

John Schoeneman Vorhies, MD

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Board Certification: Orthopaedic Surgery, American Board of Orthopaedic Surgery	2019
CA State Medical License	10/10/2012-4/30/2020
TX State Medical License	6/1/2016-8/31/2019

Educational Background

Fellow in Pediatric Orthopaedics and Scoliosis, Texas Scottish Rite Hospital for Children, Dallas, TX	8/2016 - 8/2017
Orthopaedic Surgery Resident, Stanford University Hospital, Stanford, CA	7/2011 - 7/2016
M.D., Stanford University School of Medicine, Stanford, CA	8/2007 - 6/2011
B.A., Chemistry (cum laude), Pomona College, Claremont, CA	9/2001 - 5/2005

Professional Appointments

Assistant Professor Department of Orthopaedic Surgery Stanford University Stanford, CA	1/2018 - Present
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Clinical Instructor Department of Orthopaedic Surgery Stanford University Stanford, CA	10/2017 - 12-2017
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Honors and Awards

Recognized for Exceptional Clinical Care By Surgical Specialties Professional Practice Evaluation Committee, LPCH	2019
Elected Member of Gold Humanism Honors Society	2010
Elected member of Phi Beta Kappa Honors Society	2005
Elected member of Sigma Xi Scientific Society	2005
Pomona College Scholar	2005
Mason L. Hill Award for Leadership and Scholarly Achievement in Geology	2005
The Frank Parkhurst Brackett, Jr., and David Ward Brackett Prize in Chemistry	2005
Shulz Research Award in Environmental Studies	2004

Scholarly Publications

Peer-reviewed journal articles

1. Jiang SY, Carlock KD, Campbell ST, **Vorhies JS***, Gardner MJ, Leucht P, Bishop JA. The Impact of Subspecialty Fellows on Orthopaedic Resident Surgical Experience: A Multicenter Study of 51,111 Cases. *J Am Acad Orthop Surg.* 2020 Jul 7. doi: 10.5435/JAAOS-D-20-00233. Epub ahead of print. PMID: 32649442. *Participated in Analysis and interpretation of data, Drafting of the manuscript, Critical revision of the manuscript for important intellectual content, Statistical analysis
2. Gamble JG, **Vorhies JS**. Remodeling of Sagittal Plane Malunion After Pediatric Supracondylar Humerus Fractures. *J Pediatr Orthop.* 2020 Jun 26. doi: 10.1097/BPO.0000000000001623. Epub ahead of print. PMID: 32604347.
3. Tsui BCH, Esfahanian M, Lin C, Policy J, **Vorhies J**. Moving toward patients being pain- and spasm-free after pediatric scoliosis surgery by using bilateral surgically-placed erector spinae

