#### Curriculum Vitae

# AUSTIN V. STONE, MD, PHD

#### **CONTACT INFORMATION**

Suite K401, 740 S. Limestone Dr., Lexington, KY 40536

859.218.3131 (Appointments), 859.218.3065 (Office), Fax 859.323.2412

www.austinstonemd.com

#### **EDUCATION**

## Wake Forest University Graduate School of Arts and Sciences

Winston-Salem, NC; August 2010 – August 2013

Doctor of Philosophy, Molecular Medicine and Translational Sciences

## **University of Cincinnati College of Medicine**

Cincinnati, OH; August 2006 – May 2010

Medical Doctor

## **Wake Forest University**

Winston-Salem, NC; August 2001 – May 2005

Bachelor of Science, Honors in Biology

Areas of Concentration: Protein Biochemistry, Basic Science Research. Minor: Chemistry

## POST-GRADUATE EDUCATION AND TRAINING

# Wake Forest School of Medicine, Department of Orthopaedic Surgery

Winston-Salem, North Carolina (July 2010 – June 2012)

Post-doctoral research fellow: orthopaedic surgery, orthopaedic regenerative medicine, cell and molecular biology

Mentors: Cristin M. Ferguson, MD (basic science, clinical) and Richard F. Loeser, MD (basic science)

## Wake Forest School of Medicine, Department of Orthopaedic Surgery

Winston-Salem, North Carolina (July 2010 – June 2017)

Resident, Physician Scientist Training Program (seven-year pathway)

# Rush University Medical Center, Division of Sports Medicine, Department of Orthopaedic Surgery

Chicago, Illinois (August 2017 – July 2018)

Sports Medicine Fellow

#### **CERTIFICATIONS**

2005: College Reading and Learning Association Tutor Accreditation.

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2005 – present: CITI – Course in the Protection of Human Research Subjects

2006 - present: Health Insurance Portability and Accountability Act (HIPPA)/Occupational

Safety and Health Administration (OSHA) Compliance Certification

2015 – present: Institute for Healthcare Improvement, Quality Improvement Certifications

2017: American Board of Orthopaedic Surgery: Board Eligible

## MEDICAL LICENSURE

Physician License, Division of Professional Regulation, Illinois Department of Financial and Professional Regulation.

Issued: 2017. Status: Active

Physician License, Professional Licensing Agency, Indiana Professional Licensing Agency.

Issued: 2017. Status: Active

Resident Training License, North Carolina Board of Medicine

Issued: 2012. Status: Inactive.

#### PROFESSIONAL AND SOCIETY MEMBERSHIPS:

- 2018 present: Arthroscopy Association of North America (AANA)
- 2017 present: American Orthopaedic Society for Sports Medicine (AOSSM), Candidate Member
- 2016 present: Emerging Leaders Program, American Orthopaedic Association (AOA)
- 2012 present: American Academy of Orthopaedic Surgeons (AAOS), Resident Member
- 2009 2017: Orthopaedic Research Society (ORS), Associate Member
- 2006 2010: American Medical Association (AMA), Student Member
- 2006 2010: American College of Surgeons (ACS), Student Member
- 2004 2005: Beta Beta Biology Honor Society
- 2003 2005: Alpha Epsilon Delta Premedical Honor Society
- 2003 2005: American Chemical Society, Student Member

#### HONORS AND AWARDS

- 2018: The Herodicus Society Traveling Fellowship
- 2016 present: Emerging Leaders Program, American Orthopaedic Association
- 2016: Resident Leadership Forum nominated participant, American Orthopaedic Association, Seattle, WA
- 2016: Finalist, Wake Forest Baptist Health Quality Improvement Showcase, Wake Forest Baptist Health, Winston-Salem, NC
- 2016: Feagin Leadership Experience Invited Participant. Duke University School of Medicine,
   Department of Orthopaedic Surgery, Durham, NC

- 2015: First place, Research Presentation. Wake Forest School of Medicine, Department of Orthopaedic Surgery Resident Research Day, Winston-Salem, NC
- 2015: Feagin Leadership Experience Invited Participant. Duke University School of Medicine, Department of Orthopaedic Surgery, Durham, NC.
- 2015: Geriatrics Principles for Specialists, Resident Travel Award. Wake Forest School of Medicine Department of Geriatrics and the Kate B. Reynolds Foundation, Winston-Salem, NC
- 2014: First Place, Basic Science Research. Wake Forest School of Medicine, Division of Surgical Sciences Resident Research Day, Winston-Salem, NC
- 2014: Who's Who in America. Marquis Who's Who, LLC, New Providence, NJ
- 2012: First Place, Basic Science Research. Wake Forest School of Medicine, Division of Surgical Sciences Resident Research Day, Winston-Salem, NC
- 2012: First place, Basic Science Research. Wake Forest School of Medicine, Department of Orthopaedic Surgery Resident Research Day, Winston-Salem, NC
- 2012: Runner-up, Resident Research Presentation. Orthopaedic Research Society/Orthopaedic Research and Education Foundation Research Atlantic Coast Symposium, Columbia, SC
- 2012: Runner-up, Translational Science Award. Wake Forest University Graduate School of Arts and Sciences. Winston-Salem, NC
- 2011: First place, Resident Research Presentation. Orthopaedic Research Society/Orthopaedic Research and Education Foundation Research Atlantic Coast Symposium, Winston-Salem, NC
- 2011: First place, Resident Research Presentation. North Carolina Orthopaedic Association, Kiawah Island, SC
- 2011: First place, Resident Research Presentation. Clinical Orthopaedic Society. Charleston,
   SC
- 2011: Runner-up, Translational Science Award. Wake Forest University Graduate School of Arts and Sciences, Winston-Salem, NC
- 2010: National Institute of Health (NIH)/American Orthopaedic Society for Sports Medicine (AOSSM) Young Investigator Travel Award, New Orleans, LA.
- 2007: American Medical Association Travel Award, Chicago, IL
- 2007: Ohio Medical Association/American Medical Association Travel Award, Columbus,
   OH
- 2007: Golden Scalpel Award. University of Cincinnati College of Medicine Department of Anatomy, Cincinnati, OH
- 2005: Graduation with Honors in Biology, Department of Biology, Wake Forest University.
- 2005: Wake Forest University Senior Colloquium, Speaker (nominated and selected).

- 2005: Elton C. Cocke Scholarship Award. Wake Forest University Department of Biology, Winston-Salem, NC
- 2005: First Place, Oral Presentation. North Carolina Academy of Sciences, Research Triangle Park, NC
- 2002 2005: Wake Forest University Dean's List. Winston-Salem, NC
- 2002: Graduate, Leadership Development and Training (LEAD) Program. Wake Forest University, Winston-Salem, NC
- 2001: Finalist, National Air and Space Administration (NASA)/Boeing International Space Station Design Competition. Cape Canaveral, FL

#### TEAM COVERAGE EXPERIENCE

- 2018 present: Team Physician, Eastern Kentucky University, Richmond, KY
- 2017 2018: Assistant Team Physician, Chicago White Sox, Chicago, IL. Head Team Physician: Nikhil N. Verma, MD
- 2017 2018: Assistant Team Physician, Chicago Bulls, Chicago, IL. Head Team Physician: Brian J. Cole, MD, MBA
- 2017 2018: Team Physician, Chicago Steel Hockey, Geneva, IL. Head Team Physician: Shane J. Nho, MD
- 2018: Assistant Team Physician, Chicago State University Men's Basketball, Chicago, IL.
   Head Team Physician: Brian J. Cole, MD, MBA
- 2017: Assistant Team Physician, Chicago Fire, Chicago, IL. Head Team Physician: Brian Forsythe, MD
- 2017: Team Physician, Morton West High School Football, Berwyn, IL. Head Team Physician: Shane J. Nho, MD
- 2015 2017: Assistant Team Physician, Wake Forest University Baseball, Winston-Salem,
   NC. Head Team Physician: Michael T. Freehill, MD

# ADMINISTRATIVE SERVICE

- 2018 Present: Reviewer, *BioMed Research International*
- 2018 Present: Reviewer, *PLOS1*
- 2017 present: LinkedIn Advisor, LinkedIn Corporation
- 2017 present: Reviewer, *Sports Health*
- 2017 2018: Orthopaedic Sports Medicine Coordinator, Chicago Steel, Chicago, IL

