

## CURRICULUM VITAE

JONATHON D. BACKUS, M.D.



**DATE:** October 23, 2023

**CITIZENSHIP:** USA

**ADDRESS AND TELEPHONE NUMBERS:**

The Steadman Clinic  
181 W. Meadow Drive  
Suite 400  
Vail, CO 81657  
970-401-8949 Office/ 970-237-5596 Fax

**PRESENT POSITION:**

The Steadman Clinic, Vail, CO

**EDUCATION:**

- 2001-2005 BS in Molecular and Cellular Biology,  
Minor in Chemistry, Cum Laude and Departmental Distinction,  
University of Illinois Urbana – Champaign, IL
- 2004 Biomedical Sciences  
Kings College London, UK
- 2006-2010 Doctorate of Medicine  
Duke University School of Medicine, Durham, NC
- 2010-2015 Residency, Department of Orthopaedic Surgery  
Washington University School of Medicine/  
Barnes-Jewish Hospital, St. Louis, MO
- 2015-2016 The Steadman Clinic Foot and Ankle Fellowship Program, Vail, CO

**ACADEMIC POSITIONS / EMPLOYMENT:**

- 2016-2019 Private Practice  
Cornerstone Orthopaedics & Sports Medicine, P.C.  
Orthopaedic Foot and Ankle Surgeon  
3 Superior Drive, Suite 225  
Superior, CO 80027
- 2019-2023 Assistant Professor, Department of Orthopaedic Surgery  
Washington University School of Medicine, St. Louis, Missouri

2023-Present Private Practice  
The Steadman Clinic  
181 W. Meadow Drive  
Suite 400  
Vail, CO 81657

**NATIONAL, UNIVERSITY, AND HOSPITAL APPOINTMENTS AND COMMITTEES:**

2017-2019 American Orthopaedic Foot and Ankle Society  
Member of the Young Physician Committee

2017-2019 American Orthopaedic Foot and Ankle Society  
Member of Evidence Based Medicine Committee

2019-2023 St. Louis Foot and Ankle Study Group  
President

2019-Present American Orthopaedic Foot and Ankle Society  
Education Committee

2019-2023 Barnes-Jewish Hospital  
One Barnes-Jewish Hospital Plaza  
St. Louis, MO 63110  
Active Status

2019-2023 Barnes-Jewish Hospital  
Washington University Orthopedic Center  
14532 South Outer Forty Drive  
Chesterfield, MO 63017  
Attending Status

2019-2023 Barnes-Jewish Hospital  
Progress West Healthcare Center  
2 Progress Point Parkway  
O'Fallon, MO 63368  
Active Status

2020-2023 Barnes-Jewish West County Hospital  
12634 Olive Boulevard  
St. Louis, MO 63141  
Active Status

2020-2023 BJH Credentialing Committee

2021-2022 BJH Ortho Trauma Physician Sub Group Committee

2022-2023 Washington University Department of Orthopaedic Surgery  
Orthopaedic Resident Clinical Competency Committee

2021-2023 American Orthopaedic Foot and Ankle Society  
Member at Large, Board of Directors

2023-present American Orthopaedic Foot and Ankle Society  
Committee on Outside Collaborations, Chair

**MEDICAL LICENSURE AND BOARD CERTIFICATION:**

2015-present Colorado Department of Regulatory Agencies, #54772

2018-2028 American Board of Orthopaedic Surgery, Certified

2019-Present Missouri Board of Registration for the Healing Arts, #2019009680

2020-2023 Illinois Department of Financial and Professional Regulation, #036156480

**HONORS AND AWARDS:**

2001-2005 Graduated Cum Laude with Departmental Distinction "MeCP2 Promoter  
Activity during *Xenopus Tropicalis* Development"

