Curriculum Vitae KIRK ANTHONY MCCULLOUGH, M.D.

<u>Date</u>: October 20, 2022

Practice Information:

Orthopaedic and Sports Medicine Clinic of Kansas City, LLC 3651 College Blvd Suite 100A
Leawood, KS 66211
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kmccullough@osmckc.com

Education:

Candidate for Bachelor of Arts in Biology United States Air Force Academy June 1997 to May 1999 USAFA, CO

Bachelor of Arts with Honors, Biology William Jewell College August 1999 to May 2001 Liberty, MO

Doctor of Medicine University of Kansas School of Medicine August 2002 to May 2007 Kansas City, KS

Post-Sophomore Fellowship, Pathology University of Kansas School of Medicine July 2004 to June 2005 Kansas City, KS

Post Graduate Education and Training:

Internship, General Surgery Vanderbilt University Medical Center July 2007 to June 2008 Nashville, TN

Residency, Orthopaedic Surgery Vanderbilt University Medical Center July 2008 to June 2012 Nashville, TN Fellowship, Orthopaedic Sports Medicine and Shoulder/Elbow OrthoCarolina August 2012 to July 2013 Charlotte, NC

Fellowship, Orthopaedic Foot and Ankle Surgery Cleveland Clinic August 2013 to July 2014 Cleveland, OH

Board Certification:

Diplomate of the American Board of Orthopaedic Surgery (expiration 12/31/2026) Subspecialty Certificate (CAQ) in Orthopaedic Sports Medicine (expiration 12/31/2026)

Academic Affiliations:

Assistant Professor of Orthopedic Surgery, University of Missouri – Kansas City

Medical Licensure:

Doctor of Medicine, State of Kansas, June 2013 to present
Doctor of Medicine, State of Missouri, June 2013 to present
Doctor of Medicine, State of Ohio, May 2013 to present
Doctor of Medicine, State of North Carolina, August 2012 to present
Doctor of Medicine, State of Tennessee, February 2010 to July 2012

Military Service:

Cadet, United States Air Force Academy 1997 – 1999

Professional Society/Organization Activity:

NFL Foot and Ankle Subcommittee, Member

NFL Physicians Society, Member (2014-2020)

MLS Physicians Society, Member

USL Sports Medicine Task Force, Member

American Academy of Orthopaedic Foot and Ankle Surgeons, Member

American Orthopaedic Society for Sports Medicine, Member

Elected Member – Enduring Education Committee (8/17 to 7/21)

Elected Representative – State Council of Delegates (term starting July 2018)

American Academy of Orthopaedic Surgeons, Member

Alpha Omega Alpha

Christian Medical and Dental Association

Team Coverage Experience:

U.S. Soccer Network Physician (Present)

Team Physician, Sporting KC Professional Soccer Team (MLS) (2015 – present)

Chief Medical Officer/Head Team Physician – KC Current Professional Soccer Team (NWSL) (2020 – present)

Head Team Physician, Swope Park Rangers/SKC II Professional Soccer Team (USL/MLS Next) (2015 – present)

Team Physician, Kansas City Chiefs Professional Football Team (2014-2019)

Consultant, Kansas City Ballet (2014 – present)

Head Team Physician and Medical Director, Saint Thomas Aquinas High School (2016 – present)

Assistant Team Physician, Carolina Panthers Professional Football Team, 2012-13

Assistant Team Physician, Charlotte Knights AAA Baseball Team, 2013

Assistant Team Physician, Charlotte Hounds Professional Lacrosse Team, 2013

Assistant Team Physician, University of North Carolina Charlotte Athletics, 2012-13

Assistant Team Physician, Davidson University Athletics, 2012-13

Honors and Awards:

Practice:

Ingram's Magazine "40 under 40: Class of 2019" award recipient for greater Kansas City Area

Saint Thomas Aquinas High School Class of 2020 Hall of Fame Inductee

Fellowship:

Art Rettig Award for best scientific research, "Lisfranc Injury in the Elite Football Athlete" at 2014 NFL Combine Scientific Meeting of NFL Physicians Association. Study performed by **K. McCullough**, C. Corn, and R. Anderson.