- 2016 2017: Administrative Chief Resident, Department of Orthopaedic Surgery, Wake Forest School of Medicine, Winston-Salem, NC
- 2015 2017: Departmental Representative, Entrepreneurial House Office Quality
   Improvement Committee, Wake Forest School of Medicine, Winston-Salem, NC
- 2015 2017: Departmental Representative, Resident Quality Improvement Council, Wake Forest School of Medicine, Winston-Salem, NC
- 2015 2017: Representative, Residency Review and Oversight Committee, Wake Forest School of Medicine, Department of Orthopaedic Surgery, Winston-Salem, NC
- 2015 2017: Departmental Co-Representative, Quality Improvement Initiative, Geriatrics
  Principles for Specialist Multidisciplinary Committee, Wake Forest School of Medicine/North
  Carolina Baptist Hospital, Winston-Salem, NC
- 2015: Resident Representative, Wake Forest School of Medicine Review Committee, Accreditation Council for Graduate Medical Education (ACGME)
- 2015 2016: Reviewer, Journal of Orthopaedic Research & Physiotherapy
- 2013 present: Orthopaedic Surgery Resident Mentor for rotating medical students. Wake Forest School of Medicine, Winston-Salem, NC
- 2011 2012, 2015 present: Coordinator, Arthroscopy Wet Skills Lab, Wake Forest School
  of Medicine Department of Orthopaedic Surgery Knee Arthroscopy Lab, Winston-Salem, NC
- 2010 2013: Student Representative/MD Liaison, Molecular Medicine and Translational Sciences Committee, Wake Forest School of Medicine, Winston-Salem, NC
- 2007 2008: Public Relations Chair, American Medical Association/University of Cincinnati College of Medicine Chapter, Cincinnati, OH
- 2007: Ad hoc committee co-chair for American Medical Association/University of Cincinnati College of Medicine 5k Race Fundraiser, Cincinnati, OH
- 2002 2005: Treasurer, Wake Forest University Running Club, Winston-Salem, NC
- 2003 2004: Treasurer, American Chemical Society/Wake Forest University Chapter, Winston-Salem, NC

## LOCAL AND NATIONAL SERVICE

- 2018: Volunteer Faculty, Sports Medicine Arthroscopy Lab, Arthrex MedWest, Chicago, IL
- 2018: Volunteer Faculty, Shoulder and Elbow Arthroscopy Lab, Arthrex MedWest, Chicago,
   IL
- 2017: Volunteer Faculty, Knee Arthroscopy Lab, Arthrex MedWest, Chicago, IL
- 2017: Volunteer Faculty, Rush Department of Orthopaedic Surgery Knee Arthroscopy Lab

- 2011 2017: Research Mentor. Undergraduate Research with Wake Forest University, Winston-Salem, NC
- 2011 2017: Mentor, Medical Student Research Proposal and Project. Wake Forest School of Medicine, Winston-Salem, NC
- 2009 present: Volunteer Advisor, Wake Forest University Alumni Career Assistance Program, Winston-Salem, NC
- 2011 2012: Clinical Volunteer Faculty Facilitator, Medical Student Physical Exam Curriculum. Wake Forest School of Medicine, Winston-Salem, NC
- 2008 2010: Founding member, University of Cincinnati College of Medicine Orthopaedic Surgery Interest Group. Cincinnati, OH
- 2007 2009: Member, University of Cincinnati College of Medicine Surgery Interest Group, Cincinnati, OH.
- 2006 2010: Church Musician Volunteer. Mount Washington Presbyterian Church, Cincinnati, OH
- 2006 2009: Child Education Volunteer. Mount Washington Presbyterian Church, Cincinnati,
   OH
- 2004 2006: Fundraiser, Multiple Sclerosis Bike Tour. North Carolina Chapter, National Multiple Sclerosis Society, Winston-Salem, NC
- 2004 2005: Science Educator, American Chemical Society, Volunteer. Brunson Elementary, Winston-Salem, NC
- 2002 2005: College Tutor (CLRA accredited), Life and Physical Sciences, Wake Forest University, Winston-Salem, NC

#### **GRANT SUPPORT**

#### Active Grant Support

Smith and Nephew, PLC: Shoulder and Hip Repair Division
 Medial Row Management: Assessment of Contact Area and Contact Pressure in Rotator Cuff
 Repair

Co-Principle Investigator: Freehill MT, Stone AV

## Completed Grant Support

 2011: American Orthopaedic Society for Sports Medicine (AOSSM) Young Investigator Grant

Molecular Mechanisms in Meniscus Injury that Contribute to Subsequent Osteoarthritis.

Principle Investigator: **Stone AV** 

Co-Investigators: Ferguson CM (Mentor), Loeser RF, Smith TL

 2011: Orthopaedic Research & Education Foundation (OREF): Resident Clinician Scientist Training Grant.

The Role of HIF-2 $\alpha$  and NF- $\kappa B$  in meniscus degeneration.

Principle Investigator: Stone AV

Co-investigators: Ferguson CM (Mentor), Loeser RF, Smith TL

2011: Wake Forest School of Medicine Medical Student Research Project.
 The Role of HIF-1α and HIF-2α in Meniscus Degeneration in Osteoarthritis.
 Co-Principle Investigators: Pareja R, Stone AV, Ferguson CM.

 2008: Orthopaedic Research & Education Foundation: Resident Research Grant OREF/DePuy #08-029

Is Osteochondritis dissecans a growth arrest of the secondary ossification center?

Principle Investigator: Little KJ

Co-investigator: Wall EJ, Stone AV, Bylski-Austrow DI, Glos D

 2008: University of Cincinnati College of Medicine University Orthopaedic Research & Education Foundation: Faculty Research Grant

Is Osteochondritis dissecans a growth arrest of the secondary ossification center?

Principle Investigator: Wall EJ

Co-investigator: **Stone AV**, Little KJ, Bylski-Austrow DI, Glos D

 2007: Orthopaedic Research & Education Foundation (OREF): Medical Student Summer Orthopaedic Research Fellowship. OREF #07-112

Is Osteochondritis dissecans a growth plate disorder?

Co-Principle Investigators: Stone AV, Wall EJ

Co-Investigators: Little KJ, Bylski-Austrow DI, Glos D

• 2004: Wake Forest University Research Fellowship: Grant Award.

Purification of the NPA Binding Protein in Arabidopsis thaliana

Co-Principle Investigators: Stone AV, Muday GK

2004: Wake Forest University Research Fellowship: Grant Award.
 Localization of the NPA Binding Protein in Arabidopsis thaliana
 Co-Principle Investigators: Stone AV, Muday GK

## **PUBLICATIONS**

### Peer Reviewed Publications

- Stone AV, Ma J, Whitlock PW, Koman LA, Smith TL, Smith BP, Callahan MF. Effects of Botox and Neuronox on muscle force generation in mice. J Orthop Res. 2007 Dec;25(12):1658-64. PubMed PMID: 17600825.
- 2. **Stone AV**, Ma J, Callahan MF, Smith BP, Garrett JP, Smith TL, Koman LA. Dose and volume dependent-response to intramuscular injection of botulinum neurotoxin-A optimizes muscle force decrement in mice. J Orthop Res. 2011 Nov;29(11):1764-70. Epub 2011 Apr 13. PubMed PMID: 21491479.

- 3. Mannava S, Plate JF, **Stone AV**, Smith TL, Smith BP, Koman LA, Tuohy CJ. Recent advances for the management of Raynaud phenomenon using botulinum neurotoxin A. J Hand Surg Am. 2011 Oct;36(10):1708-10. Epub 2011 Sep 8. Review. PubMed PMID: 21903346.
- 4. **Stone AV**, Koman LA, Callahan MF, Eckman DM, Smith BP, Plate JF, Smith TL. The effect of botulinum neurotoxin-A on blood flow in rats: a potential mechanism for treatment of Raynaud phenomenon. J Hand Surg Am. 2012 Apr;37(4):795-802. Epub 2012 Mar 3. PubMed PMID: 22386546.
- 5. **Stone AV.** In Reply. J Hand Surg Am May;37(5):1105.
- 6. Stone AV, Loeser RF, Vanderman KS, Long DL, Clark SC, Ferguson CM. Pro-inflammatory stimulation of meniscus cells increases production of matrix metalloproteinases and additional catabolic factors involved in osteoarthritis pathogenesis. Osteoarthritis Cartilage. 2014 Feb;22(2):264-74. Epub 2013 Dec 4. PubMed PMID: 24315792; PubMed Central PMCID: PMC3967850.
- 7. **Stone AV**, Xu NM, Patterson RW, Koman LA, Smith BP, Li Z. Five-year mortality for patients with end-stage renal disease who undergo upper extremity amputation. J Hand Surg Am. 2015 Apr;40(4):666-72. Epub 2015 Feb 24. PMID: 25721234.
- 8. **Stone AV**, Stubbs AJ. Hip arthroscopy: a patient education and clinical research tool. J Hip Preserv Surg. 2015 Jul;2(2):201. PMID: 27011842
- 9. **Stone AV**, Stubbs AJ. PhysPrac: a custom physiotherapy application. J Hip Preserv Surg (2015) 2 (2): 200 doi:10.1093/jhps/hnv015
- 10. Stone AV, Vanderman KS, Willey JS, Long DL, Register TC, Shively CA, Stehle JR Jr, Loeser RF, Ferguson CM. Osteoarthritic changes in vervet monkey knees correlate with meniscus degradation and increased matrix metalloproteinase and cytokine secretion. Osteoarthritis Cartilage. 2015 May 30. PubMed PMID: 26033163.
- 11. Case JM, Mannava S, Fallin JH, **Stone AV**, Freehill MT. Acute changes in glenohumeral range-of-motion following in-season minor league pitching starts. Phys Sports Med. 2015 Nov;43(4):360-5. PMID: 26095759.
- 12. Mannava S, Howse EA, **Stone AV**, Stubbs AJ. Basic Hip Arthroscopy: Supine Patient Positioning and Dynamic Fluoroscopic Evaluation. Arthrosc Tech. 2015 Aug 24;4(4):e391-6. PMID: 26759783
- 13. Mannava S, Howse EA, Rogers JP, **Stone AV**, Stubbs AJ. Arthroscopic removal of a bullet from the central and peripheral compartments of the hip joint. Arthroscopy Techniques, Volume 5, Issue 2, e217 e221. PMID: 27489755.
- 14. Howse EA, Botros DB, Mannava S, **Stone AV**, Stubbs AJ. Basic Hip Arthroscopy: Anatomic Establishment of Arthroscopic Portals without Fluoroscopic Guidance. Arthrosc Tech. 2016 Mar 14;5(2):e247-50. doi: 10.1016/j.eats.2015.12.003. PMID: 27489756
- 15. **Stone AV**, Stubbs AJ. Book Review: The Cleveland Clinic Way. J Hip Preserv Surg (2015) 2 (4): 438. doi:10.1093/jhps/hnv068

