instrumental not only in connecting me to Dr. Sciubba, but also in my thinking through what I want my career to look like and how I might best achieve that. Despite his schedule, he would suggest we grab a coffee and talk through things. As a faculty member, he would always open his home for journal clubs and participate. As a father, he was active and quite proud of his kids (I recall him telling me how much fun it was when he and his son wrote a yellow journal article together). And as a clinician he is outstanding, always putting the patient first, while maintaining excellence in teaching both in the OR and clinic.



Finally, in many ways I still draw a lot of my inspiration from my Dad, who was diagnosed with metastatic pancreatic cancer during my last year of medical school, and passed away when I was an intern (JAMA 2017;318:1977-78). Being with him through that process of diagnosis, treatment and eventually death taught me an unbelievable amount about what it's like to be on the other side as the patient. His sickness and death happened at such a critical time that it had a remarkable effect on how I view patients and how I practice clinically. I still look through JAMA and NEJM each week because of him. At time of his diagnosis, a new trial on the treatment FOLFIRINOX had just been published the year before, and patients like him in a RCT had lived around 11 months to a year instead of ~6-7 months on the older treatment (which he was expected to receive). We did the newer treatment and he made it just over 1 year. And last, patients inspire me on a near-daily basis. They remind me of what it is like to be on the other side and what my dad went through.

4) How has your fellowship experience been so far?

Phenomenal. Obviously, there was an adjustment period for me, coming into a Neurosurgery program from an Orthopedic program. The cultures are different, the approach to problems can often be different, but the goals and the high-level care are the same. Johns Hopkins Neurosurgery is unique not only for its storied history under Dr. Henry Brem, but also for its remarkable cutting edge Spine Division under Dr. Nick Theodore, and its relationship with Orthopedics. Even though the bulk of my activities are under Dr. Sciubba, I was warmly welcomed by both departments. There is a growing amount of cross-pollination between the departments, which I think only benefits the patients.

In my specific role with Dr. Sciubba, I cannot say enough good things. Everyone knows he is a remarkable surgeon in the OR and a dynamic and brilliant speaker and leader. I think what some may not realize is how he does these things so effectively and maintains his family life at the same time. I am not sure I have figured it out yet, but certainly much of his success seems due to his extraordinary

work ethic and his attention to and support of everyone on his team. He is the coach you don't want to disappoint. And he goes out his way to do the right thing for the patient, which makes working hard for him and his patients easy. On a professional level, he has gone out of his way to introduce me to the leaders in this field, and to put me in position for success. I view this year as being unique in that it is my chance to learn absolutely everything I can about how Dr. Sciubba does what he does, in and out of the OR.

5) What is your typical day like?

My typical day varies quite a bit. It is obviously different as a fellow than it was as a resident and it will be as an attending. As a resident there were stretches of time where I was getting up at 3am and running to the lab to mix solutions, driving to the mouse facility to inject mice, and then running over the hospital to start the day by 5am. As a chief resident I would often call or text our night float resident at 3 or 4am everyday to review their decisions/plans and make sure nothing was dropped overnight and the OR was ready. Obviously as a fellow I try not to bother the residents like that now!

I still like to be up early, typically around 4am. Usually I like to read, write, and relook over the cases for the day at that point. With Dr. Sciubba we have three days every week of pretty full ORs, 1 day a week is a full clinic, and then 1 day a week is an add-on/admin day. The admin day is on Friday, which also makes travel for speaking/courses a little easier. There are also multiple meetings throughout each week in addition to Grand Rounds on Thursday morning. These include a weekly research meeting in Dr. Sciubba's office on Monday mornings, our Sarcoma board (run by the Ortho Oncologists) each Tuesday, and our weekly spine tumor board on Wednesdays. Additionally, Dr. Sciubba gets contacted from providers around the world on a daily basis with difficult spine tumor problems and questions, so it is a lot of fun sorting those things out.

Before leaving the hospital each day, I typically go back to the floor to PM round on Dr. Sciubba's patients to make sure nothing has been missed and that everyone is doing ok. I like to get home to help put my kids in bed at 8pm when possible, but if working later we try to always at least have a phone conversation so I can say goodnight to them. I still try to squeeze in a 4-5 mile run each day when possible. Typically I like to be in bed by midnight. On the weekends we are not on call or traveling, I try to balance getting research and other work done with spending time with my family. Currently we love going on walks and hikes together, eating breakfast at our local bakery, and playing "roughhouse" whenever we can!

6) How has being an AOSNA Fellow helped you in your career path?

