

Summary of 2023-2024 Research Achievements, Awards and Publications

J. Vernon Luck Sr. MD Orthopaedic Research Center Luskin Orthopaedic Institute for Children

PEER-REVIEWED PUBLICATIONS

1. Wabeh JM, Lama, J.L., Park, S.H., Sangiorgio, S.N., Ebramzadah, E. : Degradation and Fatigue Behavior of 3d Printed Bioresorbable Tracheal Splints. *Journal of Biomedical Materials Research Part-B*. 2024.
2. Wahbeh JM, Hookasian E, Lama J, Alam L, Park SH, Sangiorgio SN, Ebramzadeh E: An Additively Manufactured Model for Preclinical Testing of Cervical Devices. *JOR Spine*. 2024 Mar;7(1):e1285. Epub 2024/01/15.
3. Ho NC, Hollister SJ, Agrawal V, Flanagan CL, Lee C, Wheeler MB, Wang H, Ebramzadeh E, Sangiorgio SN: Evaluation of Topology Optimization Using 3d Printing for Bioresorbable Fusion Cages: A Biomechanical Study in a Porcine Model. *Spine (Phila Pa 1976)*. 2023 Feb 15;48(4):E46-E53. Epub 2022/09/22.
4. McCarty CP, Nazif MA, Sangiorgio SN, Ebramzadeh E, Park SH: Can Severity of Trunnion Damage Be Estimated by Visual Inspection Alone? *Bone Joint Res*. 2023 Mar 1;12(3):155-64. Epub 2023/04/14.
5. Wahbeh JM, Kelley BV, Shokoohi C, Park SH, Devana SK, Ebramzadeh E, Sangiorio SN, Jeffcoat DM: Comparison of a 2.7-Mm and 3.5-Mm Locking Compression Plate for Ulnar Fractures: A Biomechanical Evaluation. *OTA Int*. 2023 Sep;6(3):e278. Epub 2023/07/27.
6. Wahbeh JM, Park SH, Iyer S, Ebramzadeh E, Sangiorgio SN: Observations of Bony Ongrowth and Clinical Fixation in Two Retrieved Disc Replacements. *J Biomed Mater Res B Appl Biomater*. 2023 Sep;111(9):1653-63. Epub 2023/05/16.
7. Bell JA, Mayfield CK, Collon K, Chang S, Gallo MC, Lechtholz-Zey E, Ayad M, Sugiyam O, Tang AH, Park SH, Lieberman JR: In vivo effects of cell seeding technique in an ex vivo regional gene therapy model for bone regeneration. *J Biomed Mater Res A*. 2024 Apr 11. doi: 10.1002/jbm.a.37718.

INVITED COMMENTARIES

1. Ebramzadeh E, Sharpe FE, Sangiorgio SN: The Cost of Reducing Waste in Orthopaedic Surgery: Commentary on an Article by E.L. Tsay Et Al.: "Reuse of Orthopaedic Equipment: Barriers and Opportunities". JBJS Rev. 2024 Mar 1;12(3). Epub 2024/03/11.
2. Ebramzadeh E: Don't Throw the Baby out with the Bathwater: Commentary on an Article by Barbara H. Currier, Mche, Et Al.: "Oxidation in Retrieved, Never-Irradiated Uhmwpe Bearings. What Can We Learn About in Vivo Oxidation?". J Bone Joint Surg Am. 2023 Feb 15;105(4):e14. Epub 2023/02/16.

CONFERENCE ABSTRACTS AND PODIUM PRESENTATIONS

1. Wahbeh, J.M., Lama, J., Hookasian, E., Park, S-H., Ebramzadeh, E., Sangiorgio, S.N.: "3D-Printed Biomimetic Cervical Vertebral Body for Spinal Arthroplasty Testing." Annual Meeting, Orthopaedic Research Society, Dallas, TX, 2023.
2. Wahbeh, J.M., Park, S-H., Ebramzadeh, E., Sangiorgio, S.N.: " Is Bone Ongrowth In Total Disc Replacements Necessary For Clinical Fixation?" Annual Meeting, Orthopaedic Research Society, Dallas, TX, 2023.
3. Sharpe, F.E., Mohammad, S., Wahbeh, J.M., Hookasian, E., Iyer, S.S. Stevanovic, M., ParkS-H, Sangiorgio, S.N., Ebramzadeh, E.: "Alternative K-wire Configuration In The Treatment Of Scaphoid Fractures." Annual Meeting, Orthopaedic Research Society, Dallas, TX, 2023.
4. Wahbeh, J., Hookasian, E., Lama, J., Alam, L., Park, S., Ebramzadeh, E., Sangiorgio, S., "3D-Printed Biomimetic Cervical Vertebral Body for Spinal Arthroplasty Testing." International Society for the Advancement of Spine Surgery, San Francisco, 2023, Podium Presentation
5. Wahbeh, J., Kehoe, S., Lama, J., Park, S., Ebramzadeh, E., Sangiorgio, S., "3D-Printed Biomimetic Cervical Vertebral Body for Spinal Arthroplasty Testing." International Society for the Advancement of Spine Surgery, San Francisco, 2023, Podium Presentation.
6. McCarthy, S.M., Wahl, P., Hall, D.J., Elzemeyer, W., Campbell, P. Sangiorgio, S.N., Ebramzadeh, E., Van Citters, D. Jacobs, J.J., and Pourzal, R., "Wear, Corrosion, and Adverse Tissue Response in 2nd Generation Small-Diameter Metal-on-Metal Total Hip Arthroplasties." Annual Meeting, International Society for Technology in Arthroplasty, New York, NY, 2023.