- plane catheters. *Can J Anaesth*. 2020 May;67(5):621-622. doi: 10.1007/s12630-019-01543-0. PubMed PMID: 31776896.
4. Leonard DA, Segovia NA, Kaur J, Bishop L, **Vorhies JS**. Posterior Sternoclavicular Dislocation: Do We Need “Cardiothoracic Backup?” Insights from a National Sample. *J Orthop Trauma*. 2020 Feb;34(2):e67-e71. doi: 10.1097/BOT.0000000000001685.
 5. **Vorhies JS**, Funk S, Elliot M, Riccio A, Ramo B. The Utility of Intra-Operative Arthrogram in the Management of Pediatric Lateral Condyle Fractures of the Humerus. *Orthopedics*. 2020 Jan 1;43(1):30-35. doi: 10.3928/01477447-20191031-01.
 6. **Vorhies JS**, Uzosike OB, Imrie MN, Rinsky L, Hoffinger S. Treatment in a Nonpediatric Hospital Is a Risk Factor for Open Reduction of Pediatric Supracondylar Humerus Fractures: A Population-Based Study. *J Orthop Trauma*. 2019 Sep;33(9):e331-e338. PMID: 31188255
 7. Calanna F, Chen F, Risitano S, **Vorhies J***, Franceschini M, Giori NJ, Indelli PF. Debridement, Antibiotic Pearls, and Retention of the Implant (DAPRI): A Modified Technique for Implant Retention in Total Knee Arthroplasty PJI Treatment. *J Orthop Surg (Hong Kong)*. 2019 Sep-Dec;27(3):2309499019874413. doi:10.1177/2309499019874413. PMID: 31554470.
*Participated in Conception and Design, Critical revision of the manuscript for important intellectual content,
 8. **Vorhies JS**, Lindsay EA, Tareen NG, Kellum RJ, Jo CH, Copley LAB. Severity Adjusted Risk of Long-Term Adverse Sequelae Among Children with Osteomyelitis. *Pediatr Infect Dis J*. 2019 Jan;38(1):26-31. PMID: 29742649
 9. Lichstein PM, Kleimyer JP, Githens M, **Vorhies JS***, Gardner MJ, Bellino M, Bishop J. Does the Watson-Jones or Modified Smith-Petersen Approach Provide Superior Exposure for Femoral Neck Fracture Fixation? *Clin Orthop Relat Res*. 2018 Jul;476(7):1468-1476. PMID: 29698292.
*Participated in Analysis and interpretation of data, Drafting of the manuscript, Critical revision of the manuscript for important intellectual content, Statistical analysis
 10. Paci GM, Tileston KR, **Vorhies JS***, Bishop JA. Pediatric Supracondylar Humerus Fractures: Does After-Hours Treatment Influence Outcomes? *J Orthop Trauma*. 2018 Jun;32(6):e215-e220. PMID: 29432316. *Participated in Analysis and interpretation of data, Drafting of the manuscript, Critical revision of the manuscript for important intellectual content, Statistical analysis
 11. **Vorhies JS**, Hernandez-Boussard, T., Alamin, TS. Treatment of Degenerative Lumbar Spondylolisthesis with Fusion or Decompression Alone Results in Similar Rates of Reoperation at 5 years. *Clinical Spine Surgery*. Clin Spine Surg. 2018 Feb;31(1):E74-E79 PMID: 28671881
 12. **Vorhies JS**, Weaver, MJ Bishop JA. Admission through the Emergency Department is an independent risk factor for Lower Satisfaction with Physician Performance among Orthopaedic Surgery Patients. *Journal of the American Academy of Orthopaedic Surgeons*. 2016 Oct;24(10):735-42 PMID: 27579815
 13. Gaines RR, **Vorhies JS**. Growth mechanisms and geochemistry of carbonate concretions from the Cambrian Wheeler Formation (Utah, USA). 2015. *Sedimentology*. 2016 Volume 63, Issue 3
 14. Rolnick J, **Vorhies JS**. Legal restrictions and complications of abortion: insights from data on complication rates in the United States, *Journal of Public Health Policy*, vol. 33, pp. 348–362, 2012. PMID: 22622483
 15. **Vorhies JS**, Wang Y, Herndon J, Maloney WJ, Huddleston JI. Readmission and length of stay after total hip arthroplasty in a national Medicare sample. *J Arthroplasty*. 2011 Sep;26(6 Suppl):119-23. PMID: 21723700
 16. **Vorhies JS**, Wang Y, Herndon JH, Maloney WJ, Huddleston JI. Decreased Length of Stay After TKA Is Not Associated With Increased Readmission Rates in a National Medicare Sample. *Clin Orthop Relat Res*. 2011 Jul 1. PMID: 21720934
 17. **Vorhies JS**; Gaines RR. Microbial dissolution of clay minerals as a source of iron and silica in marine sediments. 2009. *Nature Geosciences* (2) 221 - 225
 18. Nemunaitis J; Senzer N; Khalil I; Shen Y; Kumar P; Tong A; Kuhn J; Lamont J, Nemunaitis M; Rao D; Zhang Y; Zhou Y; **Vorhies JS***; Maples P; Hill C; Shanahan D. Proof of Concept for Clinical justification of Network Mapping for Personalized Cancer Therapeutics. 2007. *Cancer Gene Therapy*. Aug;14(8):686-95. PMID: 17541424 *Participated in Drafting of the manuscript, Critical revision of the manuscript for important intellectual content
 20. Nemunaitis J; **Vorhies JS***; Pappen B; Senzer N. 10 Year Follow Up of Gene Modified

Adenoviral Based Therapy in 146 Non Small Cell Lung Cancer (NSCLC) Patients. 2007. *Cancer Gene Therapy* Aug;14(8):762-3. PM ID: 17514194 *Participated in Drafting of the manuscript, Critical revision of the manuscript for important intellectual content