- 16. **Stone AV**, Howse EA, Mannava S, Stubbs AJ. Cyclists have a greater chondromalacia index compared to age matched controls at the time of hip arthroscopy. Arthroscopy. 2016 Oct;32(10):2102-2109. PMID: 27289277
- 17. Marquez-Lara A, Mannava S, **Stone AV**, Howse EA, Stubbs AJ. Arthroscopic Management of Hip Chondral Defects: A Systematic Review of the Literature. Arthroscopy. 2016 Jul;32(7):1435-43 PMID: 27117866.
- Stone AV, Little KJ, Glos DL, Stringer KF, Wall EJ. Repetitive Stresses Generate Osteochondral Lesions in Skeletally Immature Rabbits. Am J Sports Med. 2016 Nov;44(11):2957-2966. PMID: 27460999
- Mannava S, Jinnah AH, Plate JF, Stone AV, Tuohy CJ. Freehill MT. Basic Shoulder Arthroscopy: Beach Chair Patient Positioning. Arthrosc Tech. 2016 Jul 11;5(4):e731-e735. PMID: 27709029
- Jinnah AH, Mannava S, Plate JF, Stone AV, Freehill MT. Basic Shoulder Arthroscopy: Lateral Decubitus Patient Positioning. Arthrosc Tech. 2016 Sep 19;5(5):e1069-e1075. PMID: 27909677
- 21. **Stone AV**, Mannava S, Patel A, Marquez-Lara A, Freehill MT. The use of long-toss throwing by professional pitchers: an epidemiological study. Orthop J Sports Med. 2017 Feb 10;5(2):2325967116686773. PMID: 28255565.
- 22. **Stone AV**, Howse EA, Mannava S, Miller BA, Botros D, Stubbs AJ. Basic Hip Arthroscopy: Diagnostic hip arthroscopy. Arthrosc Tech. 2017 Jun 5;6(3):e699-e704. PMID: 28706820
- 23. Makhni EC, **Stone AV**, Ukwuani GC, Zuke W, Garabekyan T, Mei-Dan O, Nho SJ. A Critical Review: Management and Surgical Options for Articular Defects in the Hip. Clin Sports Med. 2017 Jul;36(3):573-586. PMID: 28577713.
- 24. **Stone AV**, Mannava S, Freehill MT. A Critical Review of Long-Toss Throwing in Baseball. In press: Am J Orthop. January 2017.
- 25. **Stone AV**, Atilla HA. J W Thomas Byrd, Asheesh Bedi, Allston J Stubbs, The Hip: AANA Advanced Arthroscopic Surgical. *J Hip Preserv Surg*. 2017 Aug;4(3):260.
- 26. Marquez-Lara A, Luo TD, **Stone AV**, Sharma A, Freehill MT. Top 50 Cited Journal Articles on Overhead Throwing Athletes: A Bibliographic Analysis. JSESOA. 2017 1(2): 55–62.
- 27. **Stone AV**, Jacobs CA, Luo TD, Meadows MC, Nho SJ, Stubbs AJ, Makhni EC. High degree of variability in reporting of clinical and patient-reported outcomes following hip arthroscopy: A Systematic Review. Am J Sports Med. 2017 Sep 1:363546517724743. PMID: 28922016.
- 28. Teske L, **Stone AV**. Edited by Joseph C. McCarthy, Philip C. Noble and Richard N. Villar, Hip Joint Restoration. J Hip Preserv Surg. 2017. Aug;4(3):261.
- 29. **Stone AV,** Jinnah AH, Wells BJ, Atkinson H, Futrell WM, Miller AN, Emory CL. Nutritional markers may identify patients with greater risk of readmission after geriatric hip

- fractures. **Stone AV**, Jinnah A, Wells BJ, Atkinson H, Miller AN, Futrell WM, Lenoir K, Emory CL. Int Orthop. 2018 Feb;42(2):231-238. PMID: 28988402.
- 30. Haws BE, **Stone AV**, Usoro AO, Marquez-Lara A, Mannava S, **Freehill MT**. Optimal management of physeal elbow injuries in the skeletally immature athlete remains undefined: a systematic review. *J ISAKOS: Joint Dis and Orthop Sports Med*. 2018;3(1):38-45.
- 31. Malloy P, **Stone AV**, Kunze KN, Neal WH, Nho SJ. Symptomatic patients with femoroacetabular impingement have muscular imbalances around the hip and pelvis. Accepted in Revision in *Arthroscopy* November 2017.
- 32. **Stone AV**, Jacobs CA, Nho SJ, Stubbs AJ, Makhni EC. HAGOS Could Be Important in the Evaluation of Patients Undergoing Hip Arthroscopy-Why Ignore It in a Sports Medicine Update When the Scientific Data Suggest Otherwise? Response. Am J Sports Med. 2018 Mar;46(4):NP7-NP8. PMID: 29543516.
- 33. Puzzitiello R, Agarwalla A, **Stone AV**, Forsythe B. Patellar Tendon Excision and Repair for Residual Patella Alta After Prior Failed Patellar Tendon Repair: Surgical Decision Making and Outcome. In press: *Case Reports Orthop*. June 2018.
- 34. Agarwalla A, Puzzitiello R, **Stone AV**, Forsythe B. Tibial tubercle avulsion fracture with multiple concomitant injuries in an adolescent male athlete. In press: *Case Reports Orthop*. July 2018.
- 35. Luo TD, Marquez-Lara A, **Stone AV**, Mannava S, Howse EA, Atilla HA, Stubbs AJ. Diabetic patients undergoing hip arthroscopy more frequently demonstrate femoral head chondromalacia: a case-controlled study. In press: Hip Int: July 2018.
- 36. Basques BA, Waterman BR, Ukwuani G, Beck EC, Neal WH, Friel NA, **Stone AV**, Nho SJ. Preoperative Symptom Duration is Associated with Outcomes Following Hip Arthroscopy. In Press: Am J Sports Med. July 2018

#### Non-Peer Reviewed Publications

- 1. Mannava S, Howse EA, **Stone AV**, Stubbs AJ. 15-year-old female with hip pain. 'Rush Grand Rounds.' Orthopedics Today. September 2015.
- 2. Freehill MT, **Stone AV**. Elbow injuries in the throwing athlete: Location, location, location! Semi-annual newsletter of the International Society of Arthroscopy, Knee Surgery, and Orthopaedic Sports Medicine. January 2016.
- 3. **Stone AV**. Perspective on "Running decreases need intra-articular cytokine and cartilage oligomeric matrix concentrations: a pilot study". Orthopaedics Today. January 2017. http://www.healio.com/orthopedics/biologics/news/online/%7b2eb67f74-81fe-408a-b526-92c969deb166%7d/young-healthy-participants-had-reduction-in-markers-of-inflammation-while-running
- 4. **Stone AV**, Freehill MT. A 14-year-old with shoulder pain. 'Rush Grand Rounds'. Orthopaedics Today. March 2017.

5. **Stone AV,** Nho SJ. A call to action for limiting time spent in the "Butterfly"? American Orthopaedic Society for Sports Medicine: Sports Medicine Update. March 2018.

## Published Multimedia

- Mannava S, Howse EA, Rogers JP, Stone AV, Botros DB, Stubbs AJ. Arthroscopic removal
  of a bullet from the central and peripheral compartments of the hip joint. Multimedia/Video
  accepted at American Academy of Orthopaedic Surgeons (AAOS) 2016 Annual Meeting.
  Orlando, FL. March 2016.
- 2. **Stone AV**, Andersen JS, Miller AN, Emory CL. The Wake Forest Baptist Hospital Hip Fracture Care Experience: Hip Arthroplasty. 2015. Creative Communications, Wake Forest Baptist Hospital.
- 3. **Stone AV**, Andersen JS, Miller AN, Emory CL. The Wake Forest Baptist Hospital Hip Fracture Care Experience: Operative Fixation. 2015. Creative Communications, Wake Forest Baptist Hospital.
- 4. Howse EA, Mannava S, **Stone AV**, Botros D, Stubbs AJ. Two Portal Supine Hip Arthroscopy Minimal Radiation Approach: Set-up, Positioning, Anatomic Portal Placement, Diagnostic Scope. Orthopaedic Video Theater. Annual Meeting of the American Academy of Orthopaedic Surgeons. March 2017.
- 5. Howse EA, Mannava S, **Stone AV**, Botros D, Stubbs AJ. Atypical Hip Impingement: Pre-Operative Imaging, Therapeutic and Surgical Consideration. Orthopaedic Video Theater. Annual Meeting of the American Academy of Orthopaedic Surgeons. March 2017.

