

CURRICULUM VITAE



Jon-Michael E. Caldwell, MD

DATE: August 16, 2021

BIRTHPLACE: Atlanta, Georgia, USA

HOMETOWN: Dunwoody, Georgia

CITIZENSHIP: United States

MEDICAL LICENSES: NPI: 1487071460
Colorado License: DR.0065424 (Exp: 4/30/2023, Unrestricted)
Wyoming License: 13309A (Exp: 6/30/2022, Unrestricted)

EDUCATION:

August 1999 – May 2003	Woodward Academy Atlanta, Georgia
August 2003 – May 2007	Bachelor of Science , Biomedical Engineering High Honors Georgia Institute of Technology Atlanta, Georgia
September 2008 – May 2013	Doctor of Medicine Columbia University College of Physicians and Surgeons New York, New York

POST-DOCTORAL TRAINING:

June 2013 – June 2014	Translational Research in Orthopedics (TRIO) Fellowship Robert Carroll and Jane Chace Carroll Laboratory Center for Orthopedic Research Columbia University Medical Center
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Curriculum Vitae

Jon-Michael E. Caldwell, MD

Page 2

New York, New York
Director: Francis Lee, MD / Charles Jobin, MD

June 2014 – June 2019

Residency in Orthopedic Surgery
New York-Presbyterian Hospital / Columbia University
New York, New York
Director: Charles Jobin, MD / Chairman: William Levine, MD

July 2019 – July 2020

Fellowship in Sports Medicine
Cedars-Sinai Kerlan-Jobe Institute
Los Angeles, California
Director: Michael Banffy, MD / Chairman: Neal S. ElAttrache, MD

COURSES:

2014 Foundation for Orthopedic Trauma Lower Extremity Dissection Course
(Las Vegas, NV)
2014 OTA Resident Comprehensive Fracture Course (Tampa, FL)
2017 Basic Microsurgery (Microsurgery Research and Training Laboratory,
New York, NY)
2018 QUEST Leadership Academy (Columbia University Medical Center,
New York, NY)
2018 Zimmer-Biomet National Resident Course (Chicago, IL)
2020 20th Annual International Sports Medicine Fellows Conference /
Biologics Association Summit (Carlsbad, CA)

RESEARCH POSITIONS:

2016 – Present **Minority Founding Partner / Researcher**
Syntegrity Biomedical, LLC
New York, New York
2011–2012 **Student Research Fellow**
Center for Shoulder, Elbow, and Sports Medicine
Columbia University, New York, NY
Director: William Levine, MD
2004–2007 **Undergraduate Research Assistant**
Neurological Biomaterials and Therapeutics Laboratory
Georgia Institute of Technology, Atlanta, GA
Director: Ravi Bellamkonda, Ph.D.

PREVIOUS EMPLOYMENT:

September 1, 2021 – Present **Orthopedic Surgeon**
Panorama Orthopedics and Spine Center, Inc.
Golden, Colorado

Curriculum Vitae

Jon-Michael E. Caldwell, MD

Page 3

- December 8, 2020 – July 2021 **Locums Tenens Orthopedic Surgeon**
Weatherby Locums / Hot Springs Memorial Hospital
Thermopolis, Wyoming
- February 2012 – May 2013 **Fellow**
Columbia University Technology Ventures
New York, New York
- January 2012 – May 2013 **Teaching Assistant**
Student Success Network
Columbia University, New York, New York
- June 2007 – June 2008 **Medical Assistant**
Sanus Internal Medicine
Atlanta, Georgia
- May 2005 – July 2005 **Medical Examiner, Intern**
Georgia Bureau of Investigation
Atlanta, Georgia

PROFESSIONAL SOCIETIES and ACTIVITIES:

- 2008 American Medical Association
2015 – 2017 OREF Resident Grant Review Committee Member
2014-Present American Academy of Orthopaedic Surgeons (AAOS)
2019 – Present American Orthopedic Society for Sports Medicine (AOSSM)
2020 – Present Article Reviewer, American Journal of Sports Medicine (AJSM)
2020 – Present Article Reviewer, Orthopaedic Journal of Sports Medicine (OJSM)