Non Peer-Reviewed Journal Articles

1. Rao DD, **Vorhies JS**, Senzer N, Nemunaitis J. siRNA vs. shRNA: similarities and differences. *Adv Drug Deliv Rev.* 2009 Jul 25;61(9):746-59 PMID:19389436
2. **Vorhies JS**, Senzer N, Nemunaitis J. Nucleic acid Aptamers for use in targeting of shRNA based cancer therapy. 2007. *Biologics: Targets & Therapy* 1(4) 367–376. PMID: PMC2721292
3. **Vorhies JS**, Nemunaitis J. Non-viral shRNA delivery vehicles for cancer therapy. 2007. *Expert Opinions in Cancer Therapy*, 2007 Mar;7(3):373-82. PMID: 17338656

Book Chapters, Thesis

1. **Vorhies JS**, Rao DD, , Senzer N, Nemunaitis J. siRNA vs. shRNA for Personalized Cancer Therapy: Mechanisms and Applications. *Gene Based Therapies for Cancer*. Roth JA (Ed.) 2010, 51-62
2. **Vorhies JS**, Nemunaitis J. Synthetic vs. Natural/Biodegradable Polymers for Delivery of shRNA Based Cancer Therapies. 2009. *Macromolecular Drug Delivery, Methods in Molecular Biology, Molecular Medicine and Biotechnology* Vol. 480 Belting M (Ed.) 2009, XIV, 202 p.PMID: 19085121
3. **Vorhies JS**. Arsenic biogeochemistry in the surface waters of the Long Valley Caldera. 2005 *Pomona College Undergraduate Chemistry Thesis*.

Published Abstracts and Presentations

1. Gamble JGG, **Vorhies JS**. Remodeling of Sagittal Plane Mal-Union after Pediatric Supracondylar Fractures. August 2020. 84th Annual Meeting of the Western Orthopaedic Association (accepted for podium presentation)
2. Cahan EM, Segovia NA, Kaur J, Tileston K, Chan CM, **Vorhies JS**. Do Opioid Prescriptions After PSF for AIS cause Opioid Abuse? August 2020. 84th Annual Meeting of the Western Orthopaedic Association (accepted for presentation)
3. Kaur J, Segovia NA, Cahan EM, Tileston K, Chan CM, **Vorhies JS**. Do Peripheral Nerve Blocks Decrease Opioid Usage After ACL Reconstruction? August 2020. 84th Annual Meeting of the Western Orthopaedic Association (accepted for podium presentation)
4. Kwong JW, Tileston K, Kaur J, Segovia NA, Imrie MN, Rinsky LA, **Vorhies JS**. Temporary Flexible Rods for Correction of Severe Pediatric Spinal Deformity. August 2020. 84th Annual Meeting of the Western Orthopaedic Association (accepted for electronic-poster presentation)
5. Kaur J, Koltsov JCB, Cheng I, **Vorhies JS**. Does Navigation Make Spinal Fusion for Adolescent Idiopathic Scoliosis Safer? Insights from 17,400 Cases from a National Database. May 2020. Annual Meeting of the Pediatric Orthopaedic Society of North America (accepted for podium presentation)
6. Kaur J, Koltsov JCB, Cheng I, **Vorhies JS**. Does Navigation Make Spinal Fusion for Adolescent Idiopathic Scoliosis Safer? Insights from 17,400 Cases from a National Database. May 2020. North American Spine Society 35th Annual Meeting (accepted for podium presentation)
7. Montgomery BK, Tileston K, Kaur J, Kim D, Segovia NA, Imrie MN, Policy J, Rinsky LA, **Vorhies JS**. Elongation, Derotation, Flexion Cast on Jackson Table. May 2020. Annual Meeting of the Pediatric Orthopaedic Society of North America (accepted for presentation)
8. Cahan EM, Segovia NA, Kaur J, Chan CM, **Vorhies JS**. Opiate Re-Prescription Following ACL Reconstruction is Associated with Subsequent Opiate Use Disorder. May 2020. Annual Meeting of the Pediatric Orthopaedic Society of North America (accepted for poster)
9. Cahan EM, Segovia NA, Kaur J, Chan CM, **Vorhies JS**. Opiate Prescription Patterns Do Not Predict Subsequent Development of Opioid Use Disorders in Pediatric Patients Undergoing Spinal Fusion for Adolescent Idiopathic Scoliosis. April 2020. 27th International Meeting on Advanced Spine Techniques (accepted for poster presentation)