7. Wahbeh, J. M., Park, S-H., Campbell, P., Ebramzadeh, E., Sangiorgio, S.N., “Sneak Peak at a Comprehensive Retrieval Analysis of 200 Cervical Disc Replacements,’ Annual Meeting, International Society for Technology in Arthroplasty, New York, NY, 2023.
8. Mohammad, S., Iyer, S., Hookasian, E., Wahbeh, J.M., Sangiorgio, S.N., Stevanovich,M., Ebramzadeh, E., Sharpe, F. “Biomechanical Evaluation of Alternative K-Wire Configurations for Unstable Scaphoid Fractures,” Annual Meeting of the American Society for Surgery of the Hand, Toronto, ON, 2023.
9. Coltoff, E.C., Loss, J.G., Dukkipi, Siril T., Wahbeh, J.M., Chastain, K. L., Pelletier, M.H., Wang, T., Brown, P.J., Driscoll, M., Sangiorgio, S.N., Ebramzadeh, E., Myers, K., Walsh, W.R., Cornwall, G.B., Kelly, B., Colbrunn, R., W. “Composite Lumbar Spine Surrogate Biomechanical Variability During Multi-Laboratory Collaborative Testing,” Annual Meeting of the Orthopaedic Research Society, Long Beach, CA, 2024.
10. Coltoff, E.C., Loss, J.G., Dukkipi, Siril T., Wahbeh, J.M., Chastain, K. L., Pelletier, M.H., Wang, T., Brown, P.J., Driscoll, M., Sangiorgio, S.N., Ebramzadeh, E., Myers, K., Walsh, W.R., Cornwall, G.B., Kelly, B., Colbrunn, R., W. “Temporal Variation in Artificial Composite Spinal Surrogates Through Inter-Laboratory Spine Biomechanics Testing,” Annual Meeting of the Orthopaedic Research Society, Long Beach, CA, 2024
11. Sharpe, F., Hookasian, E., Wahbeh, J., Mohammad, S., Iyer, S., Stevanovic, M., Park, S-H, Sangiorgio, S.N., Ebramzadeh, E., “Scaphoid Morphology and Alternate Pin Configuration in the Treatment of Scaphoid Non-union, “ Annual Meeting of the Orthopaedic Research Society, Long Beach, CA, 2024.
12. Wahbeh, J., Hookasian, E., Lama, J., Alam, L., Park, S-H, Ebramzadeh, E., Sangiorgio, S.N., “An Additively Manufactured Model for Preclinical Testing of Cervical Devices,” Annual Meeting of the Orthopaedic Research Society, Long Beach, CA, 2024.
13. Lamb, N., Sangiorgio, S.N., Ebramzadeh, E., Zoghi, M., Ehteshami, J.: “Comparison of The Effect Of Spine Implant Surface Architecture to Quality Of Interfaced Bone,” Annual Meeting of the Orthopaedic Research Society, Long Beach, CA, 2024.