2001-2005 Edmund James Scholar: University of Illinois Scholar Program

2005 Cancer Research Training Award Fellowship, National Cancer Institute

2013 AOFAS Resident Scholar

2020 AOFAS Traveling Fellow Alternate

2021-2023 Castle Connolly Top Doctor

**EDITORIAL RESPONSIBILITIES:**

2018-Present *Foot & Ankle International*, Reviewer

2018-Present *Foot & Ankle Orthopaedics*, Reviewer

2019-Present *Techniques of Foot & Ankle*, Reviewer

**PROFESSIONAL SOCIETIES AND ORGANIZATIONS:**

American Academy of Orthopaedic Surgeons Member - active

American Orthopaedic Foot and Ankle Society Member - active

U.S. Ski Team Pool Physician – active

### MAJOR INVITED PROFESSORSHIPS AND LECTURESHIPS:

1. McAndrew CM, **Backus JD**, Putnam SM. Ankle Fractures: The good, the bad, and the ugly. Symposium II. Mid-America Orthopaedic Association Annual meeting 2022, San Antonio, TX. April 6-10, 2022.
2. **Backus JD**. Arthroscopy for Ankle Fractures: Symposium 5: Arthroscopy for Arthritis and Fractures: Indications and Techniques. Moderators Fortin PT, Hepple S. American Orthopaedic Foot & Ankle Society 2022 Annual Meeting. Quebec City, Canada. September 14-17, 2022.
3. **Backus JD**. Moderator, Paper Session1: Ankle/Hindfoot Arthritis. American Orthopaedic Foot & Ankle Society 2023 Winter Meeting. Big Sky, MT. January 27, 2023
4. **Backus JD**. Moderator, Paper Session 2A: Total Ankle 1. American Orthopaedic Foot & Ankle Society 2023 Annual Meeting. Louisville, KY. September 22, 2023

### CONSULTING RELATIONSHIPS AND BOARD MEMBERSHIPS:

2021-2023	American Orthopaedic Foot and Ankle Society Board of Directors, Member at Large
2018-2022	Medline Industries UNITE Foot and Ankle Implant Consultant
2020-2022	Marrow Access Technologies Medical Consultant

### RESEARCH SUPPORT (role, title, duration, amount):

#### ACTIVE

##### a. Governmental

##### b. Non-governmental

2019-present	Washington University in St. Louis. Investigated lateral ligament instability, postoperative ankle fracture management, Total ankle outcomes, and long-term outcomes of motion sparing procedures for hallux rigidus. AOFAS Grant, \$20,000 Multi-center grant with the AOFAS and Arthritis Foundation \$200,000/2y.
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#### PAST

2002-2005	University of Illinois, Peter Jones, PhD, Champaign, IL Laboratory Technician Researched epigenetic etiologies of the neurological disorder Rett Syndrome through utilizing molecular genetic and transgenic techniques in Xenopus.
2005-2006	National Cancer Institute, Laboratory of Molecular Cell Biology, Carl Wu, PhD, Bethesda, MD Cancer Research Training Award Fellowship Researched specific epigenetic phenomena related to a histone variant's (H2A.Z) deposition and function in chromatin structure and gene expression. Some abnormalities in this particular phenomenon have been known to cause acute myelogenous and lymphoblastic leukemia.

- 2008-2010 Duke University Medical School, James A Nunley, MD & Steven A Olson, MD, Durham, NC – With Dr. Nunley – investigated operative outcomes of treatment for osteochondral lesion of the talus. -With Dr. Olson, researched acute changes in articular cartilage following trauma through a novel porcine knee model.
- 2010-2012 Washington University in St. Louis, Jeremy McCormick, MD, Jay D Keener, MD, William M Ricci, MD, St. Louis, MO  
 - Started a multi-center prospective clinical outcomes study comparing syndesmosis fixation techniques.  
 - Investigated the effect medical co-morbidities and patient expectations have on outcomes following reverse total shoulder arthroplasty with Dr. Keener.  
 - Studied the effect that a novel radiographic protocol has on operative indications and treatment outcomes for clavicle fractures with Dr. Ricci.
- 2015-2022 The Steadman Philippon Research Institute, Thomas O. Clanton, MD, Vail  
 -Involved in a multi-center project investigating the effect of Syndesmosis fixation on patient outcomes.