#### Thesis Titles:

- Stone AV. A potential biologic role for the meniscus in the development of osteoarthritis. 2015. Wake Forest University Graduate School of Arts and Sciences. Doctoral Dissertation for the Molecular Medicine and Translational Sciences Program. (https://wakespace.lib.wfu.edu/handle/10339/39030)
- 2. **Stone AV**. Strategies for purification of the NPA Binding Protein from Arabidopsis thaliana using an ANPA affinity resin. 2005. Wake Forest University. Undergraduate Honors Thesis for the Department of Biology.

## Books and Book Chapters

- 1. **Stone AV**, Stubbs AJ. Positioning and Distraction Options. *In: Hip Arthroscopy, 3rd ed*. Editor: Byrd JWT. New York: Elsevier. 2012.
- 2. Krishnamoorthy VP, **Stone AV**, Nho SJ. Gluteus maximus transfer for gluteal deficiency. *In: Hip Surgery: Tricks of the Trade*. Editor: Stubbs AJ. India: Thieme. In press.
- 3. **Stone AV**, Bach BR. Pre-operative complications in Anterior Cruciate Ligament surgery. *In: Complications in Orthopaedic Surgery: Sports Medicine*. Editors: Thompson S and Schmitz M. Philadelphia: Elsevier. In press.

#### **ABSTRACTS**

- 1. **Stone AV**, Plunk TJ, Anderson NA, McFarland K, Rodriguez J. National Air and Space Administration (NASA)/Boeing International Space Station Design Competition. Cape Canaveral, Fl. April 2001. **Award winner: Finalist.**
- 2. **Stone AV**, Brady S, Muday GK. Chemical synthesis of an affinity chromatography ligand and purification of an auxin efflux protein. North Carolina Academy of Sciences 2005 Annual Meeting. Research Triangle Park, NC. April 2005. **Award winner: First place, Research Presentation.**
- 3. **Stone AV**, Callahan MF, Ma J, Koman LA, Smith, TL. Botulinum neurotoxin A (BoNT-A): Effects of Botox® and Neuronox® on muscle force generation in mice. FASEB J, 2006; 20(4), A801.
- 4. Ma J, Smith BP, **Stone AV**, Callahan M, Garrett J, Smith TL, Koman LA. Dose-related recovery of muscle function following botulinum toxin A in a murine model. Dev Med Child Neurol 2006; 48(s107):33.
- Stone AV, Glos DL, Stringer KF, Sheppard ZR, Little KJ, Bylski-Austrow DI, Wall EJ.
  Repetitive Stresses Generate Osteochondral Lesions in Immature Animals. Orthopaedic
  Research Society/Orthopaedic Research and Education Foundation Atlantic Coast 2010 Annual
  Research Symposium. Durham, NC. November 2010.
- 6. **Stone AV**, Glos DL, Stringer KF, Sheppard ZR, Little KJ, Wall EJ. Repetitive Stresses Generate Osteochondral Lesions in Immature Animals. Wake Forest School of Medicine 2010 Annual Surgical Sciences Research Day. Winston-Salem, NC. November 2010.
- Stone AV, Loeser, RF, Long DL, Smith TL, Ferguson CM. Differential matrix metalloprotease expression in human osteoarthritic meniscal cells stimulated with inflammatory cytokines. Wake Forest Institute for Regenerative Medicine Research Symposium. Pinehurst, NC, March 2011.
- 8. **Stone AV**, Loeser RF, Long DL, Smith TL, Ferguson CM. Differential matrix metalloprotease expression in human osteoarthritic meniscal cells stimulated with inflammatory cytokines. Graduate Student and Post-Doctoral Research Day, Wake Forest University Graduate School of Arts and Sciences. Winston-Salem, NC. March 2011. **Award winner: Runner-up, Translational Science Award.**
- Stone AV, Loeser RF, Long DL, Ferguson CM. Human osteoarthritic and degenerative
  monkey menisci have differential increases of matrix metalloproteases compared to both
  osteoarthritic chondrocytes and healthy monkey menisci. Wake Forest School of Medicine
  Department of Orthopaedic Surgery 2011 Resident Research Day. Winston-Salem, NC. April
  2011.
- 10. Ma J, **Stone AV**, Smith BP, Callahan M, Garrett J, Smith TL, Koman LA. Dose and volume dependent response to intramuscular injection of botulinum neurotoxin-A optimizes muscle

- force decrement in mice. American Society for Surgery of the Hand 2011 Annual Meeting. Las Vegas, NV. September 2011.
- 11. **Stone AV**, Glos DL, Stringer KF, Sheppard ZR, Little KJ, Wall EJ. Repetitive Stresses Generate Juvenile Osteochondritis Dissecans-Like Changes in Immature Animals. AAOS 2011.
- 12. **Stone AV**, Stringer KF, Glos DL, Sheppard ZR, Little KJ, Wall EJ. Repetitive Physiologic Stresses Create Osteochondral Lesions in Juvenile Rabbits. Trans Orthop Res Soc, #2124, 2011
- 13. Stone AV, Long DL, Loeser RF, Ferguson CM. A potential biological mechanism for meniscus involvement in osteoarthritis. Clinical Orthopaedic Society (COS) Annual Meeting. Charleston, SC. September 2011. Award winner: First place, Resident Research Presentation.
- 14. Plate JF, **Stone AV**, Seyler TM, Marker DR, Akbar M, Mont MA. Accuracy of diagnosing periprosthetic infections by both cultures and frozen sections. Clinical Orthopaedic Society (COS) Annual Meeting, Charleston, SC. September 2011.
- 15. Plate JF, **Stone AV**, Seyler TM, Akbar M, Mont MA. Comparison of dislocation rates in patients with large diameter metal-on-metal and small diameter metal-on-polyethylene bearings in total hip arthroplasty. Clinical Orthopaedic Society (COS) Annual Meeting, Charleston, SC. September 2011.
- 16. **Stone AV**, Plate JF, Gyr BM, Scott AT. Early results following bovine xenograft placement for pediatric Cotton and Evan's osteotomies. Clinical Orthopaedic Society (COS) Annual Meeting, Charleston, SC. September 2011.
- 17. **Stone AV**, Long DL, Loeser RF, Ferguson CM. A potential mechanism for meniscus involvement in degenerative joint disease. North Carolina Orthopaedic Association 2011 Annual Meeting. Kiawah Island, SC. October 2011. **Award winner: First place, Resident Research Presentation**.
- 18. Koman LA, Plate JF, Mannava S, **Stone AV**, Jinnah RH, Smith TL. Addressing the shortage of academic orthopaedic surgeons: Evaluation of an Innovative seven-year physician scientist residency training program. North Carolina Orthopaedic Association 2011 Annual Meeting. Kiawah Island, SC. October 2011.
- 19. Stone AV, Long DL, Loeser RF, Ferguson CM. A potential biological mechanism for meniscus involvement in osteoarthritis. Orthopaedic Research Society/Orthopaedic Research and Education Foundation 2011 Min-Atlantic Regional Resident Research Symposium. Winston-Salem, NC. October 2011. Award winner: First place, Resident Research Presentation.
- 20. Stone AV, Long DL, Loeser RF, Ferguson CM. Human osteoarthritic and degenerative monkey menisci have differential increases of matrix metalloproteases compared to both osteoarthritic chondrocytes and healthy monkey menisci. Eastern Orthopaedic Association (EOA) 2011 Annual Meeting. Williamsburg, VA. October 2011.

- 21. Koman LA, Plate JF, Mannava S, Stone AV, Jinnah RH, Smith TL. Addressing the shortage of academic orthopaedic surgeons: evaluation of an innovative seven-year physician scientist residency training program. Eastern Orthopaedic Association (EOA) 2011 Annual Meeting. Williamsburg, VA. October 2011.
- 22. Pareja R, **Stone AV**, Ferguson CM. The Role of HIF-1α and HIF-2α in Meniscus Degeneration in Osteoarthritis. Wake Forest School of Medicine Division of Surgical Sciences 2011 Annual Research Day. October 2011.
- 23. **Stone AV**, Loeser RF, Long DL, Ferguson CM. A potential biological mechanism for meniscus involvement in osteoarthritis. Orthopaedic Research Society (ORS) 2012 Annual Meeting. San Francisco, CA. February 2012.
- 24. Koman LA, Plate JF, Mannava S, **Stone AV**, Jinnah RH, Smith TL. Addressing the shortage of academic orthopaedic surgeons: Evaluation of an Innovative seven-year physician scientist residency training program. American Academy of Orthopaedic Surgery (AAOS) 2012 Annual Meeting. San Francisco, CA. February 2012.
- 25. Stone AV, Loeser RF, Long DL, Ferguson CM. A biologic mechanism for meniscus involvement in osteoarthritis pathogenesis. Wake Forest School of Medicine Department of Orthopaedic Surgery 2011 Resident Research Day. Winston-Salem, NC. April 2011. Award winner: First place, Basic Science.
- 26. **Stone AV**, Loeser RF, Long DL, Ferguson CM. An evolving role for the meniscus in osteoarthritis pathogenesis. Orthopaedic Research Society/Orthopaedic Research and Education Foundation Atlantic Coast 2012 Annual Research Symposium. Columbia, SC. June 2012. **Award winner: Runner-up, Resident Research Award.**
- 27. **Stone AV**, Loeser RF, Long DL, Stehle JR, Register TC, Ferguson CM. An evolving biologic role for the meniscus in osteoarthritis development. March 2012. **Award winner: Runner-up, Translational Science Award.**
- 28. Koman LA, Plate JF, Mannava S, **Stone AV**, Jinnah RH, Smith TL. Addressing the shortage of academic orthopaedic surgeons: Evaluation of an Innovative seven-year physician scientist residency training program. [ABSTRACT]. American Orthopaedic Association (AAOS) Annual Meeting 2012 Annual Meeting. Washington D.C. June 2012.
- 29. Xu NM, **Stone AV**, Patterson R, Koman LA Smith BP, Li Z. Upper Extremity Amputation Is A Predictor Of Increased Five Year Mortality In Patients On Dialysis. North Carolina Orthopaedic Association (NCOA) 2012 Annual Meeting. Pinehurst, NC. October 2012.
- 30. **Stone AV**, Loeser RF, Long DL, Yammani RR, Ferguson CM. Inflammatory factors associated with injury stimulate early osteoarthritis pathways in the meniscus. Wake Forest School of Medicine Division of Surgical Sciences 2012 Annual Research Day. Winston-Salem, NC. November 2012. **Award winner: First place, Basic Science.**
- 31. Stubbs AJ, Stem C, Wooster B, Howse E, **Stone AV**, Smith BP. Prospective, Controlled Pilot Study of Serum Biomarkers in Patients Undergoing Hip Arthroscopy. International society of