14. Wahbeh, J. M., Park, S-H., Ebramzadeh, E., Sangiorgio, S.N.: “Results From The Largest Retrieval Cohort Of Cervical Disc Replacements,” Annual Meeting of the Orthopaedic Research Society, Long Beach, CA, 2024.
15. Wahbeh, J. M., McGregor, M., Ebramzadeh, E., McLachlin, S., Sangiorgio, S.N.: “Interlaboratory Mechanical Testing Of Novel 3D-printed Cervical Vertebrae,” Annual Meeting of the Orthopaedic Research Society, Long Beach, CA, 2024
16. Lamb, N., Sangiorgio, S.N., Ebramzadeh, E., Zoghi, M., Ehteshami, J.: “Interbody Implant Initial Micromotion as A Function Of Surface Architecture and Simulated Anatomical Spondylolisthesis Conditions,” Annual Meeting of the Orthopaedic Research Society, Long Beach, CA, 2024.
17. Lamb, N., Sangiorgio, S.N., Ebramzadeh, E., Zoghi, M., Ehteshami, J.: “Interbody Implant Initial Micromotion as a Function of Surface Architecture and Simulated Anatomical Spondylolisthesis Conditions,” Annual Meeting of International Society for the Advancement of Spine Surgery,” Miami, FL, 2024.
18. Coltoff, E., Loss, J., Dukkipati, S., Wahbeh, J., Chastain, K., Matthew Pelletier, M., Wang, T., Brown, P., Driscoll, M., Sangiorgio, S.N., Ebramzadeh, E., Meyers, K., Walsh, W., Cornwall, G.B., Kelly, B., Colbrunn, R.: “Biomechanical Variability in Composite Lumbar Spine Surrogates During Multi-Laboratory Collaborative Testing,” Summer Biomechanics, Biomaterials, and Biotransport Conference (SB3), Lake Geneva, Wisconsin, 2024.
19. Lamb, N., Sangiorgio, S.N., Ebramzadeh, E., Zoghi, M., Ehteshami, J.: “Effect of Spine Interbody Fusion Implant Surface Architecture on Fixation,” Annual Meeting of the International Society for Technology in Arthroplasty, Nashville, TN, 2024.
20. Coltoff, E., Loss, J., Dukkipati, S., Wahbeh, J., Chastain, K., Pelletier, M., Wang, T., Brown, P., Driscoll, M., Sangiorgio, S.N., Ebramzadeh, E., Meyers, K., Walsh, W., Cornwall, G.B., Kelly, B., Colbrunn, R.: “Composite Lumbar Spine Surrogate Biomechanical variability During Multi-Laboratory Collaborative Testing,” Annual Meeting of the International Society for Technology in Arthroplasty, Nashville, TN, 2024.
21. Coltoff, E., Loss, J., Dukkipati, S., Wahbeh, J., Chastain, K., Pelletier, M., Wang, T., Brown, P., Driscoll, M., Sangiorgio, S.N., Ebramzadeh, E., Meyers, K., Walsh, W., Cornwall, G.B., Kelly, B., Colbrunn, R.: “Temporal Variation in Artificial Composite Spinal Surrogates Through Inter-Laboratory Spine Biomechanical

- Testing,” Annual Meeting of the International Society for Technology in Arthroplasty, Nashville, TN, 2024
22. Wahbeh, J.M., Park, S-H, Ebramzadeh, E., Sangiorgio, S.N.” Migration of Retrieved Ball-and-Socket Cervical Disc Replacements,” Annual Meeting of the International Society for Technology in Arthroplasty, Nashville, TN, 2024.
 23. Rupert, M., Park, S-H, Sangiorgio, S.N. Ebramzadeh, E.,” Findings from a Large Cohort of Modular Liner Metal-on-Metal Hip Replacements,” Annual Meeting of the International Society for Technology in Arthroplasty, Nashville, TN, 2024.

HONORS AND AWARDS

- Jenna Wahbeh, PhD Candidate: Journal of Orthopaedic Trauma, Article CME Selection, 2023
- Jenna Wahbeh, PhD Candidate: Orthopaedic Research Society, Spine Section Travel Fellowship, 2023
- ORS Section Awards, Spine Section Best Poster, Annual Meeting of the Orthopaedic Research Society, February 2024, Long Beach, CA.

STUDENTS AND SCHOLARS

GRADUATE PhD CANDIDATES

1. Jenna Wahbeh, UCLA
2. Harry Sandstrom, UCLA
3. Nick Lamb, UCLA

GRADUATE MS CANDIDATES

1. Dani Sotelo, UCLA
2. Erika Hookasian, UCLA
3. Melissa Rupert, UCLA
4. Labiba Alam, UCLA

UNDERGRADUATE

1. Annette Park, UCLA
2. Caraline Baker, USC
3. Connor Rice, USC

4. David Ballester, Cal Poly SLO
5. Eric Almendral, USC
6. Neha Kulkarni, UCLA
7. Elizabeth Lopez, Princeton
8. Lisbeth Sanchez, UCLA
9. Harry Sandstrom, UCLA
10. Taber Ball, UCLA
11. Audrey Chang, USC

HIGH SCHOOL

1. Elizabeth Lopez
2. Nathaniel Palencia
3. Melissa Gonzalez