Vanderbilt University Medical Center:

Friend of the SICU Award, June 2008

2011 Tennessee Medical Association Annual Meeting, Best Poster Presentation Award

University of Kansas Medical Center:

Alpha Omega Alpha Junior Member and election to President of University of Kansas Chapter, 2006-'07 academic year

Deborah E. Powell Pride in the Profession Award

Thomas G. Orr, Sr. Outstanding Student in Surgery Clerkship Award

Russell Jay Eilers Award

Helmuth Sprinz Award

R.M. Gouldner Memorial Medical Foundation Scholarship

McPike Scholarship recipient

Irvin R. Ricklefs Scholarship recipient

Ralph Canuteson Award Scholarship recipient

John Trembly Foundation Scholarship recipient

Endowment Scholarship recipient

Election to membership in Association of Pathology Chairs Honor Society

William Jewell College:

NAIA Div. II Academic All-American 1999-'00, 2000-'01

Summa Cum Laude

Phi Epsilon Honor Society

Honors Project: SGS1-Shedding New Light on the Aging Process

Dean's List (1999-2001)

Mortar Board member

Dr. Donald M. Wald Scholarship Recipient (top junior biology student)

Fristoe Scholarship Recipient (top pre-med student)

Outstanding Senior Biology Major Award

Frank G. Brooks Award for Excellence in Student Research

Beta Beta Biological Society Research Foundation Grant

Missouri Academy of Science Research Competition 1st Place (2002)

US Air Force Academy:

Commandant's Pin for military excellence in Basic Training

Superintendent's Pin for military, academic, and athletic excellence (Fr. and So.)

Cadet of the Month for Second Group (out of 1000 cadets) (Fr. and So.)

Cadet of the Semester for Second Group (out of 1000 cadets) (So.)

Elected Group Superintendent for Second Group (highest ranking Jr. cadet)

Western Athletic Conference Scholar Athlete Award

National Student-Athlete Day Award (awarded by the NCAA, NFHS, National

Consortium for Academics and Sports, and Northeastern University's Sport in Society for commitment to excellence in academics, athletics, and community service)

Class Rank: 14 out of 980

Administrative Service:

Resident Coverage Coordinator, Vanderbilt Sports Medicine High School Football Outreach Program – Fall 2011

ACGME Orthopaedic Residency Review Committee Class Representative, 2010

Student Organization for Surgery – 2002-'06 (President, 2004-'05; Social Chair, 2003-04)

Founder of Orthopedic Surgery Interest Group, KUMC – 2006-2007

Christian Medical Fellowship/CMDA KUMC Chapter – 2002-2007 (Vice-President, 2003-'04)

Student Curriculum Advisory Committee – 2002-'07

LCME Teaching and Evaluation Committee member – 2004-'05

Grant Support:

Completed

"Effect of Anterior Cruciate Ligament Reconstruction of Return to Play for Football Players"

Principal Investigator: Kirk A. McCullough, M.D.

Funding: NFL Charities Grant – November 2008 to March 2012

Submitted

"Multicenter Arthroscopic Study of the Ankle and Foot"

Co-Investigator: Kirk A. McCullough, M.D.

Funding: Pre-Review application submitted to AANA, Research Grant

"Return to Play for High School Basketball Players following ACL Reconstruction" Co-Principal Investigator: Kirk A. McCullough, M.D.

Funding: Pre-Review application submitted to AOSSM Sandra Kirkley Clinical Outcomes Research Grant

Collaborative Research

MASTAF (Multi-center Arthroscopic Study of the Ankle and Foot) Study Group

- Project initiated February 1, 2017
- Currently serve as project/group Vice-President
- www.MASTAFstudy.com

Publications:

Peer-Reviewed Publications

Jastifer JR, McNitt AS, Mack CD, Kent RW, **McCullough KA**, Coughlin MJ, Anderson RB. The development of mandatory practices for the testing and maintenance of synthetic turf fields in the National Football League. *Int Turfgrass Soc Res J.* Published online 2021. doi:10.1002/its2.94.