10. Kaur J, Koltsov JCB, Cheng I, **Vorhies JS**. Does Navigation Make Spinal Fusion for Adolescent Idiopathic Scoliosis Safer? Insights from 17,400 Cases from a National Database. April 2020. 27th International Meeting on Advanced Spine Techniques (accepted for podium presentation)
11. Cahan EM, Segovia NA, Kaur J, Chan CM, **Vorhies JS**. Opiate Re-Prescription Following ACL Reconstruction is Associated with Subsequent Opiate Use Disorder. April 2020. 39th European Pediatric Orthopaedic Society Annual Meeting (accepted for electronic-poster presentation)
12. Kym D, Kaur J, Segovia NA, Mayor ID, Imrie MN, **Vorhies JS**. Has the Evolution of Pelvic Fixation in Neuromuscular Scoliosis Improved Outcomes?. April 2020. 39th European Pediatric Orthopaedic Society Annual Meeting (accepted for electronic-poster presentation)
13. Kaur J, Koltsov JCB, Cheng I, **Vorhies JS**. Does Navigation Make Spinal Fusion for Adolescent Idiopathic Scoliosis Safer? Insights from 17,400 Cases from a National Database. April 2020. 39th European Pediatric Orthopaedic Society Annual Meeting (accepted for podium presentation)
14. Leonard DA, Segovia N, Kaur J, Nathan K, **Vorhies JS**. Does Autism Alter the Risk Profile for Adolescent Idiopathic Scoliosis Surgery?. April 2020. 39th European Pediatric Orthopaedic Society Annual Meeting (accepted for electronic-poster presentation)
15. Montgomery BK, Tileston K, Kaur J, Kim D, Segovia NA, Imrie MN, Policy J, Rinsky LA, **Vorhies JS**. Elongation, Derotation, Flexion Cast on Jackson Table. March 2020. April 2020. 39th European Pediatric Orthopaedic Society Annual Meeting (accepted for electronic-poster presentation)
16. Montgomery BK, Tileston K, Kaur J, Brody C, Imrie MN, Policy J, Rinsky LA, **Vorhies JS**. Elongation, Derotation, Flexion Cast on Jackson Table. March 2020. 13th Annual Meeting of the American Academy of Orthopaedic Surgeons (accepted for video abstract; Recipient of the Pediatric Evidence-Based Technique Award)
17. Leonard DA, Segovia N, Kaur J, Bishop L, **Vorhies JS**. Posterior Sternoclavicular Dislocation: Do We Need “Cardiothoracic Backup?” Insights from a National Sample. March 2020. Annual Meeting of the American Academy of Orthopaedic Surgeons (accepted for podium presentation)
18. Leonard DA, Segovia N, Kaur J, Nathan K, **Vorhies JS**. Does Autism Alter the Risk Profile for Adolescent Idiopathic Scoliosis Surgery?. March 2020. Annual Meeting of the American Academy of Orthopaedic Surgeons (accepted for poster presentation)
19. Montgomery BK, Tileston K, Kaur J, Imrie MN, Policy J, Rinsky LA, **Vorhies JS**. Novel Technique for Early Onset Scoliosis Casting Using Jackson Table. November 2019. 13th International Congress on Early Onset Scoliosis (electronic-poster presentation)
20. Leonard DA, Segovia N, Kaur J, Bishop L, **Vorhies JS**. Posterior Sternoclavicular Dislocation: Do We Need “Cardiothoracic Backup?” Insights from a National Sample. September 2019. Annual Meeting of the Orthopaedic Trauma Association (podium presentation)
21. Montgomery BK, Tileston K, Kaur J, Imrie MN, Policy J, Rinsky LA, **Vorhies JS**. Novel Technique for Early Onset Scoliosis Casting Using Jackson Table. August 2019. 83rd Annual Meeting of the Western Orthopaedic Association (electronic-poster presentation)
22. Leonard DA, Segovia N, Kaur J, Nathan K, **Vorhies JS**. Does Autism Alter the Risk Profile for Adolescent Idiopathic Scoliosis Surgery?. August 2019. 83rd Annual Meeting of the Western Orthopaedic Association (rapid fire presentation)
23. **Vorhies JS**, Hall KE, Kaur J, Imrie MN, Rinsky LA. Characteristics and Outcomes in Post Sternotomy/Thoracotomy Scoliosis Undergoing Fusion. August 2019. 83rd Annual Meeting of the Western Orthopaedic Association (electronic-poster presentation)
24. Leonard DA, Segovia N, Kaur J, Bishop L, **Vorhies JS**. Posterior Sternoclavicular Dislocation: Do We Need “Cardiothoracic Backup?” Insights from a National Sample. August 2019. 83rd Annual Meeting of the Western Orthopaedic Association (poster presentation)
25. Montgomery BK, Tileston K, Kaur J, Imrie MN, Policy J, Rinsky LA, **Vorhies JS**. Novel Technique for Early Onset Scoliosis Casting Using Jackson Table. July 2019. 26th Annual International Meeting on Advanced Spine Techniques (podium presentation)