HONORS AND AWARDS:

- 2007 **Outstanding Leadership Award**
Department of Biomedical Engineering
Georgia Institute of Technology
Atlanta, Georgia
- 2007 **Order of Omega Honor Society**
Georgia Institute of Technology
Atlanta, Georgia
- 2013 **Donald M. Palatucci Prize**
Columbia University College of Physicians and Surgeons
New York, New York
- 2014 **2nd Place Research Presentation**
OREF/ORS Northeast Region Resident Research Symposium
- 2019 **Frank E. Stinchfield, M.D. Award**

RESEARCH SUPPORT/GRANTS:

1. **Caldwell JE**, Schneider D: Baxter Advanced Surgery Investigator Initiated Research Grant. \$7,800. Awarded July 2021, in progress. Evaluation of Fibrin Sealant to Improve Hemostasis in Reverse Total Shoulder Arthroplasty.
2. **Caldwell JE**, Levine W, Lu H: OREF Resident Research Project Grant #17-0057. \$5,000. 2017-2018, completed. Arthroscopic Technique for Implantation of Tissue Engineered Scaffold.
3. **Caldwell JE**, Lee F: OREF Resident Clinical Scientist Training Grant #14-018. \$20,000. 2014-2016, completed. Effect of matrix stiffness on sarcoma growth: the scientific implication of compartments.

BIBLIOGRAPHY:

Peer Reviewed Articles:

1. Y.T. Kim, **Caldwell JE**, R.V. Bellamkonda. "Nanoparticle-mediated local delivery of methylprednisolone after spinal cord injury", Biomaterials. 2009 May; 30(13):2582-90. PMID: 19185913.
2. L.H. Redler, **Caldwell JE**, B.M. Shulz, W.N. Levine. "Management of Articular Cartilage Injuries of the Knee." The Physician in Sportsmedicine. 2012 Feb; 40(1):20-35. PMID: 22508248.
3. **Caldwell JE**, Kim HM, Levine WN. "Radial Nerve Injury Associated with Application of a Hinged Elbow External Fixator: A Report of Two Cases." J Shoulder Elbow Surg. 2013 Mar;22(3). Epub 2013 Jan 23. PMID: 23352546
4. Kim HM, **Caldwell JE**, Buza JA, Fink LA, Ahmad CS, Bigliani LU, Levine WN. "Factors affecting satisfaction and shoulder function in patients with a recurrent rotator cuff tear." J Bone Joint Surg Am. 2014 Jan 15;96(2):106-12. PMID: 24430409.
5. Worthley DL, Churchill M, [..] **Caldwell JE**, et al. "Gremlin 1 identifies a skeletal stem cell with bone, cartilage, and reticular stromal potential." Cell. 2015 Jan 15;160(1-2):269-84. PMID 25594183.
6. Patel N, Nizami S, [..], **Caldwell JE**, et al. "CA-074Me compound inhibits osteoclastogenesis via suppression of the NFATc1 and c-FOS signaling pathways." J Orthop Res. 2015 Oct;33(10):1474-86. PMID 25428830.
7. Vorys GC, Bai H, Chandhanayingyong C, Lee CH, Compton JT, **Caldwell JE**, Gardner TR, Mao JJ, Lee FY. "Optimal internal fixation of anatomically shaped synthetic bone grafts for massive segmental defects of long bones." Clin Biomech. 2015 Dec;30(10):1114-8. PMID 26386637.