Lau BC, Barg A, Haytmanek CT, **McCullough K**, Amendola A. Evolution in Surgical Management of Ankle Instability in Athletes. *J Am Acad Orthop Surg*. 2021 Jan 1;29(1):e5-e13. doi: 10.5435/JAAOS-D-20-00176. PMID: 33306560.

McCullough KA. Osteochondral Lesions of the Talus: A Continued Optimal Management and Clinical Follow-up Enigma: Commentary on an article by Hong-Yeol Yang, MD, and Keun-Bae Lee, MD, PhD: "Arthroscopic Microfracture for Osteochondral Lesions of the Talus. Second-Look Arthroscopic and Magnetic Resonance Analysis of Cartilage Repair Tissue Outcomes". *J Bone Joint Surg Am*. 2020 Jan 2;102(1):e3. doi: 10.2106/JBJS.19.01203. PMID: 31880658.

Beason AM, Koehler RJ, Sanders RA, Rode BE, Menge TJ, **McCullough KA**, Glass NA, Hettrich CM, MOON Shoulder Group, Cox CL. "Surgeon Agreement on the Presence of Pathologic Anterior Instability on Shoulder Imaging Studies." *Orthop J Sports Med* 2019: Aug 9: *Epub ahead of print*.

- D. Tropha, W. Graham, **K. McCullough**, C. Lattermann, D. Corpus, B. Saltzman, J. Fleischli, D. Piasecki. "A Radiographic Sizing Algorithm for Tibial Plateau Osteochondral Allografts." *Cartilage* 2019 Mar 12: *Epub ahead of print*.
- J. Jastifer, A. McNitt, C. Mack, R. Kent, **K. McCullough**, M. Coughlin, R. Anderson. "Synthetic Turf: History, Design, Maintenance, and Athlete Safety." *Sports Health*. 2019 Jan/Feb 11(1): 84-90.
- J. Jastifer, **K. McCullough**. "Fatigue bending strength of Jones fracture specific screw fixation." *Foot Ankle Int.* 2018 Apr 39(4): 493-499.

- S. Parekh, **K. McCullough**, S. Brigido, M. Cooper. "Sports Injuries of the Foot and Ankle: How Do Treatments Differ from the General Patient Population." *Foot Ankle Spec.* 2017 Aug;10(4): 329-332.
- J. Jastifer, R. Kent, J. Crandall, C. Sherwood, D. Lessley, **K. McCullough,** M. Coughlin, R. Anderson. "The Athletic Shoe in Football: Apparel or Protective Equipment?" *Sports Health.* 2017 Mar/Apr: 126-131.
- S. Richman, M. Siqueira, **K. McCullough**, M. Berkowitz. "Correction of Hammertoe Deformity with Novel Intramedullary PIP Fusion Device versus K-Wire Fixation." *Foot Ankle Int.* 2017 Feb; 38(2): 174-180.
- N. Amin, **K. McCullough**, G. Mills, D. Cerynik, J. Rosneck, R. Parker. "The Impact and Functional Outcomes of Achilles Tendon Pathology in National Basketball Association Players." *Clin Res Foot Ankle*. 2016 Sep 4:3.
- W. B. Lievers, R. Frimenko, **K. McCullough**, J. Crandall, R. Kent. "Etiology and Biomechanics of Midfoot (Lisfranc) Injuries in Athletes." *Crit Rev Biomed Eng.* 2015; 43: 213-238.
- **K. McCullough**, C. Shaw, R. Anderson. "Mini-Open Repair of Achilles Rupture in the National Football League." *J Surg Orthop Adv.* Winter 2014; 23(4):179-183.
- C. Anderson, J. Nyman, **K. McCullough**, Y. Song, S. Uppuganti, K. O'Neill, A. Anderson, W. Dunn. "Biomechanical Evaluation of Physeal-Sparing Fixation Methods in Tibial Eminence Fractures." *Am J Sports Med*. 2013 May 20. [Epub ahead of print]
- **K. McCullough**, K. Phelps, M. Matava, W. Dunn, R. Parker, E. Reinke, K. Spindler. "Return to High School and College Level Football following ACL Reconstruction." *Am J Sports Med.* 2012 Aug 24. [Epub ahead of print]
- C. Devin, **K. McCullough**, B. Morris, A. Yates, J. Kang. "Hip-Spine Syndrome: Current Concepts". *J Am Acad Orthop Surg*. 2012 Jul;20(7):434-42.
- J. Even, **K. McCullough**, B. Braly, J. Hohl, Y. Song, J. Lee, M. McGirt, C. Devin. "Clinical Indications for Arterial Imaging in Cervical Trauma." *Spine (Phila Pa 1976)*. 2012 Feb 15;37(4):286-91.
- **K. McCullough**, C. Waits, R. Garimella, S. Tague, J. Sipe, H.C. Anderson. "Immunohistochemical Localization of Bone Morphogenetic Proteins (BMPs) 2, 4, 6, and 7 during Induced Heterotopic Bone Formation." *J Orthop Res* 2007 Apr; 25(4): 465-72.
- **K. McCullough**, H. Nguyen, D. Stechshulte, O. Tawfik. "Ligneous Conjunctivitis: A Case Report with Multi-organ Involvement." *Histopathology* 2007 Mar; 50(4): 511-3.

