2019 Annual Report Academic Year August 2018 – July 2019



OUR MISSION TO SERVE THE SPINE COMMUNITY THROUGH ACHIEVEMENT OF PROFESSIONAL EXCELLENCE AND OPTIMIZATION OF CLINICAL CARE

Note From The President and Founder



It gives me great pleasure to write this year's note to you, as 2019 has been marked by many milestones and achievements for SDSF. Our foundation was originally established for the purpose of supporting physician education, particularly within our fellowship program. From there, we evolved to include spine research and eventually outreach, each of which has allowed us to learn more about who we are as an organization and in what direction we are moving. This past July, our Board of Directors gathered for its latest Strategic Planning Meeting to get a pulse on just that. This meeting provided many of us with an "aha!" moment, which led us to redefine our Mission Statement as well as create a new Vision Statement for the future.

I am pleased, as a result, to present our revised Mission Statement: "To Serve the Spine Community through Achievement of Professional Excellence and Optimization of Clinical Care." Our Board will now focus on activities that enable us to achieve our Mission and Vision in a measurable way over the next 3–5 years.

I am also excited about SDSF's newest addition to the Board of Directors: Samuel Ward, Ph.D., Vice Chair of the Department of Orthopedic Surgery at UCSD. Dr. Ward brings a wealth of experience in Orthopedic-based research and academics and we look forward

to benefitting from his unique perspective on the Board. We extend our warmest welcome to Sam as the newest member of the SDSF family!

On a bittersweet note, SDSF was sorry to say goodbye this year to our talented Research Manager, Stacie Tran, who accepted a research position in the pharmaceutical field. Although we are happy for Stacie and wish her the best as she starts this new chapter, she will be greatly missed. After Stacie's departure, an opportunity presented itself to restructure the research support provided to our fellows. Subsequently, SDSF recently signed on Dr. Bahar Shahidi, a Ph.D. researcher from UCSD, as a Research Consultant to the Foundation and our fellowship program. Dr. Shahidi has already been a regular presence at our weekly research meetings to guide our fellows as they work to complete required projects, as well as to collaborate with SDSF faculty on potential new projects in the field of Orthopedics and Spine. Welcome, Bahar – we are happy to have you and know great things are to come!

I must also mention how extremely proud I am of our San Diego Spine Fellowship Program. With Bob Eastlack and Greg Mundis, Jr. at the helm, our superb faculty has led our program to become one of the most sought-after spine training programs currently in the country. Each year, the caliber of candidates continues to rise and we have been blessed to match consistently with highly-ranked fellows. Many thanks to both our faculty and our fellows, the latter of whom have also invested their time and energy to help our program improve each year.

Now the most exciting news, I am delighted to announce that our fundraising efforts to help establish the first Endowed Chair in Spine Surgery at UCSD has been realized, reaching the goal of two million dollars! This was a concerted effort supported by SDSF, private and corporate donors, and the Department of Orthopedic Surgery at UCSD. A committee has convened to search for a qualified candidate to become the first UCSD Endowed Chair of Spine Surgery. We look forward to the day we can announce the name of the appointed chair. I personally wish to thank Steven R. Garfin, M.D., for initiating this endeavor, and everyone at UCSD as well as our donors for their support in getting us across the finish line. The realization of this position will lead to further collaboration between SDSF and UCSD as well as with other San Diego Spine Initiative (SDSI) affiliated institutions in the city. At the end of the day, when members of the San Diego Spine Community all work together for excellence in spine care, it is our patients who will receive the greatest benefit as a result.

As I bring this year's note to a close, I would like to encourage you to please plan to attend our 2020 Gala Fundraiser on February 28, 2020, at the Hyatt Aventine Hotel. SDSF and Global Spine Outreach are again combining forces to bring awareness about the needs of our respective missions. We hope you will join us at the Gala and continue to help us realize our dream of continuing our missions for many years to come. In the meantime, we wish you a happy, healthy, and blessed New Year!

Warmest regards,

Behrooz



Behrooz A. Akbarnia, MD President and Founder, Board of Directors Director Emeritus San Diego Spine Fellowship Program

San Diego Spine Foundation Board of Directors



Sarah E. Aghassi, Esq. Secretary, Board of Directors



Robert K. Eastlack, MD CFO, Board of Directors Co-Director and Faculty Member, Spine Fellowship Program



Patricia N. Kostial, RN, BSN Executive Director Administrator, Spine Fellowship Program Member, Board of Directors



Gregory M. Mundis, Jr., MD Vice President, Board of Directors Co-Director and Faculty Member, Spine Fellowship Program



Jeff Pawelek, BS Member, Board of Directors



Sam Ward, PT, Ph.D. Member, Board of Directors



Ramin Bagheri, MD Scripps Clinic, La Jolla, CA



Ali Bagheri, MD Girard Orthopedics San Diego, CA



Maneesh Bawa, MD San Diego Orthopaedic Associates Medical Group, San Diego, CA.

Additional Members of the Fellowship Faculty



Hani Malone, MD Neurosurgeon Scripps Clinic, La Jolla, CA.



James D. Bruffey, MD Scripps Clinic, La Jolla, CA.

San Diego Combined Spine Fellowship Program Fellowship Co-Directors Message 2018-2019

Our 2018-19 Fellowship year was another success, with 2 physicians completing their clinical spine training: Nicole Record and Daniel Thibaudeau. Since graduation, Nicole has accepted a position with LA Bone and Joint Institute, in Los Angeles, California and Dan has accepted a position with Raleigh Orthopaedic Clinic, in Raleigh, North Carolina. We'd like to congratulate both Dan and Nicole for their hard work and wish them great success in their future careers.

On August 1, 2019, our new clinical fellows hit the ground running: Ryan Hoel from the University of Minnesota Orthopedic Residency Program and Ruwan Ratanayake from the University of California, Davis Orthopedic Surgery Residency Program. They are accompanied by two more Barrow Neurologic Institute PGY-6 in-folded fellows, Jakub Godzik and Corey Walker, who will each matriculate with the SDSF spine fellowship over the course of the 2019-2020 academic year.

Looking to the future, we will be welcoming Robert J. Ames from Temple University Orthopedic Surgery Residency in Philadelphia, PA and Daniel B.C. Reid from Brown University Orthopedic Surgery Residency in Providence, RI. Both Drs. Ames and Reid matched with our program and were among the top ranked candidates interviewed in a year that had a record-breaking number of applications to our program.

We are pleased to again have near record number of applications for the 2021-2022 academic cycle with plans to conduct interviews in late February 2020. Already armed with constructive input from our past and current fellows, we hope to continue to build a program that is one of the best in the country. Thank you to all who have contributed to making our fellowship training program one of the very best!

Robert K. Eastlack, M.D.



Board Member

Samuel R. Ward, P.T., Ph.D. is a Professor in the Departments of Orthopaedic Surgery, Radiology, and Bioengineering at UC San Diego. He is also the Vice-Chair of Research in Orthopaedic Surgery, Co-Director of the Translational Science Partnerships Program, and Director of the Muscle Physiology Laboratory.