8. Makhni M, **Caldwell JE**, Saifi C, Fischer CR, et al. "Tissue Engineering Advances in Spine Surgery." Regen Med. 2016 Mar;11(2):211-22. PMID 26877156.
9. Barnes L, Kim HM, **Caldwell JE**, Buza JA, Ahmad CS, Bigliani LU, Levine WN. "Satisfaction, Shoulder Function, and Repair Integrity after Arthroscopic versus Mini-Open Rotator Cuff Repair." Bone Joint J. 2017 Feb;99-B(2):245-249. PMID 28148668.
10. Laratta J, **Caldwell JE**, Lombardi J, Levine W, Ahmad C. "Evaluation of common elbow pathologies: a focus on physical examination." Phys Sportsmed. 2017 May;45(2):184-190. PMID 28276991.
11. Makhni M, Park P, Jimenez J, Saifi C, **Caldwell JE**, Ha A, Figueroa-Santana B, Lehman RA, Weidenbaum M. "The medicolegal landscape of spine surgery: how do surgeons fare?" Spine J. 2017 Jun 30. pii: S1529-9430(17)30312-1. PMID 28673825.
12. Patel S, **Caldwell JE**, Doty S, Levine W, Rodeo S, Soslowky L, Thomopoulos S, Lu H. "Integrating Soft and Hard Tissues via Interface Tissue Engineering." J Orthop Res. 2017 Nov 17. PMID: 29149506.
13. Bixby E, **Caldwell JE**, Levine WN. "Subscapularis tenotomy vs. lesser tuberosity osteotomy during total shoulder arthroplasty: When less is more." Seminars in Arthroplasty. 2017 Sept; 28(3):109-112. doi: <https://doi.org/10.1053/j.sart.2017.11.002>.
14. Lightsey H, Noback B, **Caldwell JE**, Trofa D, Greisberg J, Vosseller JT. "Online Physical Therapy Protocol Quality, Variability, and Availability in Achilles Tendon Repair." Foot Ankle Spec. 2019 Feb;12(1):16-24. PMID: 29310456.
15. **Caldwell JE**, Lightsey H, Trofa D, Swindell H, Greisberg J, Vosseller JT. "Seasonal Variation of Achilles Tendon Injury." J Am Acad Orthop Surg Glob Res Rev. 2018 Aug; 2(8): e043. PMID: 30631830.
16. Trofa DP, Noback PC, **Caldwell JE**, Miller JC, Greisberg JK, Ahmad CS, Vosseller JT. "Professional Soccer Players' Return to Play and Performance After Operative Repair of Achilles Tendon Rupture." Orthop J Sports Med. 2018 Nov 28;6(11). PMID: 30534574.
17. **Caldwell JE**, Alexander FJ, Ahmad CS. "Weighted-Ball Velocity Enhancement Programs for Baseball Pitchers: A Systematic Review." Orthop J Sports Med. 2019 Feb 12;7(2). PMID: 30800693.
18. **Caldwell JE**, Vosseller JT. "Maximizing Return to Sports After Achilles Tendon Rupture in Athletes." Foot Ankle Clin N Am. 2019 Sep;24(3):439-445. PMID: 31370995.
19. Beschloss A, Mueller J, **Caldwell JE**, Ha AS, Lombardi JL, Ozturk A, Lehman RA, Saifi C. "Comparison of medical comorbidities in Medicare patients treated by orthopaedic surgeons and neurosurgeons throughout the USA." Bone Joint Open. 2020 Jun 12;1(6):257-60. PMID: 33225298.

20. Campbell A, **Caldwell JE**, Yalamanchili D, Sepanek L, Youssefzadeh K, Limpisvasti O, Uquillas C. "Effect of Patient Height and Sex on the Patellar Tendon and Anterior Cruciate Ligament." Orthop J Sports Med. 2021 May 3;9(5): 23259671211003244. PMID: 34017879.
21. **Caldwell JE**, Youssefzadeh K, Limpisvasti O. "A method for calculating the fragility index of continuous outcomes." J Clin Epi. 2021 Aug 136; 20-25. PMID: 33684509.
22. Campbell A, Narvaez M, **Caldwell JE**, Banffy M. "Stay Ipsilateral: An Analysis of Tibial Tunnel Distance Between Cruciate Ligament Reconstruction and Posterior Meniscal Root Repair." Arthrosc Sports Med Rehabil. 2021 May 17. DOI: 10.1016/j.asmr.2021.03.008.