**CLINICAL TITLE AND RESPONSIBILITIES:**

- 2019-2023 Assistant Professor, Department of Orthopaedic Surgery  
 Washington University School of Medicine, St. Louis, Missouri

**BIBLIOGRAPHY:**

**SCIENTIFIC PRESENTATIONS – NATIONAL AND INTERNATIONAL**

1. **Backus JD**, Furman B, DeFrate L, Pritchett P, Guilak F, Olson SA. Chondrocyte Viability Following Traumatic Joint Disruption in a Novel Closed Intraarticular Fracture Model of the Porcine Knee. Podium presentation for the 25th Orthopaedic Trauma Association Basic Science Annual Meeting. Oct 7-10, 2009. San Diego, CA.
2. **Backus JD**, Jo MJ, Merriman DJ, McAndrew C, Gardner MJ, Ricci WM. Upright Radiographs of the clavicle: how does patient positioning affect displacement. Podium presentation for the 29th Orthopaedic Trauma Association Annual Meeting. Oct 9-12, 2013. Phoenix, AZ. Nominated for Edwin Bovill “Best Paper” award.
3. **Backus JD**, Clanton TO, Whitlow SR, Williams BT, Dornan GJ, Saroki A, Turnbull TL, LaPrade, RF. Repair of Ankle Syndesmosis: A Biomechanical Analysis of Three Current Repair Techniques. Podium Presentation for the 2016 American Orthopaedic Society of Sports Medicine Annual Meeting. Colorado Springs, CO. July 7-10, 2016.
4. **Backus JD**. “Up Feet, Down Feet, Here Come Clown Feet: Advancements in Foot and Ankle Surgery. Washington University Mini-Medical School Curriculum. October 12, 2021.
5. Obey M, Schafer KA, Matheny LM, McAndrew C, Gardner MJ, Ricci WM, Clanton TO, **Backus JD**. Syndesmotomic Suture Button Fixation Results in Higher Tegner Activity Scale Scores when Compared to Screw Fixation: A Multicenter Investigation. Paper Session 3A: Trauma. Moderators: Eric M. Bluman, MD, PhD, and Stephen J. Pinney, MD. Podium presentation presented at the 2022 American Orthopaedic Foot & Ankle Society Annual Meeting. September 14-17, 2022, Quebec City, Canada.

6. Savage-Elliott, I, Rodriguez, R, Backus, J. Talus. Fractures: Now and Maybe Later? VuMedi. 15 October 2021. <https://www.vumedi.com/video/talus-fractures-now-and-maybe-later/>