Dr. Ward started his education at UC Davis in Civil and Materials Science Engineering, and completed his degree in Physical Therapy at CSU Long Beach (1997) before practicing at USC University Hospital (1997-1999). He received his PhD from USC (1999-2003) and came to UC San Diego for a post-doctoral fellowship (2003-2006). He has served in the roles of Treasurer, Financial Advisor, and President for a number of State and National organizations. He is a standing NIH Study Section Member, and has served as the Chair of the Scientific Advisory Board for a number of organizations. At UC San Diego, he has served and chaired a number of committees in the School of Medicine and on Main Campus. He is a 2018 graduate of the Health Leadership Academy.

Dr. Ward is a clinician-scientist and his research program focuses on musculoskeletal design and plasticity. He has published 125 peer-reviewed manuscripts and has been continuously funded by the NIH, DoD, and other agencies since he started his faculty appointment in 2006. His scientific accomplishments include defining the structural features of human skeletal muscle that predict function in the extremities and spine. This work has been extended to understand normal and pathological muscle biology and physiology in the presence of joint disease. His current focus is on understanding chronic muscle atrophy and cell death in mature adults, with an emphasis on the use of stem cells and regenerative medicine approaches to treat these disease processes. His work has led to career achievement awards including the Kappa Delta Award from the American Academy of Orthopaedic Surgeons and Marion Williams Award from the American Physical Therapy Association. He is also a Fellow of the American Physical Therapy Association and a Distinguished Alumn at the University of Southern California and California State University Long Beach.

Sam is also an avid craftsman, photographer, and outdoorsman. His artistic work has been featured and won awards at several local and state competitions.

SDSF would like to welcome Dr. Sam Ward to its Board of Directors, and Dr. Bahar Shahidi as SDSF's new Research Consultant. Welcome Bahar and Sam to the SDSF Family!

Research Consultant

Bahar Shahidi, PT, DPT, PhD is an Assistant Professor in the Department of Orthopaedic Surgery at University of California San Diego. Her academic background includes a B.S. in chemistry from UC Berkeley, a Doctorate in Physical Therapy (DPT) from University of Colorado Denver, a PhD in neurophysiology from University of Colorado Denver, and a post-doctoral fellowship in skeletal muscle physiology at the UC San Diego. Her research background includes understanding biological, neurophysiological and psychosocial contributions to the development and maintenance of spine disorders using biological, physiological, and imaging-based tools. She is currently funded by the NIH (R01, R03, R21 and the Foundation for Physical Therapy).

Dr. Shahidi also has 9 years of clinical experience as an outpatient orthopedic physical therapist specializing in chronic spine conditions. Additionally, she has extensive teaching experience both clinically and academically, serving as a primary instructor or assistant instructor for the Physical Therapy program at the University of Colorado Denver, the Orthopaedic Surgery Resident program, Medical School, and School of Pharmacy at UCSD, and the Physical Therapy program at San Diego State University.



VISITING PROFESSORSHIP...



Alex Vaccarro, MD, PHD, MBA, FACS Thomas Jefferson University Philadelphia, Pennsylvania



Michael P. Kelly, MD, MSCI Washington University School of Medicine St. Louis, Missouri

Thanks to the support of industry, SDSF hosted its Annual Visiting Professorship Meeting on Friday, July 26th at the Hilton La Jolla Torrey Pines Hotel. This year's Visiting Professors, Alex Vacarro and Mike Kelly, along with a strong faculty of regional spine surgeons and past fellows provided a day long meeting focused on safety and effacy in spine surgery care. Thanks to everyone who supported and attended this event and special thanks to our Co-Chairs Greg Mundis, Jr. and Edward Nomoto.



SDSF Faculty member Jamie Bruffey along with past fellow and VP faculty member Amrit Khalsa and graduating fellows Nicole Record and Dan Thibaudeau



2019 Faculty. From left, front row: Behrooz Akbarnia, Steven Garfn, Alex Vaccaro, Michael Kelly, Bob Cho, Eddie Nomoto, Rajiv Saigal From left, back row: Vikas Varma, Greg Mundis, Jr., Bob Eastlack, Jay Turner, Bryan Cornwall, Jamie Bruffey, Amrit Khalsa,...., Pooria Salari, Afshin Aminian, A.N. Shamie, Hani Malone, Kush Verma

Leading Today...

San Diego Spine Initiative

In January 2018, SDSF initiated a collaborative effort now known as the San Diego Spine Initiative in the San Diego spine community, with the objective of creating a database to study different conditions of the spine across clinical and academic institutions in San Diego. Thus far, a pilot study has been initiated and institutional approval has been obtained or is in progress for 6 institutions, including UC San Diego, Scripps Health, Rady Children's Hospital, Kaiser, SpineZone and Spine Institute of San Diego. Data collected from these sites will generate a repository of clinical information that surgeons can use to help improve and optimize the quality of patient care, with the goal of making San Diego a city of excellence in spine care. Since its inception, UCSD has been an integral part in the development of this initiative, thanks to the tireless efforts for Dr. Bahar Shahidi and Dr. Samuel Ward. Please visit our website for updates on this initiative as well as other ongoing efforts.



Greg Mundis Jr, with Bahar Shahidi, Bob Eastlack and Behrooz Akbarnia during recent SDSI meeting

SDSF Strategic Planning

In July of 2019, SDSF held its 3rd Strategic Planning Meeting since its inception with the purpose of determining the foundation's direction for the next 3-5 years. In addition to the Board of Directors in attendance, SDSF Research Manager Stacie Tran, Strategic Fundraising Associate team members Darren Diess and Michelle Gilmore attended. The meeting was facilitated by Melinda J Rothhouse, Ph.D. SDSF has crafted a new Vision statement and revised its Mission Statement:

Mission Statement:

"To Serve the Spine Community through Achievement of Professional Excellence and Optimization of Clinical Care"

Vision Statement:

"To enhance professional excellence in spine care in San Diego through mentorship, education, research, advocacy, and leadership, while serving patients with spinal disorders through quality care that is thoughtful, scientific, and compassionate."



STRATEGIC From left, Melinda Rothhouse, Behrooz Akbarnia, Stacie Tran, Bob Eastlack, Jeff Pawelek, Greg Mundis, Jr., Sarah Aghassi, Darren Diess, Michelle Gilmore, Sam Ward and Pat Kostial

Mind Map for Strategic Planning

Building Future Leaders







In the 2018-2019 Academic Year, SDSF held Weekly Fellow's Spine Conferences, 6 Journal Club Meetings and Weekly Research Meetings.



SRS Traveling Fellowship



The San Diego Spine Foundation's mission is intertwined with excellence in education, research and outreach. As such, many of SDSF's board members and faculty are members of the Scoliosis Research Society (SRS), the preeminent spine society in the world. SRS, in addition to the pursuit of excellence in scientific research to help improve the lives of patients with spinal deformities, has strong ties to the education of its members, especially its younger members who will eventually become the SRS' future leaders. The SRS Traveling Fellowship is one such educational opportunity to send its junior members, accompanied by a senior member, abroad to share ideas, educate and be educated by other SRS members around the globe.