It has been more valuable than I ever imagined. I remember when we started talking about my working with Dr. Sciubba, I was told that I was going to be in an "AOSpine" fellowship position. At the time I thought it was great, especially because I am close with Dr. Brodke. But I did not realize until I started fellowship how useful it was. We are contacted immediately and connected to all the leaders in the field, given a fellows' reading list as well as other resources, we have an interactive webinar series, and we get financial support for the fellows' cadaver course, Banff, and Global Spine Congress. AO is remarkable in attracting the best spine faculty to teach the next generation of spine surgeons in an organized and methodical manner. It has been incredibly helpful for me, and I hope to contribute whatever I can in helping that legacy continue.

Congratulations to the Graduating Fellows of 2018-2019

At the end of July, we bid farewell to the AOSNA fellows of 2018-2019 graduating from our fellowship sites. On behalf of the AOSNA Fellowship Committee, we wish them much success and happiness in their next steps.

Graduating Fellows from Cleveland Clinic

Elyne Kahn, MD, MPH
Shaleen Vira, MD
Daniel Coughlin, MD
Ghaith Habboub, MD

Graduating Fellows from Columbia University

Griffin Baum, MD
James Lin, MD
Simon Morr, MD, MPH
Joseph Osorio, MD

Graduating Fellows from Emory University Orthopedics and Spine Center

Raj Gala, MD
Elliott Kim, MD
Tyler Jenkins, MD
John Kleimeyer, MD

Graduating Fellows from the Hospital for Special Surgery

Philip York, MD
Yoshihiro Katsurra, MD
Jeremy Steinberger, MD
Sohrab Virk, MD
Ravi Verma, MD

Graduating Fellows from Houston Methodist

Daren McCalla, MD
Zack Witte, MD

Graduating Fellow from Johns Hopkins University

Matthew Goodwin, MD, PhD

Graduating Fellows from Mayo Clinic

Navid Khezri, MD
Nayef Dajim, MD, MPH, PT

Graduating Fellows from McGill University Health Centre

Ahmed Alshammasi, MBBS, FRCSC
Abdulaziz Binshebeen, MD
Oded Rabau, M Med
Rodrigo Navarro-Ramirez, MD
Alisson Teles, MD

Graduating Fellows from Northwestern University

Joseph Snaveley, MD

Graduating Fellows from NYU Hospital for Joint Diseases

Alexander Riccio, MD
Anand Segar, MD
Deeptee Jain, MD
Elizabeth Lord, MD
Roosevelt Offoha, MD

Graduating Fellows from OrthoCarolina Spine Center

Christian Klare, MD
Casey Davidson, MD

Graduating Fellows from Rush University Medical Center

Chris Witiw, MD, MS
Anan Shtewee, MD

Graduating Fellow from Stanford University

Thomas Niemeier, MD

Graduating Fellows from Swedish Neurosciences Institute

Ronen Blecher, MD
Andrew Jack, MD
Brooks Osburn, MD
Wyatt Ramey, MD
Zane Tymchak, MD
Basem Ishak, M Med
Alexander von Glinski, MD

Graduating Fellows from Thomas Jefferson University

Christian Hoelscher, MD

Graduating Fellows from Toronto Western Hospital/University of Toronto

Fan Jiang, BSc, MDCM, FRCSC
Anastasios Charalampedis, MD
Jamie Wilson, BA, Bch, BMedSci, FRCSC
Pratipal Kalsi, MBBS, FRCSC, BSc, Mphil
Wu Pang Hung, MBBS, Mmed, FRCSC

Graduating Fellow from University of Alabama at Birmingham

Chong Weng, MD

Graduating Fellows from University of British Columbia

Dan Banaszek, MDCM, MD, FRCSC, MHSC
Tom Inglis, MBChB
Nathan Evaniew, MD, PhD, FRCSC

Graduating Fellows from University of Calgary

Patricia Sirois, FRCSC
Sultan Aldebeyan, MD, MSC, FRCSC
Ahmed Aoude, BA, MSc, MDCM, FRCSC
Sasha Rogers, BSc, MBBS, Mphil

Graduating Fellows from University of California at Davis

Richard Hurley, MD
Douglas Nowacki, MD

Graduating Fellows from University of California at San Francisco (Ortho and Neuro)

Patrick Dermarkarian, MD, MBA
Kevin Taliaferro, MD
Roman Trimba, MD
Leslie Robinson, MD, PharmD, MBA
Ratnesh Mehra, MD

Graduating Fellows at University of Cincinnati

William Jeong, MD, MBA, MS
Bryan Krueger, MD

Graduating Fellows from University of Maryland

Ryan Gentry, MD
Shane McGowan, MD
Ashley Strickland, MD

Graduating Fellows from University of Pennsylvania

Christopher Catapano, DO
Sajeel Khan, MD

Graduating Fellow from University of Rochester

Sherif Sherif, MD

Graduating Fellows from University of Southern California

Milad Alam, MD
Ian Buchanan, MD
Kevin Wiley, MD

Graduating Fellows from University of Utah

Daniel Tobert, MD
Akshay Yadhati, MD

Graduating Fellow from University of Virginia

Saikiran Murthy, DO

Graduating Fellows from University of Washington

Ashraf El Naga, MD
Edward Jung, MD
Eric Rebich, DO

Graduating Fellows from Washington University

Owoicho Adogwa, MD, MPH
Mostafa El Dafrawy, MBChB
Nicholas Pallotta, MD
Adam Wegner, MD, PhD