#### POSTER PRESENTATIONS:

1. **Backus JD**, Furman BD, DeFrate L, Guilak F, Olson SA. Chondrocyte Viability Following Closed Intraarticular Fracture in a Novel Model of the Porcine Knee. Poster for the 2010 Annual Meeting for the American Academy of Orthopaedic Surgeons. March 10-13, 2010. New Orleans.
2. **Backus JD**, Furman BD, DeFrate L, Guilak F, Olson SA. Acute Response of Chondrocytes to Closed Intraarticular Fracture in a Novel Porcine Knee Model. Poster for the 56th Orthopaedic Research Society Annual Meeting, March 6-9, 2010, New Orleans, LA.
3. **Backus JD**, Jo MJ, Merriman DJ, McAndrew C, Gardner MJ, Ricci WM. Upright Radiographs of the clavicle: how does patient positioning affect displacement? Poster accepted for the Annual Meeting for the American Academy of Orthopaedic Surgeons. March 19-23, 2013. Chicago, IL. Featured in guided trauma poster tours by Drs. Tornetta and Templeman.
4. Schon JM, Williams BT, Venderley MB, Dornan GJ, **Backus JD**, Turnbull TL, LaPrade RF, Clanton TO. CT Analysis of Screw and Suture-Button Fixation for Syndesmosis Repair. Poster at the European Society of Sports Traumatology, Knee Surgery & Arthroscopy (ESSKA) 2016 Biennial Congress. Barcelona, Spain. 2016, May 4-7.
5. Schon JM, Williams BT, Venderley MB, Dornan GJ, **Backus JD**, Turnbull TL, LaPrade RF, Clanton TO. 3-D CT Analysis of Screw and Suture-Button Fixation for Syndesmosis Repair. Poster at the 2016 American Orthopaedic Society of Sports Medicine Annual Meeting. Colorado Springs, CO. July 7-10, 2016.
6. **Backus, JD**. Marchetti D, Slette E. Dahl, K, Turnbull TL, Clanton, TO. The Effect of Suture Caliber and Number of Core Strands on Repair of Acute Achilles Ruptures using a Mini-open Repair: A Biomechanics Study. E-poster 2016. American Orthopaedic Foot and Ankle Society Annual Meeting. Toronto, Canada. July 20-23, 2016.
7. Shlykov M, McCormick JJ, Klein SE, Johnson JE, **Backus J**, Lonergan T: Does the Canadian Orthopaedic Foot and Ankle Society Postoperative End-Stage Ankle Arthritis Classification System Correlate with Pre- and Postoperative PROMIS Scores for Total Ankle Arthroplasty? Poster presentation, American Orthopaedic Foot & Ankle Society 2020 Annual Meeting, San Antonio, TX. September 9-12, 2020.
8. Carney DD, Vyas PS, Hicks J, Johnson, JE, McCormick, JJ, Klein SE, **Backus JD**. Effect of Postoperative Immobilization Time on PROMIS Scores and Clinical Outcomes in Ankle Fracture Patients. Audio Poster presentation, American Orthopaedic Foot & Ankle Society 2021 Annual Meeting, Charlotte, NC. September 22-25, 2021.
9. Cohen, B, Ward P, Carney DD, Elliott I, Fischer B, McCormick JJ, **Backus JD**. Mid-term Follow-Up of Patient Reported Outcomes and Reoperation Rates for Minimal-Resection Total Ankle Arthroplasty. Poster presentation. 2022 AOFAS Annual Meeting, Quebec City, Canada September 14-17, 2022.

10. Matheny LM, Clanton TO, **Backus JD**, Waldrop NE, Briggs KB, Horan MP, Robinson A. Development of the Foot and Ankle Activity Level Scale (FAALS) Using Item Response Theory for Injury Assessment in Clinical Application. American Public Health Association Annual Meeting. Boston, Massachusetts. November 8, 2022.

#### SCIENTIFIC PRESENTATIONS – REGIONAL, LOCAL & STUDY GROUP MEETINGS:

##### PODIUM PRESENTATIONS:

1. **Backus JD**, Viens NA, Nunley JA. Operative Treatment Outcomes for Osteochondral Lesions of the Talus. Podium presentation accepted for the 41st Annual Meeting of the Eastern Orthopaedic Association. October 13-16, 2010. Naples, FL.
2. McAndrew CM, **Backus JD**, Putnam SM. Ankle Fractures: The good, the bad, and the ugly. Symposium II. Mid-America Orthopaedic Association Annual meeting 2022, San Antonio, TX. April 6-10, 2022.

##### Meetings:

Washington University Foot & Ankle Journal Club - quarterly

#### REVIEW ARTICLES AND NON-PEER REVIEWED PUBLICATIONS:

1. Paxton ES, **Backus J**, Keener J, Brophy RH. Shoulder arthroscopy: basic principles of positioning, anesthesia, and portal anatomy. *J Am Acad Orthop Surg*. 2013 Jun; 21(6):332-342.
2. **Backus JD**, McCormick JJ. Tendon Transfers in the Treatment of the Adult Flatfoot. *Foot Ankle Clin*. 2014 Mar; 19(1):29-48.
3. **Backus JD**, Ocel DL. Ankle Arthrodesis for Talar Avascular Necrosis and Arthrodesis Nonunion. *Foot Ankle Clin*. 2019 Mar; 24(1):131-142.
4. **Backus JD** and McCormick JJ. Achilles Tendon Disorders. *American Academy of Orthopaedic Surgeons Resident Curriculum*. Foot and Ankle Section. Chapter 4. Ed: Haddad S and Thordarson D. 2021- Online only.