This year, SDSF's own Dr. Greg Mundis, Jr. was one of 3 SRS Junior Traveling Fellows, who with senior member George H. Thompson, MD (Cleveland's Case Western / Rainbow Babies and Children's Hospital), traveled to 4 countries in 3 weeks. This is an enormous investment of time away from family, patients, fellows and colleagues, but the experience is a once in a lifetime opportunity to learn, teach and cultivate lifelong friendships with spine surgeons far from home.

FOCOS Orthopedic Hospital – Accra, Ghana, West Africa (August 26-29)

The home of Oheneba Boachie-Adjei's recently constructed FOCOS Orthopedic Hospital which treats children with spinal deformities and

orthopedic disorders from the region, was the first stop for the Traveling Fellows. FOCOS is a nonprofit organization

founded by Dr. Boachie and has provided the funding to build and staff this unique and much needed facility. Of note, this was the first time for SRS fellows to visit the continent of Africa. The fellows observed several surgeries and clinics as well as participated in regular conferences and academic exchanges. In between, they were the guests of Dr. Boachie and his wife Hilda at their beautiful West African home.



Tel Aviv Medical Center and Dana Children's Hospital, Tel Aviv, Israel (August 29 – September 1, 2019)



Hosted by Dr. Dror Ovadia and colleagues, this was again a first for SRS Traveling Fellows to visit Israel. Of note, all the ORs were 2 floors underground, permitting ongoing patient care in the event of war. Again, surgeries and lectures were part of the agenda as well as time to see and experience the beauty of Tel Aviv's Mediterranean coastline and excellent cuisine. On their day off, they traveled to Jerusalem and were able to experience the complex intersection of the world's great religions.



Hacettepe University Hospital – Ankara, Turkey (September 1 – September 5)

The next stop was Ankara, Turkey where SRS President-Elect Muharrem Yazici and his colleagues hosted the SRS entourage. The visit was a memorable mix of

academic lectures, surgeries, Turkish culture and history.

Also included was a festive early morning hot air balloon excursion to view the Turkish sunrise.



The balloon ascended too quickly and was overtaken by wind currents leading them far off course and colliding with a tree that nearly toppled the basket. Thus, they became the first SRS Traveling Fellows to be involved in a hot air balloon collision. Thankfully, nobody died.

Acibadem University and Center for Advanced Simulation and Education (CASE) – Istanbul, Turkey (September 5 – September 10)

Ahmet Alanay was the host for the Istanbul leg of their journey. The Fellows were quite impressed with CASE's state of the art simulations, the University's futurist out-



lations, the University's futurist outpatient areas as well as the hospitality of their Turkish hosts. As is the case with each stop, interesting cases were observed and lectures shared among hosts and guests. Social events included a cruise on the historic Bosphorus and a memorable evening at Dr. Alanay's home.

Ganga Hospital – Coimabatore, India (September 10 – 14)

The final stop of on this 20-day journey brought the SRS Traveling Fellows to Coimbatore, India. Dr. S. Rajasekaran and colleagues were consummate hosts, providing extensive tours of Ganga Hospital, a booming center where any citizen can be treated and 10% are treated for free. This speaks to the tremendous generosity and care of the physicians and staff at this facility, which has a national and world-wide reputation. An extensive number of surgeries were observed with cases beginning at 5:30 a.m. and continuing late into the day. The fellows were touched by tremendous hospitality.

At the end of their journey, one fellow stated "New perspectives had been gained, many new friends had been made, much knowledge had been obtained and four strangers had become family in only three short weeks".

Congratulations Dr. Mundis on being awarded this unique opportunity! We are confident that it will make you an even better physician and surgeon, if that's even possible.



From Education to Outreach



Dr. Mundis and his wife Lesley were invited to Tashkent, Uzbekistan to spend some time with Dr. Abdulfarrukh



Karimov. Dr. Karimov is a practicing neurosurgeon in Tashkent, and a past visiting fellow with SDSF for 6 months in 2019. He has recently been designated as the physician in charge of developing a government backed Neuroscience Institute. Dr. and Mrs. Mundis' visit in October 2019 had multiple purposes: to evaluate Uzbekistan as a partner site for SDSF and Global Spine Outreach (GSO) for educational and philanthropic work, and to help our new partner in Uzbekistan develop a world class center.

The three days in Uzbekistan were filled with activity including visits to several hospitals as sites for GSO, visiting the main medical school, giving lectures, and visiting with other surgeons in the spine community.



The hospitality of Dr. Karimov was overwhelming and SDSF looks forward to continuing our collaboration with our international partner.



I will never forget the day we first noticed the curve in Nathan's spine. He was standing up, balancing himself on the television cabinet with no shirt on. This was no small feat for the little guy, who at 12 months old, had already faced more adversity than most do in a lifetime.



At 5 days old, Nathan was diagnosed with hypoplastic left heart syndrome (half a heart), and we were told to take him home and let him die. Seeking other options, we were told about the Royal Children's Hospital, Melbourne, Australia, and how they offered these kids a fighting chance. We boarded a plane from Perth, Western Australia, and spent four months watching helplessly as Nathan battled daily for his life. He stabilized after his second open heart surgery and we returned home to our lives.

I dismissed the spinal curve at first. It's probably from having his chest cracked open from the heart surgeries. Still, I made an appointment to see our GP, who referred us immediately to the Orthopaedics Department at the hospital. I wish I could tell you Nathan was diagnosed with Early Onset Scoliosis (EOS) at 12 months old, that he received appropriate treatment, and went on to live a normal, happy life, but that was not to be.

For nearly 2 ½ years, Nathan's spine condition remained undiagnosed and the curve had a mind of its own. For the longest time, we simply watched it get worse, before Nathan was finally given a brace. With the curve now at 55°, no one was listening to me. The management of Nathan's spine condition was in stark contrast to his heart condition. What could I do?

My Mum found hope - a surgeon named Dr. Min Mehta in the UK, who helped kids with EOS for over 20 years. Dr Mehta's sweet, calm voice was in direct opposition to the news she delivered.

"My dear you're too late".

Dr. Mehta explained that Infantile EOS is curable, but requires early treatment before the age of two. Dr. Mehta's treatment used plaster body jackets, harnessing the infant's rapid growth to give kids the opportunity to grow out of their scoliosis. Unfortunately, for Nathan, he was now 3 1/2.

I took the information to Nathan's cardiologist, who agreed that Nathan needed to access Dr. Mehta's treatment in the UK. He was concerned the scoliosis, if not treated soon, would have disastrous consequences for his heart condition. We appealed to the public, raising \$20,000 and travelled to London for immediate treatment.

Once in the UK, planning went south as concerned anaesthesiologists pushed to have the procedure at a hospital less familiar with this casting, but superior anaesthesiology. Unfortunately, we returned home to learn the cast was ineffective. Out of options and time, I begged Dr. Mehta to treat Nathan herself. She recommended I find a willing orthopaedist in Australia and as such, she would come. It was the break Nathan needed. Yet the offer to learn from Dr. Mehta was refused in Perth, stating the treatment was archaic.

Determined, I, finally found Dr. Angus Gray at the Sydney Children's Hospital. Dr. Gray agreed and suggested Dr. Mehta attend an upcoming conference as their special guest. The conference allowed many Australian surgeons to learn from



Dr. Mehta, and many children received treatment. Nathan received nine plaster jackets and 6 weeks in halo traction over 18 months in Sydney, thus stabilizing his scoliosis.