K. McCullough, I. Damjanov. "Intestinal histoplasmosis mimicking Whipple's disease." *Histopathology*. 2006 Feb; 48(3): 306-7.

Book Chapters

- **K. McCullough**, C. Shaw, C. Barnthouse, J. Browne. "Return to American Football after ACL Reconstruction" in *The Anterior Cruciate Ligament: Reconstruction and Basic Science*." Elsevier; 2017.
- **K. McCullough**, E. Stout, K. Spindler. "Return to Sport following ACL Reconstruction: The MOON Experience" in *Rotatory Knee Instability: An Evidence Based Approach*. Springer; September 27, 2016. 427-432.

Abstracts and/or Proceedings

- **K. McCullough.** "Management of Traumatic Ankle Injuries in the Elite Athlete." Moderator and Lecturer, FOOTinnovate.com Webinar. February 11, 2020.
- **K. McCullough.** "Ankle Impingement and Osteochondral Lesions 2020." Invited lecturer, "2019 State of the Art Soccer Medicine Meeting" combined meeting of the AOSSM, ISAKOS, and AMSSM Miami, FL September 20-21, 2019.
- **K. McCullough.** "Foot and Ankle Breakout." Invited moderator, "2019 Football Sports Medicine Youth to the NFL" combined meeting of the AOSSM, PFATS, NFLPS, and AMSSM Nashville, TN March 30, 2019.
- **K. McCullough.** "Achilles Rupture." Invited lecturer, "2019 Football Sports Medicine Youth to the NFL" combined meeting of the AOSSM, PFATS, NFLPS, and AMSSM Nashville, TN March 30, 2019.
- **K. McCullough.** "Ankle Syndesmosis In-Season Surgery." Invited lecturer, "2019 Football Sports Medicine Youth to the NFL" combined meeting of the AOSSM, PFATS, NFLPS, and AMSSM Nashville, TN March 29, 2019.
- **K. McCullough,** A. Borgmann. "Recent Trends in Sports Foot and Ankle Injury Management." Invited lecturer, Mid-America Athletic Trainers Association "40th Annual Meeting & Symposium" Tulsa, OK March 28, 2019.
- D. Carreira, **K. McCullough**, B. Emmons. "Anterior and Posterior Impingement: Physical Examination Presentation, Imagine Findings, and Arthroscopic Management." Scientific Exhibit at 2019 AAOS Annual Meeting Las Vegas, NV March 12-16, 2019.
- P. Connor, D. Trofa, B. Saltzman, K. Corpus, **K. McCullough**, R. Anderson. "Focal FHL Muscular Edema: The Most Sensitive MRI Finding in Acute Syndesmotic Ankle