- Arthroscopy, Knee Surgery, and Orthopaedic Sports Medicine (ISAKOS) 2013 Annual Meeting. Toronto, Canada. May 2013.
- 32. **Stone AV**, Loeser RF, Long DL, Yammani RR, Ferguson CM. Inflammatory factors associated with injury stimulate early osteoarthritis pathways in the meniscus. Orthopaedic Research Society (ORS) 2013 Annual Meeting. San Antonio, TX. January 2013. **Featured Poster on Annual Walking Poster Tours**
- 33. Little KJ, Bylski-Austrow DI, Gregg A, Glos DL, **Stone AV**, Wall EJ. Repetitive stress numbers greater than physiologic decrease femoral epiphyseal bone volume and density in growing knees. Trans Orthop Res Soc #84, 2014
- 34. **Stone AV**, Vanderman KS, Long DL, Stehle JR, Register TC, Loeser RF, Ferguson CM. Osteoarthritic Changes In Vervet Monkey Knees Correlate With Meniscus Degradation And Increased Matrix Metalloproteinase And Cytokine Secretion. Wake Forest School of Medicine Division of Surgical Sciences Annual Research Day. Winston-Salem, NC. November 2014. **Award winner: First place, Basic Science Research Award.**
- 35. **Stone AV**, Loeser RF, Callahan MF, Vanderman KS, Long DL, McNulty MA, Ferguson CM. The Role of the Hypoxia-Inducible Factor (HIF) Pathway in Normal and Osteoarthritic Meniscus. Wake Forest School of Medicine Division of Surgical Sciences Annual Research Day. Winston-Salem, NC. November 2014.
- 36. **Stone AV**, Loeser RF, Callahan MF, Vanderman KS, Long DL, McNulty MA, Yammani RR, Ferguson CM. The Role of the Hypoxia-inducible Factor (HIF) Pathway in Normal and Osteoarthritic Meniscus. Trans Orthop Res Soc #1333, 2015.
- 37. **Stone AV**, Glos DL, Bercz A, Little KJ, Bylski-Austrow DI, Wall EJ. Repetitive Stress Cycle Numbers Greater Than Physiologic Decrease Tibial Metaphyseal Bone Volume and Density In Growing Knees. Trans Orthop Res Soc #72, 2015.
- 38. **Stone AV**, Hutchinson ID, Hicks J, Rodeo SA, Ferguson CM. The Emerging Biological Role of the Meniscus in Osteoarthritis: Implications for Meniscal Restoration. Meniscus Transplantation Study Group, Trans AAOS, Las Vegas, NV. March 2015.
- 39. **Stone AV**, Vanderman KS, Willey JS, Register TC, Shively CA, Long DL, Stehle JR, Loeser RF, Ferguson CM. Osteoarthritic changes in vervet monkey knees correlate with meniscus degradation and increased matrix metalloproteinase and cytokine secretion. Wake Forest School of Medicine Department of Orthopaedic Surgery 2015 Annual Resident Research Day. June 2015. **Award winner: First place, Resident Research Presentation.**
- 40. Marquez-Lara A, Mannava S, Howse EA, Stone AV, Stubbs AJ. Arthroscopic Management of Hip Chondral Defects: A Systematic Review of the Literature with Meta-analysis. International Society for Hip Arthroscopy (ISHA) 2015 Annual Meeting. Cambridge, England. September 2015.

- 41. **Stone AV**, Howse EA, Mannava S, Stubbs AJ. Cyclists have a greater chondromalacia index compared to age matched controls at the time of hip arthroscopy. International Society for Hip Arthroscopy (ISHA) 2015 Annual Meeting. Cambridge, England. September 2015.
- 42. Halvorson JJ, **Stone AV**, Miller AN, Carroll EA. Radiographic measurements of hip dysplasia correlate with decreased size of acetabular posterior wall fractures. . Annual Meeting of the North Carolina Orthopaedic Association. Kiawah Island, SC. October 2015.
- 43. **Stone AV**, Stem C, Howse E, Stubbs AJ. A Prospective Evaluation of Three Serum Biomarkers in Hip Arthroscopy Patients and Matched Controls. Annual Meeting of the North Carolina Orthopaedic Association. Kiawah Island, SC. October 2015.
- 44. **Stone AV**, Mannava S, Freehill MT. A Critical Review of the Long-Toss in Baseball Throwing. Annual Meeting of the North Carolina Orthopaedic Association. Kiawah Island, SC. October 2015.
- 45. Luo TD, Howse EA, **Stone AV**, Mannava S, Marquez-Lara A, Stubbs AJ. Diabetic Patients Undergoing Hip Arthroscopy More Frequently Demonstrate Femoral Head Chondromalacia. Wake Forest School of Medicine Division of Surgical Sciences Annual Research Day. Winston-Salem, NC. November 2015.
- 46. Mannava S, Boykin RE, **Stone AV**, Gaskill TR, Bruner M, Howse EA, Marquez-Lara A, Stubbs AJ. Atypical hip joint impingement—moving beyond femoroacetabular impingement: preoperative, imaging, therapeutic, and surgical considerations. American Academy of Orthopaedic Surgery (AAOS) 2016 Annual Meeting. Orlando, FL. March 2016.
- 47. **Stone AV**, Mannava S, Patel A, Marquez-Lara A, Freehill MT. The use of long-toss throwing by professional pitchers: an epidemiological study. International Congress of Shoulder and Elbow Surgery. Jeju, Korea. May 2016.
- 48. **Stone AV**, Emory CL, Andersen JS, Miller AN. Improving Physician and Patient Education Following Geriatric Hip Fractures through Targeted Informatics. Annual Wake Forest Baptist Health Quality Improvement Showcase. Winston-Salem, NC. May 2016.
- 49. **Stone AV,** Jinnah AH, Wells BJ, Atkinson H, Futrell WM, Miller AN, Emory CL. Risk factors for 30-day readmission following operative management of geriatric hip fractures. Annual Wake Forest Baptist Health Quality Improvement Showcase. Winston-Salem, NC. May 2016.
- 50. Marquez-Lara A, Luo TD, **Stone AV**, Mannava S, Howse EA, Stubbs AJ. Time to presentation: The impact of duration of symptoms on hip arthroscopy. Annual Meeting of the International Society for Hip Arthroscopy. San Francisco, CA. September 2016.
- 51. Schallmo MS, Marquez-Lara A, Luo TD, Howse EA, **Stone AV**, Howse EA, Stubbs AJ. Assessment of gender-related variation in adolescent hip arthroscopy patients. Annual Meeting of the International Society for Hip Arthroscopy. San Francisco, CA. September 2016.
- 52. Luo TD, Marquez-Lara A, Mannava S, **Stone AV**, Howse EA, Stubbs AJ. Age is associated with greater chondromalacia severity in hip arthroscopy. Annual Meeting of the International Society for Hip Arthroscopy. San Francisco, CA. September 2016.