Although his scoliosis couldn't be cured, we had successfully halted the progression in its tracks! However, our success was short lived. Nathan developed a skin infection and his plaster jacket had to come off so it could heal. His curve rocketed up to 90°!

Nathan was now five and due for a cardiac catheterization. The findings from the procedure were devastating. Nathan's heart and lungs had been significantly affected by the scoliosis. Again, we were told to take Nathan home and let him die. I remember walking out of the meeting and collapsing, being caught by Nathan's orthopaedic surgeon, who placed me on a nearby casting frame. Oh the irony!

Losing hope is, I think, the most depressing, isolating experience on this earth. Nathan was put on a bipap machine to help him breathe. He was deteriorating fast. Nathan and I both needed a lifeline.

That lifeline came in the form of an orthopaedic surgeon, Dr. Ian Torode, Nathan's orthopaedic surgeon in Melbourne. He told us about some new magnetic spinal rods that might suit Nathan because they were less invasive than the standard rods. We agreed this was Nathan's only hope. However, we faced some massive hurdles getting Nathan's surgery approved. Soon he would be too sick to have any surgery at all. We put up a herculean fight, and Nathan finally got the spinal surgery. It was a success!

For a time, Nathan enjoyed a normal(ish) life. I dedicated my life to helping children with rare diseases, to ensure other kids did not fall through the cracks like Nathan did. I enrolled at Edith Cowan University, obtained a Bachelor of Science Degree, then a Master's of Science Degree, and am now completing my Ph.D. After my Ph.D., I will enroll in medical school to become a medical doctor. We have started the Nathan Project at Edith Cowan University to promote research for kids with rare diseases, and have collaborated with the Growing Spine Study Group (GSSG - an international study group dedicated to improving the lives for kids affected with Early Onset Scoliosis).

This story should have a happy ending, but it doesn't.

Despite our best efforts, Nathan's heart function is deteriorating. He has pulmonary hypertension, severe restrictive lung disease, peripheral edema, and has just been placed in palliative care. Three months ago, he lost the ability to walk, caused by the scoliosis wearing away the tendons in his hip. He is wheelchair bound and has become isolated, lonely, and depressed. It has severely impacted my life as I try to work full time, raise a family, study, and care for Nathan's acute care needs.

EOS appears almost innocuous. But, the collateral damage from this disorder is massive. Whilst we invest money, time, and energy into developing incredible surgeries to salvage the damage caused by scoliosis, we must recognize the impact registries (such as GSSG) can have on improving these children's lives.



Registries develop best practice guidelines, so that each child receives the same standard of care. If this were in place when Nathan was a baby, he would have been treated much sooner, with the right treatment. His life would have been very different indeed. Registries that collect blood samples also have the ability to research the cause of this disorder. We must understand this and prioritise our attentions and investments to registries. It really is the difference between life, and death. And that cost is just too high for any child.

Monique would like to thank all the dedicated physicians and healthcare members who have been there for Nathan, including Nathan's current Orthopedic Surgeon, Dr. Michael Johnson.

www.sandiegospinefoundation.org/patients/stories/nathans-story/



SDSF would like to thank Monique and Nathan for sharing their story and their struggles. To see the full-version story, please visit our website: www.sandiegospinefoundation.

Graduating Clinical Fellows 2018-2019



Daniel Thibaudeau, MD Raleigh Orthopaedic Clinic Raleigh, North Carolina



Nicole Record, DO LA Bone and Joint Institute Los Angeles, California



Jakub Godzik, MD Barrow Neurological Institute Phoenix, AZ

Current Clinical Fellows 2019-2020



Ryan Hoel, MD University of Minnesota Minneapolis, MN



Ruwan Ratnayake, MD University of California: Davis Sacramento, CA



Corey Walker, MD Barrow Neurological Institute Phoenix, AZ



Fernando Rios, MD

Research Fellow

SDSF welcomes Fernando Rios, MD as our 5th Research Fellow. Fernando completed his medical degree at the Universidad Autonoma de Chihuahua, Mexico. He was introduced to the GSO/SDSF mission team during his Orthopedic Surgery Residency. He has been a team member for GSO since his first interaction and is now in San Diego with SDSF as a Research Fellow. Dr. Rios hopes to use newly gained knowledge and research to enhance care for his patients in Mexico. SDSF has trained a total of 38 Clinical Fellows, 5 Research Fellows, numerous International Fellows, and 10 Navy Ortho Residents since inception, contributing to the advancement of spinal care.

Future Clinical Fellows 2020-2021



Robert J. Ames, MD Temple University Philadelphia, Pennsylvania



Daniel Reid, MD, MPH Brown University Providence, Rhode Island

Naval Medical Center San Diego Orthopedic Residents

SDSF is proud of our collaboration with the Orthopedic Residency Training Program at NMCSD. Beginning in July 2017, we have welcomed PGY-4 residents from the Naval Medical Center. Residents complete 10 week rotations with our full-time clinical faculty. Each resident attends clinics and surgeries as well as our weekly spine and research conferences. Additionally, the group participates at our scheduled Journal Club meetings.

Each resident is responsible for giving one assigned lecture as part of their spine rotation training. We thank the NMCSD Orthopedic Faculty for entrusting their residents to us.



Ethan Berstein, MD



Martin Collier, MD



Nicholas Healy, MD





Trevor Tompane, MD

Brandon Vier, MD

Fellows Activities - Growth & Memories



Dr. Thibaudeau - Mission Trip



Fellows Graduation Party



Fellows gathering at 2019 SRS Annual Meeting



Drs. Record and Thibaudeau at cadaveric lab



SCORE Fellows year end presentation at Scripps Green Hospital. From left: Bob Eastlack, Nicole Record, Daniel Thibaudeau, Greg Mundis, Jr. and Farrukh Karimov



Publications and Presentations 2018-19

Peer-Reviewed Publications

Khalsa AS, Mundis GM, Ledesma JB, Hosseini P, Bruffey JD, Nguyen S, Akbarnia BA, Eastlack RK: Radiographic and Surgical Outcomes After Stand-Alone Lateral Lumbar Interbody Fusion, *Shafa Orthopedic J*, 5 (3); e81419, August 2018

Verma K, Slattery C, Duah H, Yankey KP, **Mundis G,** Boachie-Adjei O: Comprehensive Assessment of Outcomes from Patients with Severe Early-onset Scoliosis Treated with a Vertebral Column Resection: Results from an SRS Global Outreach Site (FOCOS) in Ghana, *J Pediatr Orthop*, 38(7): e393-e398, August 2018

Slattery C, Verma K, Rios F, **Mundis GM Jr**, Boachie-Adjei O, Rinella A: Approaching Spine Research in an Outreach Setting: What Type of Infrastructure is Conducive for Conducting Research? *Clin Spine Surg*, 31(7):306-307, August 2018

Uribe JS, Januszewski J, Wang M, Anand N, Okonkwo DO, Mummaneni PV, **Nguyen S**, Zavatsky J, Than K, Nunley P, Park P, Kanter AS, La Marca F, Fessler R, **Mundis GM**, **Eastlack RK**: Patients with High Pelvic Tilt Achieve the Same Clinical Success as Those with Low Pelvic Tilt After Minimally Invasive Adult Deformity Surgery, *Neurosurgery*, 83(2):270-276, August 2018