- Sprains." Poster presentation, 2019 NFL Combine Scientific Meeting of the NFL Physicians Society.
- **K. McCullough**. "Non-insertional Achilles Rupture: Trends with the Minimally Invasive Approach." Invited lecturer, FOOTinnovate.com Webinar. December 19, 2018
- **K. McCullough**. "Jones Fractures" Invited lecturer, VuMedi.com webinar. November 13, 2018.
- **K. McCullough.** "Foot and Ankle Injury in the Athlete." Invited lecturer, 2018 American College of Sports Medicine, Midwest Chapter Annual Meeting Kansas City, MO October 18, 2018.
- **K. McCullough**. "Navicular Stress Fractures: Beware!" Invited lecturer, FOOTinnovate.com Webinar. September 13, 2018.
- **K. McCullough.** "Navicular Stress Fractures: Beware." Invited Lecturer 2018 AOSSM Annual Meeting San Diego, CA July 8, 2018.
- **K. McCullough.** "Foot and Ankle Injury in the Athlete" and "Team Physician Considerations: Is the Risk worth the Reward." Allegheny Health Network invited Grand Rounds lecturer for Orthopedic Surgery Department. January 23, 2018
- **K. McCullough.** "Managing Midfoot Injuries in the Athlete." Invited Lecturer 2017 AOSSM Annual Meeting Toronto, July 20, 2017.
- **K. McCullough.** "Foot and Ankle Injury in the Athlete." Invited Honorarium Guest Lecturer Annual Big 12 Conference Sports Medicine Meeting Fort Worth, TX, May 5, 2017.
- **K. McCullough.** "Foot and Ankle Trauma in the Athlete Getting Them Back in the Game." Invited Session Moderator at Combined AOSSM/AOFAS Specialty Day, 2017 AAOS Annual Meeting San Diego CA, March 18, 2017.
- **K. McCullough.** "Lisfranc Injuries in Elite Athletes" AOFAS Webinar Series 2016, September 20, 2016.
- S. Richman, M. Siqueira, **K. McCullough**, M. Berkowitz. "Correction of Hammer Toe Deformity with Novel Intramedullary PIP Fusion Device vs K-Wire Fixation." Presentation, 2016 AOFAS Annual Meeting, Toronto.
- **K. McCullough.** "Foot and Ankle Injuries in the NFL" Update on current treatment trends for Achilles and Lisfranc injury and ongoing Foot and Ankle research with the Foot and Ankle Subcommittee. Co-Moderator of Foot and Ankle Academic Session and Podium presentation at 2016 AOSSM Annual Meeting, Colorado Springs, CO.

- **K.** McCullough, C. Corn, R. Anderson. "Lisfranc Injury in the Elite Football Athlete." Podium presentation, 2015 AOFAS Annual Meeting, Long Beach CA.
- N. Amin, A. Volpi, T. Lynch, R. Patel, **K. McCullough**, M. Schickendantz, M. Jones. "Distal biceps repair: A Meta-Analysis of a Single Incision Versus Double Incision Surgical Technique." Podium presentation, 2015 AAOS Meeting in Las Vegas, NV.
- **K. McCullough**, C. Corn, R. Anderson. "Lisfranc Injury in the Elite Football Athlete." Podium presentation at 2014 NFL Combine Scientific Meeting of NFL Physicians Association (presented by RBA as only author who was active NFL team physician).
- **K.** McCullough, R. Anderson. "Minimally Invasive Repair of Non-insertional Achilles Rupture in the Elite Athlete." Podium presentation, 2014 NFL Combine Scientific Meeting of the NFL Physicians Society.
- C. Anderson, J. Nyman, **K. McCullough**, Y. Song, S Uppuganti, K. O'Neill, A. Anderson, W. Dunn. "Biomechanical Evaluation of Physeal-Sparing Fixation Methods in Tibial Eminence Fractures." Podium presentation, 2012 AAOS Annual Meeting in Chicago, IL.
- **K. McCullough**, K. Phelps, E. Reinke, W. Dunn, K. Spindler. "Return to High School and College Level Football following ACL Reconstruction." Podium presentation, AOSSM 2012 Specialty Day at AAOS Annual Meeting, February 11 in San Francisco, CA (presented by Rick Parker active MOON group physician).
- **K. McCullough**, K. Phelps, E. Reinke, W. Dunn, K. Spindler. "Return to High School and College Level Football following ACL Reconstruction." Podium presentation, 2011 Tennessee Orthopedic Society Annual Meeting, September 30 in Birmingham, AL.
- **K.** McCullough, J. Even, B. Braly, J. Hohl, Y. Song, J. Lee, M. McGirt, C. Devin. "Clinical Indications for Arterial Imaging in Cervical Trauma." Poster presentation, 2011 AAOS Annual Meeting in San Diego, CA.
- **K. McCullough**, J. Even, B. Braly, J. Hohl, Y. Song, J. Lee, M. McGirt, C. Devin. "Clinical Indications for Arterial Imaging in Cervical Trauma." Poster presentation, 2011 Tennessee Medical Association Annual Meeting, April 15-17 in Nashville, TN. Awarded best poster presentation.
- **K. McCullough**, J. Even, B. Braly, J. Hohl, Y. Song, J. Lee, M. McGirt, C. Devin. "Clinical Indications for Arterial Imaging in Cervical Trauma." Poster presentation, 2011 Vanderbilt Research Forum, April 21st in Nashville, TN.
- J. Even, **K. McCullough**, B. Braly, J. Hohl, Y. Song, J. Lee, M. McGirt, C. Devin. "Clinical Indications for Arterial Imaging in Cervical Trauma." Podium presentation, 2010 CSRS Annual Meeting in Charlotte, North Carolina, December 2 4, 2010.