- 53. Luo TD, Marquez-Lara A, Mannava S, **Stone AV**, Howse EA, Stubbs AJ. Diabetics undergoing hip arthroscopy more frequently demonstrate femoral head chondromalacia. Annual Meeting of the International Society for Hip Arthroscopy. San Francisco, CA. September 2016.
- 54. Marquez-Lara A, Howse EA, Mannava S, **Stone AV**, Luo TD, Antunes A, Stubbs AJ. Clinical Impact of Motor Vehicle Collision on Hip Pain: A Review of Hip Arthroscopy Patients. Annual Meeting of the International Society for Hip Arthroscopy. San Francisco, CA. September 2016.
- 55. Sharma A, Marquez-Lara A, Luo TD, Howse EA, Mannava S, **Stone AV**, Stubbs AJ. Hip arthroscopy in adolescent patients: the impact of skeletal maturity on hip pathology and treatment. Annual Meeting of the International Society for Hip Arthroscopy. San Francisco, CA. September 2016.
- 56. Sharma A, Marquez-Lara A, Luo TD, Howse EA, **Stone AV**, Mannava S, Stubbs AJ. Arthroscopic management of patients with acetabular undercoverage. Annual Meeting of the International Society for Hip Arthroscopy. San Francisco, CA. September 2016.
- 57. **Stone AV**, Jinnah AH, Wells BJ, Atkinson H, Futrell WM, Miller AN, Emory CL. Risk factors for 30-day readmission following operative management of geriatric hip fractures. Annual Meeting of the North Carolina Orthopaedic Association. Pinehurst, NC. October 2016.
- 58. Marquez-Lara A, Luo TD, **Stone AV**, Mannava S, Howse EA, Stubbs AJ. Longer duration of symptoms correlates with chondral lesion severity. Annual Meeting of Eastern Orthopaedic Association, New Orleans, LA. October 2016.
- 59. **Stone AV**, Mannava S, Howse EA, Stubbs AJ. Cyclists undergoing hip arthroscopy have greater chondromalacia compared to non-cyclists. Annual Meeting of Eastern Orthopaedic Association, New Orleans, LA. October 2016.
- 60. Freehill MT, Mannava S, **Stone AV**, McCarthy C, Higgins LD. Bennett's Lesions of the Shoulder: A Current Concepts Review. Annual Meeting of the Eastern Orthopaedic Association. New Orleans, Louisiana. October 2016.
- 61. Luo TD, Marquez-Lara A, Howse EA, **Stone AV**, Mannava S, Stubbs AJ. Comparison of chondral defects in diabetic patients and matched controls undergoing hip arthroscopy. Annual Meeting of Société Francophone d'Arthroscopie (French Society of Arthroscopy). Paris, France. November 2016.
- 62. **Stone AV**, Luo TD, Sharma A, Danelson KA, De Gregorio M, Freehill MT. Optimizing the double row construct: Medial row management and suture tape options. Smith & Nephew Advanced Techniques in Shoulder Surgery Course. Austin, TX. March 2017.
- 63. Luo TD, Naugher GL, **Stone AV**, Strahm JG, Mannava S, Freehill MT. The effect of ultralong-toss throwing on glenohumeral range of motion in collegiate baseball pitchers. American Annual Meeting of the Academy of Orthopaedic Surgeons, San Diego, CA. March 2017.

- 64. Luo TD, Marquez-Lara A, **Stone AV**, Mannava S, Howse EA, Stubbs AJ. The effect of non-modifiable patient factors on cartilage pathology in hip arthroscopy. Annual Meeting of the Academy of Orthopaedic Surgeons. San Diego, CA. March 2017.
- 65. Luo TD, Marquez-Lara A, **Stone AV**, Mannava S, Howse EA, Stubbs AJ. The effect of non-modifiable patient factors on cartilage pathology in hip arthroscopy. Wake Forest School of Medicine Women's Health & Sex Differences Research Day. Winston-Salem, NC. April 2017.
- 66. Luo TD, Naugher GL, **Stone AV**, Mannava S, Strahm JG, Freehill MT. Evaluation of ultralong-toss versus straight-line throwing on glenohumeral range of motion in collegiate baseball pitchers. Annual Meeting of the International Society of Arthroscopy, Knee Surgery and Orthopaedic Sports Medicine. Shanghai, China. June 2017.
- 67. Luo TD, Marquez-Lara A, Mannava S, **Stone AV**, Howse EA, Stubbs AJ. Comparison of hip chondral pathology in diabetic and non-diabetic hip arthroscopy patients. Annual Meeting of the International Society of Arthroscopy, Knee Surgery and Orthopaedic Sports Medicine. Shanghai, China. June 2017.
- 68. Sharma, A, Marquez-Lara A, Luo TD, **Stone AV**, Howse EA, Stubbs AJ. Differences and Similarities between Hip and Knee Indications for the Arthroscopic Management of Chondral Defects. Annual Meeting of the International Society of Arthroscopy, Knee Surgery and Orthopaedic Sports Medicine. Shanghai, China. June 2017.
- 69. Stone AV, Jacobs CA, Luo TD, Meadows MC, Nho SJ, Stubbs AJ, Makhni EC. Clinical and patient-reported outcomes demonstrate variable reporting in the hip arthroscopy literature. Resident Research Day, Department of Orthopaedic Surgery, Wake Forest School of Medicine, Winston-Salem, NC. June 2017.
- 70. **Stone AV**, Miller AN, Andersen JS, Emory CE. Improving physician and patient education following geriatric hip fractures through targeted informatics. Annual Meeting of the American Orthopaedic Association. Charlotte, NC. June 2017.
- 71. **Stone AV**, Jinnah AH, Wells BJ, Atkinson H, Futrell WM, Miller AN, Emory CL. Risk factors for 30-day readmission following operative management of geriatric hip fractures. Annual Meeting of the American Orthopaedic Association. Charlotte, NC. June 2017.
- 72. **Stone AV**, Meadows MC, Luo TD, Nho SJ, Stubbs AJ, Makhni EC. Clinical and patient-reported outcomes demonstrate variable reporting in the hip arthroscopy literature. Annual Meeting of the American Orthopaedic Association. Charlotte, NC. June 2017.
- 73. Luo TD, Naugher GL, Stone AV, Mannava S, Strahm JG, Freehill MT. Ultra-long-toss vs straight-line throwing for glenohumeral range of motion recovery in collegiate baseball pitchers. American Orthopaedic Society for Sports Medicine Annual Meeting. Toronto, Canada. July 2017.
- 74. **Stone AV**, Luo TD, Sharma A, Danelson KA, De Gregorio M, Freehill MT. Optimizing the Double Row Construct: Medial Row Management and Suture Tape Options. Detroit Regional Sports Medicine Symposium. Plymouth, Michigan. July 2017.

- 75. **Stone AV**, Jacobs CA, Luo TD, Meadows MC, Nho SJ, Stubbs AJ, Makhni EC. Variability in outcome-reporting after hip arthroscopy: a systematic review of the literature between 2011 and 2016. Annual Meeting of the International Society for Hip Arthroscopy. Santiago, Chile. October 2017.
- 76. Schallmo M, Marquez-Lara A, Luo TD, **Stone AV**, Howse E, Stubbs AJ. Intraoperative Assessment Reveals More Extensive Chondral Degeneration in Hip Arthroscopy Patients with a History of Developmental Dysplasia of the Hip. Annual Meeting of the International Society for Hip Arthroscopy. Santiago, Chile. October 2017.
- 77. Schallmo M, Marquez-Lara A, Luo TD, **Stone AV**, Howse EA, Stubbs AJ. Detrimental Effects of Cigarette Smoking on Articular Cartilage in Hip Arthroscopy Patients. Annual Meeting of the International Society for Hip Arthroscopy. Santiago, Chile. October 2017.
- 78. Schallmo M, Marquez-Lara A, Luo TD, **Stone AV**, Howse EA, Stubbs AJ. Comparison of Presentation, Pathology, and Arthroscopic Treatment of Hip Patients Based on a History of Lumbar Spine Surgery. Annual Meeting of the International Society for Hip Arthroscopy. Santiago, Chile. October 2017.
- 79. Schallmo M, Marquez-Lara A, Luo TD, **Stone AV**, Howse EA, Mayo N, Gamer J, Stubbs AJ. More Extensive Chondral Pathology in Patients Undergoing Hip Arthroscopy is Associated with a History of Slipped Capital Femoral Epiphysis. Annual Meeting of the International Society for Hip Arthroscopy. Santiago, Chile. October 2017.
- 80. Marquez-Lara A, Schallmo M, Luo TD, **Stone AV**, Howse EA, Stubbs AJ. Management of Hip Chondral Lesions with Cartilage Allograft during Hip Arthroscopy: A Case Series and Surgical Pearls. Annual Meeting of the International Society for Hip Arthroscopy. Santiago, Chile. October 2017.
- 81. Luo TD, Marquez-Lara A, Schallmo M, **Stone AV**, Howse EA, Stubbs AJ. Hip Arthroscopic Findings in Patients With Previous History of Femoral Head Avascular Necrosis. Annual Meeting of the International Society for Hip Arthroscopy. Santiago, Chile. October 2017.
- 82. Luo TD, Schallmo M, Marquez-Lara A, **Stone AV**, Howse EA, Gamer J, Mayo N, Stubbs AJ. Mixed Sub-type Femoroacetabular Impingement is Treated Preferentially with Arthroscopic Acetabuloplasty. Annual Meeting of the International Society for Hip Arthroscopy. Santiago, Chile. October 2017.
- 83. Luo TD, Marquez-Lara A, Schallmo M, **Stone AV**, Howse EA, Stubbs AJ. Comparison of Intraoperative Findings of Primary Versus Revision Hip Arthroscopy. Annual Meeting of the International Society for Hip Arthroscopy. Santiago, Chile. October 2017.
- 84. Luo TD, Marquez-Lara A, Schallmo MS, **Stone AV**, Howse EA, Stubbs AJ. Evaluation of hip arthroscopy in patients with previous history of femoral head osteonecrosis. Annual Meeting of the American Academy of Orthopaedic Surgeons. New Orleans, LA. March 2018.