Diebo BG, Tishelman JC, Horn S, Poorman GW, Jalai C, Segreto FA, Bortz CA, Gerling MC, Lafage V, White AP, Mok JM, Cha TD, **Eastlack RK**, Radcliff KE, Paulino CB, Passias PG: The Impact of Mental Health on Patient-Reported Outcomes in Cervical Radiculopathy or Myelopathy Surgery, *J Clin Neurosci*, 54:102-108, August 2018

40 Publications 47 Podium Presentations 16 Poster Exhibits

Hosseini P, Grevitt CA, Nnadi C, Repko M, Crandall DG, Aydinli U, Rehak L, Zabka M, Seme S, **Akbarnia BA**: Preservation of Spine Motion in The Surgical Treatment of Adolescent Idiopathic Scoliosis Using an Innovation Apical Fusion Technique: A 2-Year Follow-Up Pilot Study. *Int J Spine Surg.* 2018 Aug 31;12(4):441-452



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Protopsaltis T, Terran J, Soroceanu A, Moses MJ, Bronsard N, Smith J, Klineberg E, **Mundis G**, Kim HJ, Hostin R, Hart R, Shaffrey C, Bess S, Ames C, Schwab F, Lafage V, ISSG: T1 Slope Minus Cervical Lordosis (TS-CL), The Cervical Answer to PI-LL, Defines Cervical Sagittal Deformity in Patients Undergoing Thoracolumbar Osteotomy, *Int J Spine Surg*, 12(3):362-370, August 2018

Raad M, Jain A, Neuman BJ, Hassanzadeh H, Gupta MC, Burton DC, **Mundis GM, Jr.**, Lafage V, Klineberg EO, Hostin RA, Ames CP, Bess S, Sciubba DM, Kebaish KM, ISSG: Association of patient-reported narcotic use with short- and long-term outcomes after adult spinal deformity surgery: Multicenter study of 425 patients with 2-year follow-up. *Spine (Phila Pa 1976)*, 43(19):1340-1346, October 2018

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Dr. Mundis at podium at 2019 Scoliosi Research Society Meeting

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Dr. Mundis fielding questions during 2019 SRS scientific session in Montreal

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Klyce W, Mitchell S, **Pawelek J**, Skaggs D, Sanders J, Shah S, McCarthy R, Luhmann S, Sturm P, **Akbarnia B**, Sponseller P, GSSG: Current Use in Growth-Friendly Implants: A Ten-Year Update. 12th International Congress on Early Onset Scoliosis, Lisbon, Portugal. November 15-16, 2018 and 2019 American Academic of Orthopaedic Surgeons Annual Meeting. Las Vegas, Nevada. March 12-16, 2019



Li Y, Burke M, Robbins C, Yaszay B, **Akbarnia B**, Andras L, Oetgen M, GSSG: Comparison of Health – Related Quality of Life in Patients with Early Onset Scoliosis Treated with Serial Casting Vs Traditional Growing Rods. 12th International Congress on Early Onset Scoliosis, Lisbon, Portugal. November 15-16, 2018



Helenius I, Oksanen H, **McClung A**, Yazici M, Sponseller P, Emans J, Perez-Grueso F, Thompson GH, Johnston C, Shah S, **Pawelek J**, **Akbarnia B**: Surgical and Health Related Quality of Life Outcomes of Growing Rod Graduates for Severe Versus Moderate Early Onset Scoliosis (Nominated for Best Paper Award). 12th International Congress on Early Onset Scoliosis, Lisbon, Portugal. November 15-16, 2018



Williams B, **McClung A**, Shah SA, Blakemore L, **Pawelek J**, Sponseller PD, Parent S, Emans JB, Sturm P, Yaszay B, **Akbarnia BA**, GSSG: Intraspinal MRI Abnormalities in Early-Onset-Scoliosis – Rates Across A Global Cohort. 2019 Pediatric Orthopedic Society of North America Annual Meeting. Charlotte, North Carolina, May 15-18-2019



Godzik J, Andrada BD, Newcomb A, Lehrman J, **Hlubek R**, **Mundis G**, Uribe J, Kelly B, **Turner J**: Anterior Column Realignment versus Pedicle Subtraction Osteotomy: Biomechanical Comparison of Stability and Rod Strain, *Podium*, The Society of Lateral Access Surgery (SOLAS®) 12th Annual Meeting, Miami, FL, May 16–18, 2019

Eastlack R, Uribe J, Fessler R, Than K, **Tran S**, Chou D, Park P, Fu K, Wang M, Kanter A, Mummaneni P, Okonkwo D, Nunley P, Anand N, **Mundis G**, ISSG: Does ACR Result In Greater Morbidity Than LLIF Alone When Treating Adult Spinal Deformity? *Podium*, The Society of Lateral Access Surgery (SOLAS®) 12th Annual Meeting, Miami, FL, May 16–18, 2019

Eastlack R, Chou D, Uribe J, Fessler R, Than K, **Tran S**, Park P, Fu K, Wang M, Kanter A, Mummaneni P, Okonkwo D, Nunley P, Anand N, **Mundis G**, ISSG: Treatment of Adult Scoliosis Fractional Curve with Minimally Invasive Surgery: Anterior Versus Posterior Approach? *Podium*, The Society of Lateral Access Surgery (SOLAS®) 12th Annual Meeting, Miami, FL, May 16–18, 2019

Park P, Mummaneni P, Than K, Nunley P, **Eastlack R**, Uribe J, Wang M, **Tran S**, Fessler R, Okonkwo D, Anand N, Chou D, Fu K, **Mundis G**, ISSG: Choosing Minimally Invasive Vs. Open Surgery in the Treatment of Adult Spinal Deformity (ASD): Analysis of a Prospective, Non-Randomized Multi-Center Study, *Podium*, The Society of Lateral Access Surgery (SOLAS®) 12th Annual Meeting, Miami, FL, May 16–18, 2019

Stekas N, Protopsaltis TS, Ayres EW, **Mundis GM**, Smith JS, Hart RA, Hamilton DK, Klineberg EO, Sciubba DM, Bess S, Shaffrey CI, Schwab FJ, Lafage V, Ames CP, ISSG: Towards a Cervical Deformityspecific Outcome Instrument: Use of the Patient-generated Index to Capture the Disability of Cervical Deformity, *Podium 25*, 26th International Meeting on Advanced Spine Techniques (IMAST), Amsterdam, the Netherlands, July 17–20, 2019

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Record N, Eastlack RK, Tran S, Thibaudeau DJ, Carnelian A, Brady KC, **Akbarnia BA, Mundis GM**, Intraoperative Neuromonitoring for Lateral Lumbar Interbody Fusion: An Intraoperative Protocol to Avoid Postoperative Neurologic Deficit, *Podium 66*, 26th International Meeting on Advanced Spine Techniques (IMAST), Amsterdam, the Netherlands, July 17–20, 2019