Graduating Fellows from Weill Cornell Medical College

Christoph Wipplinger, MD
Murat Cosar, MD, PhD
Franziska Anna Schmidt, MD

Graduating Fellow from West Virginia University

Samuel Adams, MD

Graduating Fellow from Yale University

Pedro Coutinho, MD

AOSpine North America is pleased to announce the sites that have been awarded fellowship funding for the 2019/2020 and 2020/2021 academic years

There were a total of 48 applications from outstanding institutions received. All of the applications went through a rigorous peer-reviewed process to determine which sites would receive the available funding. Congratulations to the 25 sites that were selected for fellowship funding for the 2019/2020 and 2020/2021 academic years. These selected fellowship sites will receive \$65,000 per academic year to support their fellowship initiatives.

Institution	Fellowship Director(s)
Augusta University	John DeVine, MD
Cleveland Clinic	Jason Savage, MD
Emory University	John Heller, MD
Hospital for Special Surgery	Han Jo Kim, MD
Jefferson University	Srinivas Prasad, MD
Johns Hopkins University	Nicholas Theodore, MD
Mayo Clinic	Bradford Currier, MD
McGill University	Jean Ouellet, MD
Northwestern University	Alpesh Patel, MD
OrthoCarolina	Brad Segebarth, MD
Rush University	Howard An, MD
Toronto Western Hospital	Michael G. Fehlings, MD / Eric Massicotte, MD
University of Alabama	Steven M. Theiss, MD
University of British Columbia	Scott Paquette, MD / Brian Kwon, MD
University of Calgary	Fred Nicholls, MD
University of Maryland	Steve Ludwig, MD
University of Missouri	Theodore Choma, MD
University of Rochester	Addisu Mesfin, MD
University of Utah	Brandon Lawrence, MD
University of Virginia	Justin Smith, MD
University of Washington	Richard J. Bransford, MD
University of California Davis	Eric Klineberg, MD / Yashar Javidan, MD
University of California San Francisco	Praveen Mummaneni, MD
University of Southern California	Jeffrey Wang, MD
West Virginia University	John France, MD

Global Spine Journal

Special Collections

Global Spine Journal has now launched a Special Collections Landing Page.

Here you can discover GSJ articles by topic from A to Z:

[CLICK HERE](#)



New Special Issue from the AOSpine Knowledge Forums Now Published

The newest Global Spine Journal Special Issue "AOSpine Knowledge Forums: Driving Research, Discovery, and Innovation in Spine", featuring articles from each of the AOSpine Knowledge Forums, is now available to read online! This issue was led by GSJ Deputy Editor and AOSpine Research Commission Chair, Dino Samartzis, PhD. Samartzis has said of the issue: "This special focus issue highlights some of the recent work by AOSpine's Knowledge Forums. The Knowledge Forums are pathology-based study groups led by some of the world's leading clinical experts in their respective fields. These groups are a perfect example that by international research collaboration, global innovation and impact is possible. To make any progress in medicine or science, we must work together and not apart."

You can access this issue here:

[CLICK HERE](#)

You can also download the entire issue to read offline later on your device or tablet.

You can also access our library of special issues on one page [here](#):

[CLICK HERE](#)

Mid-Year Top Articles

As we are now halfway through the year, we would like to share the top downloaded and cited articles of the year so far.

Top 5 cited articles:

"Timing of Decompression in Patients With Acute Spinal Cord Injury: A Systematic Review"

[CLICK HERE](#)

"Thirty-Day Readmission Risk Factors Following Single-Level Transforaminal Lumbar Interbody Fusion (TLIF) for 4992 Patients From the ACS-NSQIP Database"

[CLICK HERE](#)

"Risk Factors for Delirium After Spine Surgery in Extremely Elderly Patients Aged 80 Years or Older and Review of the Literature: Japan Association of Spine Surgeons with Ambition Multicenter Study"

[CLICK HERE](#)

"A Clinical Practice Guideline for the Management of Patients With Acute Spinal Cord Injury and Central Cord Syndrome: Recommendations on the Timing (≤ 24 Hours Versus > 24 Hours) of Decompressive Surgery"

[CLICK HERE](#)

"Type and Timing of Rehabilitation Following Acute and Subacute Spinal Cord Injury: A Systematic Review"