TEXTBOOK CHAPTERS:

1. Cassilly RT, **Caldwell JE**, Levine WN. "Workup of the Patient Presenting with Instability." *Controversies in Shoulder Instability*. 1st ed. Christopher Dodson, et al. Philadelphia: Lippincott, Williams and Wilkins, 2013.
2. **Caldwell JE**, Zhang X, Lu H, Levine WN. "Biological Augmentation of Rotator Cuff Repair." *Elite Techniques in Shoulder Arthroscopy: New Frontiers in Shoulder Preservation*. Editor Kelly, J. ISBN 978-3-319-25103-5. New York: Springer, 5 Dec 2015.
3. **Caldwell JE**, Hickernell T. Section Editor: "Foot and Ankle Injuries." *Orthopedic Emergencies*, 1st edition. Editor: Day, Charles S et al. ISBN 978-3-319-31522-5. New York: Springer International Publishing, 2017.
4. Trofa D, **Caldwell JE**, Li X. "Chapter 126: Concussion and Brain Injury." *DeLee & Drez's Orthopaedic Sports Medicine: Principles and Practice*. Editor: Mark D. Miller, et al. 2017. ISBN 978-0-323-54473-3. Philadelphia: Elsevier
5. Dennis ER, **Caldwell JE**, Levine WN. "Chapter 4: Basic Science of Implants in Sports Medicine." *DeLee & Drez's Orthopaedic Sports Medicine: Principles and Practice*. Editor: Mark D. Miller, et al. 2017. ISBN 978-0-323-54473-3. Philadelphia: Elsevier

PRESENTATIONS and POSTERS:

Scientific Presentations and Posters (National):

1. Y.T. Kim, **Caldwell JE**, and R.V. Bellamkonda. "Local delivery of nanoparticle encapsulated Methylprednisolone significantly protects neurons from injury related death after spinal cord injury." Society for Neuroscience 35th annual meeting, Washington, DC (2005).
2. **Caldwell JE**, R.T. Cassilly, H.A. Bunting, C.S. Ahmad, L.U. Bigliani, W.N. Levine, T.R. Gardner. "Effects of Hormone Therapy on Regional Surface Strain as a Function of Applied Strain in the Macaque Inferior Glenohumeral Ligament." ASME 2012 Summer Bioengineering Conference, Fajardo, Puerto Rico (2012).
3. Kim HM, **Caldwell JE**, Buza J, Fink LA, Ahmad CS, Bigliani LU, Levine WN. "Patient Age and Activity Affect Satisfaction and Shoulder Function in Failed Rotator Cuff Repairs."

- 2013 American Academy of Orthopaedic Surgeons Annual Meeting. 2013 Mar 21; Chicago, IL.
4. Zhang X, **Caldwell JE**, Ilkhani-Pour S, Goldhaber NG, Zhou B, Guo EX, Soslowsky LJ, Levine WN, Lu HH. "In Vivo Evaluation of a Bi-Phasic Nanofiber Scaffold for Integrative Rotator Cuff Repair." Orthopaedic Research Society 2013 Annual Meeting. 2012 Aug; San Antonio, TX.
 5. Zhang X, **Caldwell JE**, Easley JT, Hackett ES, Doty SB, Levine WN, Guo XE, Lu H. "In Vivo Evaluation of a Biomimetic Biphasic Scaffold in Sheep." Oral Presentation. Orthopaedic Research Society 2014 Annual Meeting. 2014 March; New Orleans, LA.
 6. **Caldwell JE**, Compton JT, Lee FY. "An Ex Vivo Osteophilic Nanoparticle System for Sustained Release of Bioactive Substances in Bone Allografts." Podium Presentation. OREF/ORS Northeast Region Resident Research Symposium. 2014 June; New York, NY. **[2nd Place Award]**
 7. Chandhanayinyong C, . . . **Caldwell JE**, Lee FY, et al. Differential osteosarcoma growth in loose areolar, musculofascial, and bone compartments: Importance of microenvironmental stiffness. ISOLS/MSTS 2015 Annual Meeting, 06-10 October 2015. Orlando, FL.
 8. Kang HP, Compton JT, Nizami S, Stamer D, **Caldwell JE**, Soung DY, Back J, Song L. "The Hidden Enemy: MRSA-Osteoblast Interaction and Its Consequences in Tissue Destruction and Recurrence." Podium Presentation. AAOS Annual Meeting. 2016 March; Orlando, FL.
 9. Zhang X, **Caldwell JE**, Goldhaber NH, Akelina Y, Doty SB, Soslowsky LJ, Levine WN and Lu HH (2016). In vivo testing of biphasic scaffold design parameters for integrative tendon repair. Front. Bioeng. Biotechnol. Conference Abstract: 10th World Biomaterials Congress. 17 May - 22 May, 2016; Montréal, Canada.
 10. Saifi C, **Caldwell JE**, Mueller J, Ha A, Petros PD, Lenke LG, Lehman RA. "Medical Comorbidities in Medicare Patients Treated by Neurosurgery and Orthopaedic Spine Surgeons." Podium Presentation. North American Spine Society 31st Annual Meeting. 2016 October; Boston, MA.
 11. **Caldwell JE**, Trofa D, Greisberg J, Vosseller JT. "Achilles Tendon Ruptures in 2018: Where Do We Stand?" Scientific Exhibit. AAOS 2018 Annual Meeting. 2018 March; New Orleans, LA.
 12. Lightsey H, Noback P, **Caldwell JE**, Trofa D, Greisberg J, Vosseller JT. "Online Physical Therapy Protocol Quality, Variability, and Availability in Achilles Tendon Repair." Poster Presentation. AAOS 2018 Annual Meeting. 2018 March; New Orleans, LA.
 13. **Caldwell JE**, Lightsey H, Trofa DP, Swindell H, Greisberg J, Vosseller JT. "Seasonal Variation of Achilles Tendon Injury." e-Poster Presentation. AOFAS 2018 Annual Meeting. 2018 July; Boston, MA.