Capoor M, Ruzicka F, James G, Machakova T, Jancalek R, Ahmed F, Alamin T, Anand N, Bhatia NN, **Eastlack RK**, Garfin SR, Gokaslan ZL, Kuo CC, Mavromattis K, Raz A, Sana J, Stewart PS, Wang JC, Whitham TF, Coscia MF, Birkenmaier C, Fischetti VA, Slaby O, *Podium 48*, Propionibacterium Acnes Biofilm in Human Lumbar Discectomy Material Supports the Existence of Low-grade Infection over Sample Contamination, 26th International Meeting on Advanced Spine Techniques (IMAST), Amsterdam, the Netherlands, July 17–20, 2019

Summary of Poster Exhibits

North American Spine Society (NASS) 33rd Annual Meeting, Los Angeles, CA, September 26–29, 2018 **- 5**

Scoliosis Research Society, 53rd Annual Meeting & Course, Bologna, Italy, October 10–13, 2018 **- 1**



Dr. Robert Cho, one of many esteemed faculty members at 2019 SDSF VP Event

53rd Annual Meeting and Course of The Scoliosis Research Society, Bologna, Italy. October 10-13, 2018 – **3*** *Louis A. Goldstein Award Recipient for Best Clinical E-Poster

12th International Congress on Early Onset Scoliosis (ICEOS), Lisbon, Portugal, November 15–16, 2018 - **3**



2019 American Academic of Orthopaedic Surgeons Annual Meeting. Las Vegas, Nevada. March 12-16, 2019 **- 1**

26th International Meeting on Advanced Spine Techniques (IMAST), Amsterdam, the Netherlands, July 17–20, 2019 - **4**

Invited Speakers





UPMC Community Osteopathic Hospital, Orthopedic Grand Rounds, Harrisburg, PA, August 23, 2018 – **Robert K. Eastlack, MD**

Society for Minimally Invasive Spine Surgery (SMISS), Las Vegas, MV, September 6–8, 2018 – **Gregory M. Mundis, Jr., MD, Robert K. Eastlack, MD**

Global Spine Outreach Annual Spine Symposium, Monterrey, Nuevo Leon, Mexico, September 21–22, 2018 - **Gregory M. Mundis, Jr., MD, Behrooz A. Akbarnia, MD**

Scoliosis Research Society, 53rd Annual Meeting, Bologna, Italy, October 10–13, 2018 - **Gregory M. Mundis, Jr., MD**

8th Annual UCSF Techniques in Complex Spine Surgery Course, Las Vegas, NV, November 2–3, 2018 - **Gregory M. Mundis, Jr., MD, Robert K. Eastlack, MD**

4th Annual International Spinal Deformity Symposium (ISDS), New York, NY, November 3–December 1, 2018 - **Gregory M. Mundis, Jr., MD** 2019 Annual San Diego Orthopaedic Society Meeting, San Diego, CA, January 25, 2019 - **Robert K. Eastlack, MD**

San Diego Spine Fellowship Program Open Spine Conference, Scripps Green Hospital Amphitheater, La Jolla, CA, January 28, 2019 - **Robert K. Eastlack, MD**

UCSF Pediatric and Adult Spine Course 2019. Honolulu, Hawaii. February 27-March 1, 2019 - **Behrooz A. Akbarnia, MD**

Specialty Day, Federation of Spine Associations (FOSA), Las Vegas, NV, March 16, 2019 - **Gregory M. Mundis, Jr., MD, Robert K.** Eastlack, MD

NASS: Adult Spinal Deformity: Using Research to Transform Your Practice and Improve Outcomes, Burr Ridge, IL, March 22–23, 2019 -**Gregory M. Mundis, Jr., MD, Robert K. Eastlack, MD**

Congreso Nacional de Ortopedia, Querétaro, Mexico, April 26–28 2019 - **Gregory M. Mundis, Jr., MD**

2019 PUMCH Spine Congress. Beijing, China, May 3-4-2019 - Behrooz A. Akbarnia, MD

The Society of Lateral Access Surgery (SOLAS®) 12th Annual Meeting, Miami, FL, May 16–18, 2019 - **Gregory M. Mundis, Jr., MD, Robert K. Eastlack, MD**

Balgrist University Hospital, Zurich, Switzerland, May 22, 2019 - Behrooz A. Akbarnia, MD

Hospital Infantile Joana De Gasmao (HIJG), Florianopolis, SC, Brazil, June 26, 2019 - **Behrooz A. Akbarnia, MD**

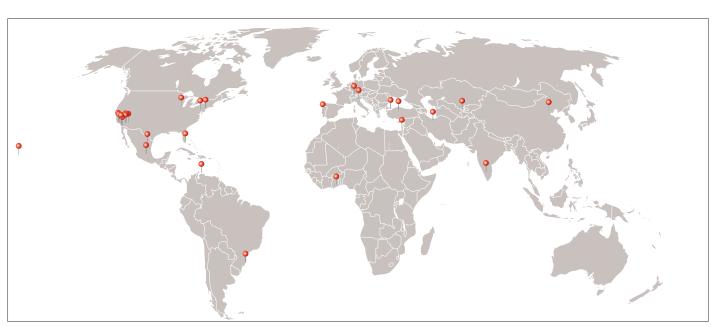
16th Annual State of Spine Surgery Think Tank, Aruba, June 27-29, 2019 - **Gregory M. Mundis, Jr., MD, Robert K. Eastlack, MD**



6th Annual Orthopedic Fellows Research Forum, Scripps Clinic Department of Orthopaedic Surgery and Shiley Center for Orthopaedic Research and Education, La Jolla, CA, July 25, 2019 – **Nicole C. Record, DO, Daniel Thibaudeau, MD, Farrukh Karimov, MD**

2019 San Diego Visiting Professorship Annual Meeting, La Jolla, CA, July 26, 2019 - Gregory M. Mundis, Jr., MD, Edward Nomoto, MD, Robert K. Eastlack, MD, Behrooz A. Akbarnia, MD, Hani Malone, MD, Amrit Khalsa, MD, Rajiv Saigal, MD, PhD, M.Sc., Pooria Salari, MD, Jay T. Turner, MD, Vikas Varma, MD, Nicole C. Record, DO, Daniel Thibaudeau, MD, Farrukh Karimov, MD, Jakub Godzik, MD, Corey Walker, MD





Scientific and Invited Talks 2018-2019



Celebrating success, from left: Peter O. Newton, Behrooz Akbarnia, Nasrin Owsia, Bob Eastlack, Bahar Shahidi, R. Todd Allen, Steven Garfin, Cheryl D. Garfin, Vinko Zlomislic, Allison Zlomislic and Sam Ward.

UCSD ENDOWMENT

The 2018-19 academic cycle was a flurry of activity for SDSF as it worked with UCSD to achieve a fundraising goal to support the first ever Endowed Chair in the Department of Orthopedic Surgery at UCSD. Thanks to a concerted effort between SDSF and UCSD, as of June 30, 2019 this goal was reached and the plans are underway to fill the Endowed Chair position, aptly named "The Behrooz A. Akbarnia and Nasrin A. Owsia, Endowed Chair in Spinal Surgery".

We would like to thank all the supporters listed here for making this Endowed Chair possible. More information and plans for this endowment will follow on our website.