- 85. **Stone AV**, Luo TD, Sharma A, Danelson KA, De Gregorio M, Freehill MT. Untied Medial Row Suture Construct Maintains Total Contact Force: A Biomechanical Rotator Cuff Repair Study. Annual Meeting of the Orthopaedic Research Society. New Orleans, LA. March 2018.
- 86. **Stone AV**, Kunze KN, Neal WH, Malloy P, Nho SJ. Symptomatic Patients with Femoroacetabular Impingement Have Muscular Imbalances Around The Hip And Pelvis. Annual Meeting of the Orthopaedic Research Society. New Orleans, LA. March 2018.
- 87. **Stone AV**, Kunze KN, Neal WH, Malloy P, Nho SJ. Symptomatic patients with femoroacetabular impingement have muscular imbalances around the hip and pelvis. Annual Meeting of the Arthroscopy Association of North America. Chicago, IL. April 2018.
- 88. **Stone AV**, Neal WH, Waterman BR, Nho SJ. Pre-operative predictors of return to high functional status after hip arthroscopy for femoroacetabular impingement at 2-year minimum follow-up. Annual Meeting of American Orthopaedic Society for Sports Medicine. San Diego, CA. July 2018.
- 89. **Stone AV**, Neal WH, Waterman BR, Nho SJ. Pre-operative predictors of return to high functional status after hip arthroscopy for femoroacetabular impingement at 2-year minimum follow-up. Annual Meeting of American Orthopaedic Society for Sports Medicine Subspecialty Day. Las Vegas, NV. March 2019.

#### RESEARCH POSITIONS AND EMPLOYMENT

- 2007 2010. Medical Student Research Fellow
   Department of Orthopaedic Surgery, Cincinnati Children's Hospital Medical Center,
   Cincinnati, OH
- 2006 2009. Cyclist
   Anthem Blue Cross/Blue Shield Cycling Team, Ghisillo Cycling, LLC, Mason, OH
- 2005 2006. Research Assistant
   Department of Orthopaedic Surgery, Wake Forest University School of Medicine, Winston-Salem, NC
- 2003 2005. Student Research Fellow
   Department of Biology, Wake Forest University, Winston-Salem, NC
   Learned experimental design, developed strong background in biochemical, molecular, and bioanalytical techniques.
- 2003 2005. Research Intern
   Department of Orthopaedic Surgery, Wake Forest University School of Medicine, Winston-Salem, NC
- 2003 2004. Chief Information Officer (CIO) Knowledge2Work, Winston-Salem, NC

Managed Information Technologies group; lead initiative for integration of cutting edge technologies and infrastructure expansion.

■ 2004. Consultant

Newsarama.com, Winston-Salem, NC

Advanced design and optimized page processing for enhanced usability.

■ 2001 – 2003. Consultant and Developer

PsychTemps, Inc., Cincinnati, OH

Enterprise application design and development; internet presence and e-commerce consulting with internal process optimization.

 1999 – 2001. Lifeguard and Swimming Instructor YMCA of Cincinnati, Cincinnati, OH

## PROFESSIONAL DEVELOPMENT

- 2018: Advanced Arthroscopy Techniques Lab, Smith & Nephew, Lexington, IL
- 2018: Meniscal Root and Multiligament Knee Lab, Smith & Nephew, Chicago, IL
- 2018: Knee and Shoulder Arthroscopy Lab, Stryker, Chicago, IL
- 2018: Fellows Sports Medicine Course, Arthrex, Naples, FL
- 2018: Shoulder and Elbow Arthroscopy Lab, Arthrex MedWest, Chicago, IL
- 2018: Orthopaedic Sports Medicine Research Symposium, Midwest Orthopaedics at Rush
- 2018: Shoulder and Elbow Ultrasound Course, SonoSite with Midwest Orthopaedics at Rush, Chicago, IL
- 2017: MACI Cartilage Course, MACI with Midwest Orthopaedics at Rush, Chicago, IL
- 2017: Hip Ultrasound Course, Midwest Orthopaedics at Rush, Chicago, IL
- 2017: Knee Arthroscopy Lab, Arthrex MedWest, Chicago, IL
- 2017: Shoulder Arthroplasty Course, Wright Medical, Henderson, NV
- 2017: Shoulder Ultrasound Course, Midwest Orthopaedics at Rush, Chicago, IL
- 2017: Shoulder Arthroscopy and Instability Lab, Arthrex MedWest, Chicago, IL
- 2017: Chicago Sports Medicine Symposium, Chicago, IL
- 2017: American Orthopaedic Society for Sports Medicine Fellows Sports Medicine Course, Rosemont, IL
- 2017: Emerging Leaders Program Participant with the American Orthopaedic Association, Charlotte, NC

- 2016: Resident Leadership Forum Participant with the American Orthopaedic Association, Seattle, WA
- 2015 2017: Institute for Healthcare Improvement, Quality Improvement Certifications
- 2014 2017: Geriatrics Principles for Specialist Quality Improvement Initiative
- 2015: Geriatrics Principles for Specialists Multidisciplinary Course, Ashville, NC
- 2011 2017: Wake Forest Baptist Health Arthroscopy Labs (Quarterly)
- 2015: Orthopaedic Trauma Association (OTA) Resident Trauma and Fracture Management Course, Chicago, IL
- 2014: AO Trauma Basic Principles of Fracture Management Course, La Jolla, CA
- 2012: Orthopaedic Research and Education Foundation/Orthopaedic Research Society Grant Writing Workshop, San Francisco, CA
- 2012: Southeastern Fracture Symposium, Duke University, Durham, NC
- 2011 2017: Trauma and Reconstruction Laboratory and Courses, Wake Forest School of Medicine Department of Orthopaedic Surgery, Winston-Salem, NC
- 2011: American Orthopaedic Society for Sports Medicine Clinical Outcomes Research
- 2011: Wake Forest Department of Orthopaedic Surgery Trauma Call Course
- 2010: Orthopaedic Research and Education Foundation/Orthopaedic Research Society Presentation Skills Workshop, Chicago, IL
- 2010: National Institutes of Health/American Orthopaedic Society for Sports Medicine Post-Joint Injury Osteoarthritis Conference, New Orleans, LA
- 2005 2006: Microsurgery Course, Department of Orthopaedic Surgery, Wake Forest University School of Medicine, Winston-Salem, NC
- 2002: LEAD Leadership Training and Development Program Graduate, Wake Forest University, Winston-Salem, NC

## ORAL PRESENTATIONS AND INVITED LECTURES

- Chemical synthesis of an affinity chromatography ligand and purification of an auxin efflux protein. Annual meeting of the North Carolina Academy of Sciences, Research Triangle Park, NC, April 2005.
- 2. Is juvenile osteochondritis dissecans a result of injury to the secondary ossification center?

  Department of Orthopaedic Surgery, Cincinnati Children's Hospital Medical Center, Cincinnati, OH, July 2007.

- 3. Renal Trauma: Assessing indications for exploration. Trauma Conference: Trauma Division, Department of Surgery, University of Cincinnati College of Medicine, Cincinnati, OH November 2008.
- 4. Scaphoid Nonunion Advanced Collapse and Scapholunate Advanced Collapse: Current diagnosis and treatment options. Orthopaedic Case Conference, Department of Orthopaedic Surgery, University of Cincinnati College of Medicine, Cincinnati, OH May 2009.
- 5. Medical Issues in the Orthopaedic Patient. Internal Medicine Conference: Department of Internal Medicine, The Jewish Hospital, Cincinnati, OH, February 2010.
- 6. Repetitive Stresses Generate Osteochondral Lesions in Immature Animals. Orthopaedic Research Society Atlantic Coast Conference, Durham, NC, November 2010.
- 7. Elucidating the Role of HIF-2α in Osteoarthritis. Department of Molecular Medicine & Translational Sciences, Wake Forest School of Medicine, Winston-Salem, NC, November 2010.
- 8. Repetitive Stresses Generate Juvenile Osteochondritis Dissecans-Like Changes in Immature Animals. Annual meeting of the American Academy of Orthopaedic Surgeons, San Diego, CA, February 2011.
- 9. Differential matrix metalloprotease expression in human osteoarthritic meniscus cells versus osteoarthritic chondrocytes stimulated with inflammatory cytokines. Meeting of the Wake Forest Institute for Regenerative Medicine, Pinehurst, NC, March 2011.
- 10. Osteoarthritic and Degenerative Changes in the Meniscus. Resident Research Day, Department of Orthopaedic Surgery, Wake Forest School of Medicine, April 2011.
- 11. A potential biological mechanism for meniscus involvement in osteoarthritis. Annual Meeting of the Clinical Orthopaedic Society, Charleston, SC, September 2011.
- 12. Early results following bovine xenograft placement for pediatric Cotton and Evan's osteotomies. Annual Meeting of the Clinical Orthopaedic Society, Charleston, SC, September 2011.
- 13. Dose and volume dependent response to intramuscular injection of botulinum neurotoxin-A optimizes muscle force decrement in mice. Residents and Fellows Conference at Annual Meeting of American Society for Surgery of the Hand, Las Vegas, NV, September 2011.
- 14. A potential biological mechanism for meniscus involvement in osteoarthritis. Orthopaedic Research Society/Orthopaedic Research and Education Foundation Atlantic Coast Research Symposium, Winston-Salem, NC, October 2011.
- 15. Human osteoarthritic and degenerative monkey menisci have differential increases of matrix metalloproteases compared to both osteoarthritic chondrocytes and healthy monkey menisci. Annual Meeting of the Eastern Orthopaedic Association, Williamsburg, VA, October 2011.
- 16. A potential biological mechanism for meniscus involvement in osteoarthritis. Annual Meeting of the North Carolina Orthopaedic Society, Kiawah Island, SC, October 2011.
- 17. A Biologic Role for the Meniscus in Osteoarthritis Pathogenesis. Department of Orthopaedic Surgery, Wake Forest School of Medicine, Winston-Salem, NC, April 2012.