14. **Caldwell JE**, Youssefzadeh K, Limpisvasti O. “The Fragility of Statistically Significant Results: An Extension of Fragility Index to Continuous Variables.” e-Poster Presentation. ASES 2020 Fellows Symposium. 2020 June; Virtual Meeting / Online.

Instructional Videos

1. **Jon-Michael Caldwell**, Ahmad C. ACL Repair with Internal Brace. VuMedi. <https://www.vumedi.com/video/acl-repair-with-internal-brace>. November 2016.
2. **Jon-Michael Caldwell**, Ahmad C. Physical Examination of the Thrower’s Elbow. VuMedi. <https://www.vumedi.com/video/physical-examination-of-the-throwers-elbow/>

Ongoing Projects:

1. Jon-Michael Caldwell, Frederick J, Levine WN. “Bovine Collage Scaffold for Augmentation of Rotator Cuff Repair: A retrospective cohort study.” *Manuscript submitted for publication*
2. Jon-Michael Caldwell, Youssefzadeh K, Limpisvasti O. “The Fragility of Orthopedic Literature: An Application of Continuous Fragility Index.” *Manuscript in preparation*.

QUALITY INITIATIVES

1. **New York Orthopedic Hospital Service Manager**: designed, created, and maintained database driven software used by residents to manage inpatients and create safe and complete patient handoffs.
2. **New York Orthopedic Hospital Quality Improvement Resident**: 2018-2019

TEAM COVERAGE

1. **Oakland Athletics**, MLB, 2020 (Spring Training / Team Physicals)
2. **Los Angeles Rams**, NFL, 2019-2020 Season
3. **Los Angeles Sparks**, WNBA, 2019 Season
4. **Anaheim Ducks**, NHL, 2019 Season
5. **Los Angeles Galaxy**, MLS, 2019-2020 Season
6. **Santa Monica College**, Football & Training Room, 2019-2020 Season
7. **West LA College**, Training Room, 2019-2020 Season
8. **TeamHEAL**, High School Football, 2019-2020 Season
9. **Rockland Boulders**, Canadian-American Association of Professional Baseball, Men’s Baseball, Pomona, NY, 2017-2018.
10. **Columbia University**, Training Room / Pre-participation clearance. Multiple Sports. 2017-2019
11. **City College of New York**, Training Room / Pre-participation clearance. Multiple sports. 2016-2017.
12. **Mount St. Michael Academy**, High School Football. 2016-2017
13. **North Bergen High School**, High School Football. 2016-2018
14. **Riverdale Country School**, High School Football. 2017
15. **NCAA Tennis Championship**, New York, NY: 2016