Drs. Garfin and Akbarnia

Major Supporters

Drs. Behrooz and Nasrin Akbarnia San Diego Spine Foundation Department of Orthopedic Surgery; UCSD NuVasive Alphatec Dr. Murray Rosenthal Dr. R. Todd Allen SeaSpine Drs. Sam Ward and Bahar Shahidi Dr. Steven Garfin Dr. Peter Newton Dr. Gregory M. Mundis, Jr. Dr. Oheneba Boachie-Adjei Dr. Robert K. Eastlack Dr. Michael Flippin Mr. Alex Roudi Dr. Hooman Melamed Dr. Amir Moussavian Dr. Payam Moazzaz Dr. Victor Hsu Dr. Michael Hennessey Dr. Halleh Akbarnia Dr. Ladan Akbarnia Mr. Ramin Akbarnia Dr. Matthew Goldstein Dr. Pooria Salari Dr. Jay Turner Dr. Mark Valenete Dr. Nima Kabirian Dr. Choll Kim Dr. Rajiv Saigal Dr. Edmund Choi Ms. Elizabeth Stimson Dr. Vinko Zlomislic Dr. Nosrat Javidan Dr. Eric Varley



Have you ever been told you can't do something?

My name is Jenn and I have Charcot-Marie-Tooth (CMT) Disease, a slowly progressive neuromuscular disorder in which the nerves do not send signals correctly to various parts of the body, and in turn, affects the muscles and nerves in my legs, hands and my spine.

So, as you might expect, my childhood was complex, full of physical challenges including many medical treatments to address my spine and orthopedic issues. I also faced significant bullying for being different at a Magnet School that focused on physical education. My journey began at a time when there was no information on the internet, no social media and no support groups nearby to help me. I have never accepted things as they are, I have always learned to "find a way". First through learning and hard work, and then through educating classmates and others on diversity and acceptance. I also experienced the heartbreak of rejection when physical limitations prevented me from pursuing my love of theater as a profession.

By that time, I was taking college courses. My mom had given me her Dad's old camera and I chose to take a Black and White Photography Darkroom class. Suddenly, I found a new way to express my creativity and artistry! At first, I was concerned that my physical limitations would hinder me from being "good". But, slowly I began to realize that people only saw the photograph and not all the work it took to get that shot. When they saw my photos, they didn't see any limitations or difficulties, they only saw the finished product. It was an amazing thing for me to learn, so, photography became my lifeline and my passion. I started going on photo trips with other photographers. I couldn't always physically keep up or do some of what they did to set up shots, so it forced me to slow down, learn to look at where I am, what is around me and to find my best shot, regardless of where others find it.

On one such trip, I was in Death Valley at the Kelso Dunes and we all headed out to get those perfect empty dune shots. I knew what I wanted to shoot, but slowly realized that no matter how hard I tried, I was NOT going to make it to my planned destination. All at once, I was angry and sad! I sat at the top of the largest dune I had managed to climb, watching the others go ahead, and allowed myself a small pity party. There was no way I would quit, but I was so frustrated! Slowly I took in the view around me.

Since I was already sitting, I laid down in the sand, and took a couple of pictures. I took my time walking back from the dunes back to the car, finding little things to photograph along the way that I had taken for granted in my hurry to obtain that dream shot in my head. I later discovered that some of those pictures were the best I had taken on the trip! I got shots and angles that I hadn't considered because I was too focused on getting to where everyone else was headed. My differences and frustrations had given me the opportunity to find a unique perspective. Mine. That was an important moment for me. With my life experiences and my ongoing acceptance of myself, I realized that I wanted to work harder toward being there for someone else in need. So, I started looking for support groups through the emerging internet websites. I found the Scoliosis Association National Chapter and then looked for a chapter around me. There wasn't any in San Diego, but there was a chapter in Orange County. I contacted the O.C. chapter leaders, Norm and Judith Lipin. They helped me get my chapter organized and my first meeting set up. I didn't know what I was doing, but they helped me tremendously. At this point, I was in my early 20's.

That's how I began meeting people with scoliosis. I reached out to Children's Hospital in San Diego, and its doctors, to expand our group's resources. Our first meeting was held at a library. We often had speakers, usually local physicians. In addition to 4 formal meetings a year, we'd have intermittent fun "get-togethers" and picnics. This also was the genesis for our "Curves are for Cars" fundraiser. My family and I are car fanatics, so I grew up in that culture. It was a natural thing to combine our Scoliosis group and Classic Cars. The event was fun and successful and it grew each year, with a run of 5-6 years when we retired the event. We offered scoliosis screening for those seeking it and all the money raised went to locally based scoliosis-related research. After 8 years, I eventually stepped away from running the Scoliosis Association San Diego Chapter, but I learned a lot about nonprofits, running support meetings and fundraisers but more importantly, I met and supported others like me.

So, where am I at this point in my life? I'm constantly learning to accept myself and adapt. Having Neuromuscular Scoliosis and CMT means constantly adjusting and adapting to the new me. Both of my conditions continue to progress, so I'm being followed by Dr. Mundis (SDSF) and Dr. Konnersman to determine the best courses of action for my future. Some days are harder than others, but I keep going. I try to look for goals and for positives. I'll find something I'd like to do and just go for it. Sometimes it works out, and sometimes it doesn't but at least I know I always try!

This outlook has led to being involved in various adaptive sports and the Challenged Athletes Foundation. My first sport was wheelchair soccer. Not only being on a team but



playing as a valued member was something I had never experienced before! It opened up a whole new world to me having participated in many different adaptive sports including skiing, surfing, hand cycling, sitting volleyball, and wheelchair tennis. I may not be able to ski upright on my feet, but I can ride a ski bike! And I may not stand on a surf board, but I'm riding that wave.....

Finding joy is very important to me. I am constantly trying to learn, accept and adapt to the new me. I will find a way!!

www.sandiegospinefoundation.org/patients/stories/jenn/



Jenn's story is especially dear to San Diego Spine Foundation. You'll find Jenn acknowledged at the end of this Annual Report, as she has been for years, as an important volunteer for our organization. Jenn volunteers her time with SDSF as a photographer and

her personality and laughter are infectious. You can read Jenn's full-length story, including the early years, at www.sandiegospinefoundation.org.





Drs. Mundis and Akbarnia with International visiting fellows, Kenyu Ito, Rodrigo Cardoso and Farrukh Karimov

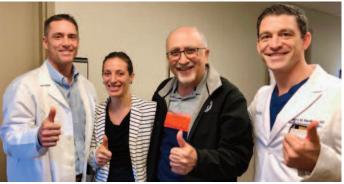
Building Bridges in the Spine Community



Farrukh Karimov presents Dr. Akbarnia a hand painted plate from Uzbekistan



Fellow Ryan Hoel, Past Fellow Amrit Khalsa with GSO Executive Director Melissa Hicks



SDSF Drs. Eastlack, Akbarnia and Mundis welcome Bahar Shahidi as SDSF's Research Consultant



SRS Traveling Fellows at Ganga Hospital in Coimabatore, India



SRS Traveling Fellows in Ankara, Turkey with host Muharrem Yazici



Dr. Hoel at GSO Columbia Mission Trip



Drs. Akbarnia and Cardoso



Drs. Blaskiewicz and Record



Dr. Akbarnia with Prof. Reinhold Ganz. The Reinhold Ganz Lectureship honors Prof. Ganz as an innovator in Orthopedics. Dr. Akbarnia was honored to serve as the 9th Ganz Lecturer in 2019 at Balgrist U. in Zurich, Switzerland











2019 SDSF Fellowship Grant Supporters

NuVasive SeaSpine Erickson Foundation

2019 SDSF Visiting Professorship Meeting

This meeting could not have happened without industry support. Many thanks to Exhibitors listed below, who supported this meeting with tremendous enthusiasm. THANK YOU ALL!