- **K. McCullough**, H. C. Anderson, C. Waits, J. Sipe, R. Dhanyamraju. "Distribution of Bone Morphogenetic Proteins (BMP's) 2, 4, and 6 during Induced Heterotopic Bone Formation, Evaluated by Immunohistochemistry." University of Kansas Medical Center Research Forum, April 2004.
- **K. McCullough**, S. Schumacher, R. Maser, J. Dilts, D. Heruth. "RecQ Helicases in Ciliated Protozoa." Poster at American Society for Microbiology, 102nd General Meeting, Salt Lake City, Utah, May 19-23, 2002.
- **K. McCullough**, S. Schumacher, R. Maser, J. Dilts, D. Heruth. "Shedding New Light on the Aging Process." Missouri Academy of Science research competition, January 2002.

Manuscripts/Research in Progress

- **K.** McCullough, J. Jastifer, R. Anderson, M. Coughlin, R. Kent, J. Crandall, and NFL Foot and Ankle Subcommittee. "Achilles Injury in the NFL: A Retrospective Review." 2015.
- **K. McCullough**, R. Anderson, M. Coughlin, R. Kent, J. Crandall, and NFL Foot and Ankle Subcommittee. "NFL Shoe Size: A Report on Measured Versus Reported Size Worn in Active NFL Players." 2014.
- **K.** McCullough, Emily Reinke, Rick Parker, Kurt Spindler, and MOON Physicians. "Return to Play for Amateur Basketball Players following ACL Reconstruction." 2014.
- **K.** McCullough, K. Schweitzer, R. Anderson. "TightRope Fixation of Unstable Syndesmotic Injuries in Elite Athletes: A Retrospective Review". 2013.
- **K. McCullough**, R. Raible, S. Martin, K. Thompson, P. Connor, R. Anderson. "High Ankle Sprains in the NFL: Can MRI Findings Predict Severity of Injury and Return to Play?" 2013.
- **K. McCullough**, J. Crandall, R. Kent, R. Anderson, and NFL Foot and Ankle Subcommittee. "High Ankle Sprains in the NFL Fundamental Study on Injury Biomechanics and Prevention." 2013.
- **K. McCullough**, C. Corn, B. Anderson. "NFL Player Return to Play following LisFranc Injury." 2013.
- **K.** McCullough, J. Silva, J. Starman, M. Wilson, D. Piasecki. "Biomechanical Comparison of Standard Transtibial Versus Anteromedial Portal and Modified Transtibial ACL Reconstruction Techniques." 2013.
- **K. McCullough**, J. Silva, D. D'Alessandro, P. Connor, D. Piasecki, and J. Fleischli. "Outcomes following ACL Reconstruction in Skeletally Immature Patients." 2013.

K. McCullough, R. Malchow, A. Thomson. "Neurological Sequelae following Outpatient Foot and Ankle Procedures under Regional Anesthesia." 2011.