26. **Vorhies JS**, Tileston K, Nguyen V, Rinsky LA. Intra-Operative Neuromonitoring for pediatric deformity, a 12 year experience from a single institution. October 2018. Annual Meeting of the Scoliosis Research Society of North America (oral presentation)
27. **Vorhies JS**, Karol LA, Herring, JA. Efficacy of Bracing for Main-lumbar vs Main-thoracic curves in patients with Adolescent idiopathic Scoliosis at Risser 0. March 2018. Annual Meeting of the American Academy of Orthopaedic Surgery (oral presentation)
28. **Vorhies JS**, Funk S, Wimberly RL, Ramo BR. The Utility of Intra-Operative Arthrogram in the Management of Pediatric Lateral Condyle Fractures of the Humerus. 2017. Orthopaedic Trauma Association Annual Meeting (oral presentation)
29. **Vorhies JS**, Karol LA, Herring, JA. Efficacy of Bracing for Main-lumbar vs Main-thoracic curves in patients with Adolescent idiopathic Scoliosis at Risser 0. 2017. Annual Meeting of the Scoliosis Research Society of North America (oral presentation)
30. **Vorhies JS**, Lindsay E, Jones M, Thornton L, Copley LA. Functional Outcome after Pediatric Osteomyelitis Treated with a Multidisciplinary Evidence-Based Clinical Practice Guideline: 2 Year Follow-up. 2017. Annual Meeting of the Pediatric Orthopaedic Society of North America (oral presentation)
31. Paci G, Tileston K, **Vorhies JS**, Bishop J. Pediatric Supracondylar Humerus Fractures: Does After-hours Treatment Influence Outcomes? 2016. Orthopaedic Trauma Association Annual Meeting (oral presentation)
32. **Vorhies JS**, Imrie M, Rinsky L, Hoffinger S Surgical Management of Pediatric Supracondylar humerus fractures in the United States: 12 Year National Trends. 2016. Annual Meeting of the Pediatric Orthopaedic Society of North America (oral presentation)
33. **Vorhies JS**, Tileston, K, Krygier, Gamble JGG. Nights and weekends: What to expect on pediatric orthopaedic call at trauma centers. 2015. 79th Annual Meeting of the Western Orthopaedic Association (oral presentation)
34. **Vorhies JS**, Bishop JB. Diagnosis of Fracture is Associated with Lower Satisfaction with Physician Performance among Orthopaedic Surgery Patients. 2015. Annual Meeting of the American Academy of Orthopaedic Surgery(oral presentation)
35. **Vorhies JS**, Bishop JB. Diagnosis of Fracture is Associated with Lower Satisfaction with Physician Performance among Orthopaedic Surgery Patients. 2014. Orthopaedic Trauma Association (oral presentation)
36. **Vorhies JS**, Alamin, TS . Treatment of Degenerative Lumbar Spondylolisthesis with Fusion or Decompression Alone Results in Similar Rates of Reoperation at 5 years. 2014. 78th Annual Meeting of the Western Orthopaedic Association (oral presentation)
37. **Vorhies JS**, Bishop JB. Orthopaedic Patients Admitted Through The Emergency Room Are Less Satisfied With Physician Performance Than Those Admitted Through Other Pathways. 2013. 77th Annual Meeting of the Western Orthopaedic Association (oral presentation)
38. **Vorhies JS**, Krygier J. Complications In The Mangement Of Bisphosphonate Related Femoral Fractures. 2013. 77th Annual Meeting of the Western Orthopaedic Association
39. Huddleston JI, **Vorhies JS**, Wang Y, Herndon, J Maloney, WJ. Readmission and Length of Stay After TKA in a National Medicare Sample 2002-2007. 2011. *57th Annual Meeting of the Orthopaedic Research Society.*
40. **Vorhies JS**, Wang Y, Herndon, J Maloney, WJ, Huddleston JI. Readmission and Length of Stay After Total Hip Arthroplasty in a National Medicare Sample. 2011. *57th Annual Meeting of the Orthopaedic Research Society.*
41. **Vorhies JS**, Slikker W, Saddic L, Pearl J, Kaburu LM, Rasori P, Miller NG, Mugambi, KK. Addressing The Social and Economic Impact of HIV/AIDS Through Microlending in Rural Kenya. 2009. *Unite for Sight 6th Annual Global Health Conference.*(oral presentation)
42. Slikker W, **Vorhies JS**, Saddic L, Pearl J, Kaburu LM, Rasori P, Miller NG, Mugambi, KK. The Effects of Microlending on Antiretroviral Treatment Adherence in HIV/AIDS Patients in Rural Kenya. 2009. *Unite for Sight 6th Annual Global Health Conference.*
43. **Vorhies JS**, Nemunaitis J. Target selection and therapeutic delivery in individualized shRNA knockdown therapy for cancer. 2007 *Modern Drug Discovery and Development Summit.* (oral presentation)
44. **Vorhies JS**; Senzer N; Nemunaitis J. Using comparative proteomics as a tool for target selection