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*DePuy Synthes, NuVasive and Stryker also provided Educational Grants for this event for this event.

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At the time of our 10th Anniversary, the SDSF Board of Directors voted to add Outreach to its mission. Not in the sense of becoming an Outreach organization, but to educate and instill Outreach values in our Fellows during their training with the hope that they too will carry on this important value to give back. It is our honor to feature Jake Godzik, one of our in-folded BNI fellows, who recently took part in a one-week Global Spine Outreach (GSO) mission trip to Monterrey, Mexico, to share his experience and the value of Outreach.

Jake Godzik, MD on Outreach

I have never done any outreach medical work and definitely not anything on an international scale. As such, I wasn't really sure what to expect aside from going in, doing surgeries, providing patient care, and leaving. Suffice to say my experience in Monterrey was powerful beyond words. I was so positively affected and impressed, as my limited expectations were completely transformed.



Of course, as you'd expect, patient care is paramount, but it is pervasive at all levels - from the senior level surgeons to the medical techs. What I didn't expect is a mission focused on education. This focus was again seen at all levels of the care team: Primary surgeon, Fellow, Neurophysiologist, Sales Rep, Scrub Tech, Nurses, etc. And, the education was bidirectional through teaching each other as well as exchanging cultural vantage points. In other words, senior surgeon teaching another senior surgeon, me helping teach another resident, nurses teaching nurses, and so on. In the end, we were all winners, especially those who remain in Monterrey to be the future torch bearers for these patients.

There was so much to take in, especially things that should matter in the U.S. including being cost-conscious. For GSO and for patient care in Monterrey, this is that simply out of necessity, but we should be as well in the U.S. The team

Mexico

there is dedicated to finding alternatives when deficits in service or supplies occur while maintaining a high level of care. Everyone there has skin in the game to ensure these children do well, and it was truly an impressive sight to behold.

At the end of my one-week mission trip, I had been exposed to numerous complex pediatric spine deformity cases and my learning was day in, day out. These are cases that are not seen on a regular basis in the U.S. I had time with many mentors again to help maximize education for me and for all involved. I was an active participant providing care to children receiving life altering procedures they would not normally have access to. That single aspect is so powerful. The gratitude of these kids and their families is tremendous and hard to articulate, but there is such a positive, palpable energy throughout that week that it drives you to want to do more.

In the end, I learned that I truly enjoy Outreach! It was certainly not what I expected, and I hope to be involved again during my career. For mentors such as Drs. Greg Mundis and Burt Yaszay, this isn't just a hobby, it's actually a part of them, its who they are. I cannot overstate this enough, this is absolutely valuable for young surgeons to see and very impactful on forming one's own career path. I strongly recommend other young surgeons to look for mentors who provide technical mentorship, but also morally, this kind of compass in life where dedicated surgeons find the time to do this and even get their families involved. It is uplifting, motivating and more so it's inspiring to witness!

I also learned that I really love working with kids! Who knows what specific path I may take professionally, but this experience will forever be with me and certainly be a formative part of my professional path forward.

A huge and heartful thank you to everyone who made this possible, from the GSO founders to the surgeons in Monterrey, my mentors, our patients, sponsors, and the rest of the volunteers!

GA

Outreach

SUPPORTING THE FOUNDATION



I'm so proud to present you SDSF's latest academic year accomplishments! We've accomplished so much, but thanks to our wonderful Board of Director's hard work through Strategic Planning, we have a new Mission and a new Vision for the future. We hope you'll consider attending our Gala Fundraiser on Friday, February 28th! To purchase tickets, or to donate, simply visit the following webpage:

https://gsosdsf2020.givesmart.com/ This Gala should be a night to remember! Finally, I'd like to thank all our donors and supporters who have believed in our mission over the years. The best is yet to come!

Patrice Kos

Annual Gala - You're Invited



Photos from SDSF-GSO 2016 Gala. From left: Alissa Carnelian, Pat Kostial, Behrooz Akbarnia, Lesley Mundis, Greg Mundis, Jr., Bridget Mortel, Anthony Rinella and Ed Quinn



Ladan Akbarnia wins trip with 52 Card Draw



Leila Sharghi, Parvis Mesbahzadeh and Yassi Mesbahzadeh



To order tickets, or to donate visit: https://gsosdsf2020.givesmart.com/



The SDSF would like to again thank Brian Greer, President of GoImage Media Services for his ongoing contributions including the development of our Annual Reports since 2013 and for our website development and management: <u>www.sandiegospinefoundation.org</u>. Brian, you are one in a million!

Brian Greer



Jennifer Rushall

Thanks to Jennifer Rushall for volunteering her time to photograph our 2019 Annual Visiting Professorship, and for sharing her story in this year's Annual report. Jennifer, thank you for always being there!

About the Cover

Our cover represents the explosion in spine advances over the past few years.

This rendition is based on the remarkable work of Anne Cotrel . Those illustrations were provided as a courtesy of Anne Cotrel and the Cotrel Foundation. Anne graduated from the Ecole Superieure Des Arts Decoratifs – Paris, and also holds a B.A. in Visual Art from Concordia University, Montreal, Quebec.

Anne has lived and worked in Canada, Italy and German speaking Switzerland. Her last personal exhibit took place at the Centre Culturel Zoroastre in Paris, April, 2014. The proceeds from Anne's art sales help to support the Cotrel Foundation.



2020 SAN DIEGO VISITING PROFESSORSHIP



Dominique André Rothenfluh, MD, PhD Consultant Spinal Surgeon Oxford University Hospitals NHS Foundation Trust Senior Research Fellow (Principal Investigator) Nuffield Department of Orthopaedics, Rheumatology and Musculoskeletal Sciences (NDORMS) University of Oxford, Oxford, England

SAVE THE DATE!

FRIDAY, JULY 31, 2020

Hilton La Jolla Torrey Pines Hotel La Jolla, California



Peter O. Newton, MD Chief of Division Orthopedic Surgery Rady Children's Specialist of San Diego Rady Children's Hospital, Medical Practice Foundation San Diego, California Past President (2018-19), Scoliosis Research Society



How can you support the San Diego Spine Foundation?

SDSF has established an Endowment Fund for those who wish to contribute to support the foundation's research, education and outreach efforts for years to come. SDSF also accepts donations for current use to cover operating expenses.

For credit/Debit card donations: https://www.sandiegospinefoundation.org/donate/

Checks can be mailed and payable to:

San Diego Spine Foundation 6190 Cornerstone Ct.; Ste. 212 San Diego, CA 92121 For Credit Card or Check: Please indicate either ENDOWMENT or ANNUAL OPERATIONS in the memo.