[CLICK HERE](#)

Top 5 downloaded articles:

"Reliability and Validity of the AOSpine Thoracolumbar Injury Classification System: A Systematic Review"

[CLICK HERE](#)

"Degenerative Lumbar Spine Disease: Estimating Global Incidence and Worldwide Volume"

[CLICK HERE](#)

"Lumbar Interbody Fusions for Degenerative Spondylolisthesis: Review of Techniques, Indications, and Outcomes"

[CLICK HERE](#)

"Surgical Site Infections in Spine Surgery: Preoperative Prevention Strategies to Minimize Risk"

[CLICK HERE](#)

"Recurrent Lumbar Disc Herniation: A Review"

[CLICK HERE](#)

An Overview of Quality Improvement in Spine Surgery: AOSpine North America

Overview:

- History of Quality Improvement
- System changes to improve care
- Quality improvements and reporting adverse events

Topics Include:

- Ambulatory care centers improving quality
- Reducing blood loss to avoid transfusions
- Avoiding wrong side surgery
- Does IOM work? Is it cost effective?
- DVT/PE thromboprophylaxis
- Preventing infections
- Spine unit or designated care site improve care
- Anticoagulation – when to stop and when to start with spine surgery
- Pre-op maximization to reduce complications (dexa, Hg, 1 AC,...)
- SCI and trauma – when is it safe to operate?



“This issue aims to aid spine surgeons by identifying and discussing the tools and treatment paradigms that may be altered so that the quality of spinal care delivered may be more efficacious, cost effective, safe, and patient centered”
- James S. Harrop, MD, FACS, Thomas Jefferson University ”

Job Openings

Orthopedic Spine Surgeon (Partnership Option)

Location: Reno, NV | Carson City, NV

Rewarding opportunity with a partnership option.

Call is required.

About Reno Orthopedic Clinic

Respect, Optimism, and Compassion are the guiding principles that make Reno Orthopedic Clinic one of the most rewarding privately-owned orthopedic practices to work. Committed to providing excellent patient care since 1958, ROC continues an impressive expansion throughout the Northern Nevada region.

Live, work, and thrive in one of the nation's foremost growing economies. Reno is ranked by Forbes as one of the top 50 Best Places for Business and Careers. Enjoy all the amenities the Biggest Little City in the World offers, including cultural events and festivals, world class dining, historical museums, the Great Reno Balloon Races, Hot August Nights, Best in the West Rib Cook-off, and much more!

[CLICK HERE](#) to learn more.

Reno is easily commutable to some of the best areas and activities in the west—Lake Tahoe, hiking and camping in the Sierra Nevada mountains, the gold rush town of Virginia City, and is conveniently located near multiple well-known ski resorts.

Position Summary

The ROC Center for Spine and Pain Care is searching for a fellowship-trained Orthopedic Spine Surgeon to join its flourishing orthopedic practice. This opportunity includes a partnership track option.

Join a busy, established practice committed to providing excellent patient care. A state-of-the-art facility, beautifully constructed with clinic space, occupational therapy, physical therapy, and an out-patient surgery center housing innovative equipment.

Education, Knowledge, Skills

Doctor of Medicine (M.D.) degree and 4-5 year residency in hospital or orthopedic practice

Fellowship-trained Spine Surgeon

State medical license and board certified/eligible

RENO ORTHOPEDIC CLINIC IS AN EQUAL OPPORTUNITY EMPLOYER

Only those most qualified will be contacted for an interview.

ROC participates in E-Verify. E-Verify is an internet-based system that compares the information that you provide on the Form I-9 with information from the Social Security Administration and Department of Homeland Security records.

For over 60 years Reno Orthopedic Clinic (ROC) has been committed to providing excellent orthopedic care. Our physicians are nationally recognized leaders and teachers that provide industry leading solutions for patients of all ages and lifestyles in our specialty centers that include Foot & Ankle, Spine & Pain Care, Fracture & Trauma, Hand & Upper Extremity, Joint Replacement, and Sports Medicine. We offer x-ray and MRI imaging, physical and occupational therapy, a surgery center, and orthopedic urgent care for the convenience of our patients.

Advancing
spine care
worldwide

Get updates on the latest news, events, course registration openings, and much more



**AOSpine North America
on FACEBOOK**



**AOSpineNA
on Twitter**







**AOSpine_NA
on Instagram**



**AOSNA
on YouTube**

AOSpine North America
1700 Russell Road
Paoli, PA 19301

T (610) 993-5131
F (610) 695-2420
clam@aospine.org
www.aospine.org

 facebook.com/aospine-North-America
 [@aospineNA](https://twitter.com/aospineNA)
 [aospine](https://www.linkedin.com/company/aospine)
 [aospine_NA](https://www.instagram.com/aospine_NA)