#### PEER-REVIEWED MANUSCRIPTS:

1. Luk E, Vu ND, Patteson K, Mizuguchi G, Wu WH, Ranjan A, **Backus J**, Sen S, Lewis M, Bai Y, Wu C. Chz1, a nuclear chaperone for histone H2AZ. *Mol Cell*. 2007 Feb; 25(3):357-368.
2. **Backus JD**, Furman BD, Swimmer T, Kent CL, McNulty AL, Defrate LE, Guilak F, Olson SA. Cartilage viability and catabolism in the intact porcine knee following transarticular impact loading with and without articular fracture. *J Orthop Res*. 2011 Apr; 29(4):501-510.
3. **Backus JD**, Viens NA, Nunley JA. Arthroscopic treatment of osteochondral lesions of the talus: microfracture and drilling versus debridement. *J Surg Orthop Adv*. 2012 Winter; 21(4):218-222.
4. **Backus JD**, Merriman DJ, McAndrew CM, Gardner MJ, Ricci WM. Upright versus Supine Radiographs of Clavicle Fractures: Does Positioning Matter? *J Orthop Trauma*. 2014 Nov; 28(11):636-641. [Featured AAOS Headline News 11/5/14].

5. **Backus, J.** In Response: "Upright vs. Supine Radiographs of Clavicle Fractures: Does Positioning Matter?", *J Orthop Trauma*. 2015 Sep; 29(9):e348.
6. Liechti, DJ, **Backus, JD**, Clanton, TO. Joint Salvage Procedures for Failed First Metatarsal Phalangeal Joint Cheilectomy. *Tech. in Foot & Ankle Surgery*, 2016 Jul; 15(3):113-118.
7. Clanton TO, Williams BT, **Backus JD**, Dornan, GJ, Liechti, DJ, Whitlow SR, Saroki AJ, Turnbull TL, LaPrade RF. A Biomechanical Analysis of the Individual Ligament Contributions to Syndesmotic Stability. *Foot Ankle Intl*. 2017 Jan; 38(1):66-75.
8. Schon JM, Williams BT, Venderley MB, Dornan GJ, **Backus JD**, Turnbull TL, LaPrade RF, Clanton TO. A 3-D CT Analysis of Screw and Suture-Button Fixation of the Syndesmosis. *Foot Ankle Intl*. 2017 Feb; 38(2):208-214.
9. Clanton TO, Whitlow SR, Williams BT, Liechti DJ, **Backus JD**, Dornan GJ, Saroki, AJ, Turnbull, LaPrade RF. A Biomechanical Comparison of 3 Current Ankle Syndesmosis Repair Techniques. *Foot Ankle Intl*. 2017 Feb; 38(2):200-207.
10. Schon JM, Mikula JD, **Backus JD**, Venderley MB, Dornan GJ, LaPrade RF, Clanton TO. 3D Model Analysis of Ankle Flexion on Anatomic Reduction of Syndesmotic Injury. *Foot Ankle Intl*. 2017 Apr; 38(4):436-442.
11. **Backus JD**, Marchetti DC, Slette EL, Dahl KD, Turnbull TL, Clanton TO. Effect of Suture Caliber and Number of Core Strands on Repair of Acute Achilles Ruptures: A Biomechanical Study. *Foot Ankle Intl*. 2017 May; 38(5):564-570.
12. Liechti DJ, Moatshe G, **Backus JD**, Marhetti DC, Clanton TO. A Percutaneous Knotless Technique for Acute Achilles Tendon Ruptures. *Arthrosc Tech*. 2018 Feb; 7(2):e171-e178.
13. Shlykov MA, Savage-Elliott I, Lonergan TM, Klein SE, **Backus JD**, Johnson JE, McCormick JJ. Does the Canadian Orthopaedic Foot and Ankle Society Postoperative COFAS End-Stage Ankle Arthritis Classification System Correlate with Pre- and Postoperative PROMIS Scores for Total Ankle Arthroplasty? *Foot Ankle Orthop*. Jan 2022; 7(1):24730114221084635.
14. Schafer KA, Cusworth BM, Kazarian GS, **Backus JD**, Klein SE, Johnson JE, McCormick JJ. Outcomes Following Repeat Ankle Arthroscopy and Microfracture for Osteochondral Lesions of the Talus. *Foot Ankle Spec*. Mar 2022 (online ahead of print)
15. Obey MR, Johnson JE, **Backus JD**. Managing Complications of Foot and Ankle Surgery: Reconstruction of the Progressive Collapsing Foot Deformity. *Foot Ankle Clin*. 2022 Jun;27(2):303-325.
16. Schafer KA, Baldini T, Hamati M, **Backus JD**, Hunt KJ, McCormick JJ. Two Orthogonal Nitinol Staples and Combined Nitinol Staple-Screw Constructs for a First Metatarsophalangeal Joint Arthrodesis: A Biomechanical Cadaver Study. *Foot Ankle Int*. 2022 Nov;43(11):1493-1500.
17. Carney DD, Vyas PS, Hicks J, Johnson JE, McCormick JJ, Klein SE, **Backus JD**. Effects of Postoperative Immobilization Time on PROMIS Scores and Clinical Outcomes in Ankle Fracture Patients. *Foot Ankle Orthop*. 2023 Jan 29;8(1):24730114221151080. Ecollection