- and validation for personalized RNAi therapy. 2007. 15th *International conference on Gene therapy of Cancer Abstracts with programs*. (oral presentation)
45. **Vorhies JS**; Rao D; Kumar P; Senzer N; Nemunaitis J. In silico and in vitro Characterization of Potential Off Target and Safety Issues with Stathmin (STMN1) shRNAs. 2007. 15th *International conference on Gene therapy of Cancer Abstracts with programs*. (oral presentation)
 46. **Vorhies JS**; Pineda L; Andruess M; Sierra MT; Jones S; Rivera R. Impact of Locally Produced Colloidal Silver Impregnated Ceramic Water Filters in an Urban Slum of Comayaguela Honduras. 2007. *Stanford Fall Forum on Community Health*. (poster presentation)
 47. **Vorhies JS**; Senzer N; Nemunaitis J. Using comparative proteomics as a tool for target selection and validation for personalized RNAi therapy. American Society of Gene Therapy 10th Annual Meeting. Seattle, WA, May 31 – June 4, 2007. (poster presentation)
 48. Gaines RR, **Vorhies JS**. Evidence for Microbial Respiration of Structural Fe³⁺ from Clay Minerals in an Ancient Diagenetic System: Implications for Authigenic Iron and Silica Products in Mudstones. *American Association of Petroleum Geologists Annual Convention and Exhibition Technical Program 2007*.
 49. **Vorhies JS**; Nemunaitis J. Vectors for the delivery of RNAi based cancer therapeutics. 2006. *International conference on Gene therapy of Cancer Abstracts with Programs*. (oral presentation)
 50. Senzer N; Nemunaitis J; Rao D; Khalil I; Shen Y; Tong A; Maples P; **Vorhies JS**; Shanahan D. Non-random thoughts on the MCMRC Individualized Therapy Project. 2006. 14th *International conference on Gene therapy of Cancer Abstracts with programs*.
 51. Khalil I; Nemunaitis J; Senzer N; Shen Y; Kumar P; Tong A; Kuhn J; Lamont J; Nemunaitis M; Rao D; Zhang Y; Zhou Y; **Vorhies JS**; Maples P; Hill C; Shanahan D. Inferring causal regulatory networks for personalized cancer therapeutics. 2006. *International conference on Gene therapy of Cancer Abstracts with Programs*.
 52. **Vorhies JS**, Gaines RR. Carbonate concretions from the Wheeler Formation preserve evidence suggesting microbial reduction of structural Fe(III) from clay minerals in Cambrian sediments. 2005. *Geological Society of America Abstracts with Programs*. (oral presentation)
 53. **Vorhies JS**; Gaines Robert R. Growth mechanisms for carbonate concretions of the Wheeler Formation House Range, Utah: Implications for pore water Biogeochemistry. 2005. *Geological Society of America Abstracts with Programs, Cordilleran Section*. (poster presentation)
 54. **Vorhies JS**. Arsenic Biogeochemistry in the Long Valley Caldera. 2004. *Pomona College Summer Research Abstracts*. (poster presentation)