- 18. A Biologic Role for the Meniscus in Osteoarthritis Pathogenesis. Department of Molecular Medicine & Translational Sciences, Wake Forest School of Medicine, Winston-Salem, NC, April 2012.
- 19. The Meniscus in Osteoarthritis: Beyond the Biomechanics. Department of Molecular Medicine & Translational Sciences, Wake Forest School of Medicine, Winston-Salem, NC, November 2012.
- Inflammatory factors associated with injury stimulate early osteoarthritis pathways in the meniscus. Annual Meeting of the Orthopaedic Research Society, San Antonio, TX, January 2013.
- 21. Pelvis and Acetabulum: Surgical approaches and anatomy. Department of Orthopaedic Surgery, Wake Forest School of Medicine, Winston-Salem, NC, July 2013.
- 22. Thoracic and Lumbar Spine: Surgical approaches and anatomy. Department of Orthopaedic Surgery, Wake Forest School of Medicine, Winston-Salem, NC, August 2013.
- 23. More Anchors: A Cost Benefit Discussion for Additional Fixation. Department of Orthopaedic Surgery, Wake Forest School of Medicine, Winston-Salem, NC, February 2014.
- 24. Sports Rehabilitation and Non-operative Management. Department of Orthopaedic Surgery, Wake Forest School of Medicine, Winston-Salem, NC, April 2014.
- 25. Juvenile Osteochondritis Dissecans of the Knee. Department of Orthopaedic Surgery, Wake Forest School of Medicine, Winston-Salem, NC, April 2014.
- 26. Soft Tissue Sarcomas. Department of Orthopaedic Surgery, Wake Forest School of Medicine, Winston-Salem, April 2014.
- 27. Radiographic Evaluation of Bone Tumors. Department of Orthopaedic Surgery, Wake Forest School of Medicine, Winston-Salem, NC, September 2014.
- 28. Bone Tumor Mimics. Department of Orthopaedic Surgery, Wake Forest School of Medicine, Winston-Salem, NC, September 2014.
- 29. Gene and Protein Mutations in Orthopaedic Oncology. Department of Orthopaedic Surgery, Wake Forest School of Medicine, Winston-Salem, NC, September 2014.
- 30. Degenerative Disc Disease, Spinal Stenosis and Myelopathy. Department of Orthopaedic Surgery, Wake Forest School of Medicine, Winston-Salem, NC, October 2014.
- 31. Pediatric Femur Fractures. Department of Orthopaedic Surgery, Wake Forest School of Medicine, Winston-Salem, NC, February 2015.
- 32. Pediatric Tibial and Ankle Fractures. Department of Orthopaedic Surgery, Wake Forest School of Medicine, Winston-Salem, NC, February 2015.
- 33. Clinical Ultrasound: Current Concepts. Division of Sports Medicine, Department of Orthopaedic Surgery, Wake Forest School of Medicine, Winston-Salem, NC, February 2015.

- 34. Repetitive Stress Cycle Numbers Greater Than Physiologic Decrease Tibial Metaphyseal Bone Volume and Density In Growing Knees. Annual meeting of the Orthopaedic Research Society, Las Vegas, NV, March 2015.
- 35. Pediatric Deep Vein Thrombosis in Context of Bilateral Juvenile Osteochondritis Dissecans Repair. Department of Orthopaedic Surgery, Wake Forest School of Medicine, Winston-Salem, NC, May 2015.
- 36. Osteoarthritic changes in vervet monkey knees correlate with meniscus degradation and increased matrix metalloproteinase and cytokine secretion. Resident Research Day, Department of Orthopaedic Surgery, Wake Forest School of Medicine, Winston-Salem, NC, June 2015.
- 37. The Wake Forest Baptist Health Hip Fracture Care Experience: Enhancing the delivery of care to geriatric hip fracture patients through a quality improvement initiative. Department of Orthopaedic Surgery, Wake Forest School of Medicine, Winston-Salem, NC, July 2015
- 38. A Potential Biologic Role for the Meniscus in Osteoarthritis. Annual meeting of the Little Orthopaedic Club, Winston-Salem, NC, September 2015.
- 39. Radiographic measurements of hip dysplasia correlate with decreased size of acetabular posterior wall fractures. Annual Meeting of the North Carolina Orthopaedic Association. Kiawah Island, SC, October 2015.
- 40. A Prospective Evaluation of Three Serum Biomarkers in Hip Arthroscopy Patients and Matched Controls. Annual Meeting of the North Carolina Orthopaedic Association. Kiawah Island, SC, October 2015.
- 41. A Critical Review of the Long-Toss in Baseball Throwing. Annual Meeting of the North Carolina Orthopaedic Association. Kiawah Island, SC, October 2015.
- 42. Old people really do break more easily. Annual Meeting of the North Carolina Orthopaedic Association. Kiawah Island, SC, October 2015.
- 43. Degenerative Disc Disease, Spinal Stenosis and Myelopathy. Department of Orthopaedic Surgery, Wake Forest School of Medicine, Winston-Salem, NC, October 2015.
- 44. Pediatric Femur Fractures. Department of Orthopaedic Surgery, Wake Forest School of Medicine, Winston-Salem, NC, February 2016.
- 45. Pediatric Tibial and Ankle Fractures. Department of Orthopaedic Surgery, Wake Forest School of Medicine, Winston-Salem, NC, February 2016.
- 46. Risk factors for 30-day readmission following operative management of geriatric hip fractures. Annual Wake Forest Baptist Health Quality Improvement Showcase. Wake Forest Baptist Health, Winston-Salem, NC. May 2016.
- 47. Adolescent Meniscus Injury. Grand Rounds, Department of Orthopaedic Surgery, Wake Forest School of Medicine, Winston-Salem, NC, June 2016.

- 48. Challenges in Orthopaedic Surgery Education: Report from the American Orthopaedic Association. Grand Rounds, Department of Orthopaedic Surgery, Wake Forest School of Medicine, Winston-Salem, NC, July 2016.
- 49. A potential Biologic Role for the Meniscus in the Development of Osteoarthritis. The Annual Dr. Gary G. Poehling Lectureship, Wake Forest School of Medicine, Winston-Salem, NC. September 2016.
- 50. Meniscus and Articular Cartilage Biology. Department of Orthopaedic Surgery, Wake Forest School of Medicine, Winston-Salem, NC, October 2016.
- 51. Cyclists undergoing hip arthroscopy have greater chondromalacia compared to non-cyclists. Annual Meeting of Eastern Orthopaedic Association, New Orleans, LA. October 2016.
- 52. Pediatric Femur Fractures. Department of Orthopaedic Surgery, Wake Forest School of Medicine, Winston-Salem, NC, November 2016.
- 53. Pediatric Lower Extremity Fractures. Department of Orthopaedic Surgery, Wake Forest School of Medicine, Winston-Salem, NC, November 2016.
- 54. The Biceps: Current Concepts and Controversies. Department of Orthopaedic Surgery, Wake Forest School of Medicine, Winston-Salem, NC, January 2017
- 55. Clinical and patient-reported outcomes demonstrate variable reporting in the hip arthroscopy literature. Department of Orthopaedic Surgery, Wake Forest School of Medicine, Winston-Salem, NC. June 2017.
- 56. Femoroacetabular Impingement: Current diagnosis and treatment strategies. Department of Orthopaedic Surgery, Rush University Medical Center, Chicago IL. October 2017.
- 57. Hip Intraarticular Surgical Indications. Department of Orthopaedic Surgery, Rush University Medical Center, Chicago IL. November 2017.
- 58. Hip Extraarticular Surgical Indications. Department of Orthopaedic Surgery, Rush University Medical Center, Chicago IL. November 2017.
- 59. Articular Cartilage Surgical Indications. Department of Orthopaedic Surgery, Rush University Medical Center, Chicago IL. February 2018.
- 60. Predictors of persistent post-operative pain at minimum two-years after arthroscopic treatment of femoroacetabular impingement. Annual Meeting of American Academy of Orthopaedic Surgeons, New Orleans, LA. March 2018.
- 61. Influence of Joint Hypermobility on Patient-Reported Outcomes after Hip Arthroscopy for Femoroacetabular Impingement Syndrome and Capsular Plication: A Cohort Study in Females. Annual Meeting of American Academy of Orthopaedic Surgeons, New Orleans, LA. March 2018.
- 62. Pre-operative predictors of return to high functional status after hip arthroscopy for femoroacetabular impingement at 2-year minimum follow-up. Annual Thesis Day, Department of Orthopaedic Surgery, Rush University Medical Center. Chicago, IL. June 2018.

63. Pre-operative predictors of return to high functional status after hip arthroscopy for femoroacetabular impingement at 2-year minimum follow-up. Annual Meeting of American Orthopaedic Society for Sports Medicine. San Diego, CA. July 2018.

**OUTSIDE INTERESTS AND HOBBIES** 

Cycling, Culinary Endeavors, Musician, General Contractor