## BOOK CHAPTERS:

1. Bogunovic L, **Backus J**, Wright RW. Stress Fractures of the Ankle. *Stress Fractures in Athletes: Diagnosis and Management*. Ed. Kaeding C, Miller T., Springer, 2014; 12:161-169.
2. Waldrup, N, Haytmanek, T, **Backus, J**, Clanton TO. Ankle Sprains, Ankle Instability and Syndesmosis Injuries. *Baxter's The Foot and Ankle in Sports*, 3<sup>rd</sup> Ed. Porter D, Schon L., Elsevier, 2021.
3. Hicks, JJ, Vyas, P, **Backus, J**, Bogunovic, L. Stress Fractures of the Midfoot and Forefoot. *Stress Fracture in Athletes*, 2<sup>nd</sup> Ed. Ed Miller TL, Kaeding CC., Springer, Cham. 2020: Chapter 19:259-278.  
[https://doi.org/10.1007/978-3-030-46919-1\\_19](https://doi.org/10.1007/978-3-030-46919-1_19).
4. Johnson JE, **Backus, JD**, Stivers, JJ: Plantarflexion Opening Wedge Medial Cuneiform Osteotomy. In Easley ME, Wiesel SW (eds.) *Operative Techniques in Foot and Ankle Surgery*. Philadelphia, PA: Wolters Kluwer/Lippincott, Williams & Wilkins; 2020: Section 8, Chapter 40.
5. Waldrup, N, Haymanek, T, **Backus, J**, Clanton TO. "Ankle and Foot Injuries and Other Disorders." *Orthopaedic Knowledge Update®: Sports Medicine 6*. Wolters Kluwer Health, Inc; 2021: Section 3, Chapter 23.
6. Fisher, BM, **Backus JD**. "Ankle Arthroscopy for Ankle Instability." *MRI-Arthroscopy Correlations: A Case-Based Atlas of the Knee, Shoulder, Elbow, Hip and Ankle*. Springer; 2022: Chapter 37.
7. Thome, AP, Backus, JD, McCormick JM "Ankle Fractures and Dislocations." *Mann's Foot and Ankle Surgery: Edition 10*. Ch43. In press.