Grants

Completed

1. POSNA Micro-grant: "Can Commitment Contracts and Financial Incentives Improve Brace Compliance in the Treatment of Clubfoot?" (Principal Investigator) \$1,000.00 Award. June 1, 2018-May 31, 2019

Ongoing

1. POSNA Zimmer Biomet Spine Research Grant: "Erector spinae plane catheters and clinical outcomes after spinal fusion" \$30,000.00 Award. February 1, 2020-July 31, 2022
2. Scoliosis Research Society: "Leveraging Embedded Haptic Sensor Technology for Force Vector Mapping in Orthoses for Adolescent Idiopathic Scoliosis" (Co-Investigator) \$50,000.00 Award. October 1, 2020-November 1, 2022.
3. Scoliosis Research Society: "Health Mindset in Postoperative Mobilization after Posterior Spinal Fusion for Adolescent Idiopathic Scoliosis" (Principal Investigator) \$30,000.00 Award. October 1, 2020-November 1, 2022.

Clinical Trials

1. Erector spinae plane catheters and clinical outcomes after spinal fusion, a randomized clinical trial. (Principal Investigator) 8/2020-present

Service as a Grant Reviewer

Pediatric Orthopaedic Society of North America (POSNA) 5/2018 – Present
Scoliosis Research Society (SRS) 8/2019 – Present

Service To Professional Organizations

Membership

Fellow of the American Academy of Orthopaedic Surgeons (AAOS) 9/2020–Present
Candidate Fellow of the Scoliosis Research Society (SRS) 12/2018–Present
American Orthopaedic Association (AOA) Emerging Leaders Program 9/2018 – Present
Pediatric Orthopaedic Society of North America (POSNA) 4/2016 – Present

Committee service

SRS–Research Grants Committee 8/2019 - Present
POSNA-Industry Relations Committee 5/2020 – Present
POSNA–Research Committee 5/2018 – Present
POSNA Evidence –Based Practice Committee 5/2018 – 5/2020

Leadership roles

Team Leader: SRS–Research Grants Committee 8/2019 - Present

Presentations

Pediatric Grand Rounds Community Hospital Monterey “Pediatric Scoliosis. Update” 8/2020
Stanford Dept of Orthopaedic Surgery Grand Rounds “What’s an RVU worth?” 6/2019
Stanford Dept of Orthopaedic Surgery Grand Rounds “Sagittal Balance” 1/2018

Community Service

Member, Board of Directors, Proyecto Villa Nueva, Everson, WA and Tegucugalpa, Honduras 8/2006-Present
Volunteer Surgeon, Operation Rainbow, San Pedro Sula, Honduras 9/2019
Volunteer Surgeon, Operation Rainbow Tegucugalpa, Honduras 9/2018
Orthopaedic Instructor, Stanford International Humanitarian Aid Course 8/2015 -12/2015
Resident Surgeon, Operation Rainbow Guatemala City, Guatemala 7/2014
Student Interviewer, Stanford School of Medicine 12/2008- 5/2011
Intern, World Health Organization Headquarters Geneva, Switzerland 6/2009-7/2009
Research Associate, Village HopeCore International Chogoria, Kenya 6/2008-8/2008
Health Education Instructor, Comayaguela, Honduras 8/2008 -12/2008
Manager, Hope for Honduras Clinic Comayaguela, Honduras 8/2005-7/2007
Ceramic Artist in Residence Jingdezhen, China 9/2005-10/2005
Spanish Interpreter, Texas Scottish Rite Hospital Dallas TX 7/2003 and 7/2004

Trainees

Ryan Seltzer, Med Scholar’s Advisee. “Describing Cannabidiol Use Patterns and Effects on Quality of Life in a Convenience Sample of Children with Cerebral Palsy” 6/2020-9/2020