

CURRICULUM VITAE

JENNIFER A ZELLERS, PT, DPT, PHD

DATE: May 7, 2024

ADDRESS AND TELEPHONE NUMBERS:

Washington University in St. Louis
Program in Physical Therapy
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PRESENT POSITION: Assistant Professor in Program in Physical Therapy and Department of Orthopaedic Surgery, Washington University School of Medicine in St. Louis

EDUCATION:

2003-2007 Bachelor of Arts, Biology; Arcadia University, Glenside, PA
2007-2010 Doctor of Physical Therapy; Columbia University, New York, NY
2014-2018 Doctor of Philosophy, Biomechanics and Movement Science; University of Delaware, Newark, DE

ACADEMIC POSITIONS / EMPLOYMENT:

2005-2007 Laboratory Technician; Fox Chase Cancer Center, Philadelphia, PA
2014-2018 Research Assistant/Teaching Assistant; University of Delaware, Newark, DE
2018 Short Term Researcher/Postdoctoral Researcher; University of Delaware, Newark, DE
2018-2021 Postdoctoral Research Scholar; Washington University School of Medicine, St. Louis, MO
2021-present Assistant Professor; Washington University School of Medicine, St. Louis, MO

LICENSURE:

Physical therapist – Delaware, Pennsylvania, New Jersey, Missouri (license #2021018652)

CERTIFICATIONS:

2021 Diversity, Equity and Inclusion in the Workplace Certificate; University of South Florida

HONORS AND AWARDS:

2004-2007 Dean's Distinguished Honors List; Arcadia University
2007 Paul R. Cutright Award for Achievement in Biology; Arcadia University
2007 Student Address, Honors Convocation; Arcadia University
2007-2009 Merit Scholarship; Columbia University
2009 Rudin Foundation Scholarship; Columbia University
2010 Award for Outstanding Achievement in Orthopaedics; Columbia University
2016 Professional Development Award; University of Delaware Office of Graduate and Professional Education
2017 Women of Promise Award; University of Delaware
2018 Biomechanics Special Interest Group Travel Award; American Physical Therapy Association
2020 Best Research Fellow Paper Award; International Symposium on Ligaments & Tendons

2023 Foot & Ankle Special Interest Group, Excellence in Service Award; Academy of Orthopaedic Physical Therapy, American Physical Therapy Association

SERVICE:

2019-2021 Director of Academy of Orthopaedic Physical Therapy's Foot & Ankle Special Interest Group Student Team
2020-2021 Annual Biomechanics Research Conference for Minority Students (ABRCMS) annual conference judge and live mentor
2021 Faculty search committee member
2022 American Physical Therapy Association, Orthopaedic Section, grant reviewer
2022 National Institutes of Health, Loan Repayment Program, study section member
2022-present Steven J. Rose Research Award committee member
2022 University of Nebraska, external grant reviewer
2023 Musculoskeletal Research Center Symposium committee member
2023-present Steven J. Rose Lectureship coordinator

EDITORIAL RESPONSIBILITIES:

Ad hoc reviewer: British Journal of Sports Medicine; Journal of Orthopaedic and Sports Physical Therapy; Knee Surgery, Sports Traumatology, Arthroscopy; Arthritis Care & Research; Frontiers in Physiology; Journal of Biomechanics; Journal of Applied Physiology; GeroScience; Journal of Athletic Training; Muscle, Ligaments, and Tendons Journal; PLOS ONE; Journal of Dance Medicine & Science; Journal of Biomechanical Engineering; Scientific Reports; BMC Surgery; Journal of ISAKOS; The Surgery Journal; Biomechanics and Modeling in Mechanobiology; Acta Biomaterialia

Conference Abstract Reviewer for American Physical Therapy Association, Combined Sections Meeting
Conference Abstract Reviewer for the Orthopaedic Research Society, Annual Meeting

PROFESSIONAL SOCIETIES AND ORGANIZATIONS:

2007-present American Physical Therapy Association
2013-2015 International Association for Dance Medicine and Science
2017-present Orthopaedic Research Society
2019-2020 American Orthopaedic Foot & Ankle Society
2022-2023 International Society for Magnetic Resonance in Medicine

INVITED LECTURESHIPS:

2003 Morina A, **Zellers JA**. Vestibular rehabilitation. Otolaryngology Symposium (ENT ORL), Philadelphia, PA.
2016 **Zellers JA**. Diagnostic Ultrasound Imaging. University of the Sciences, Philadelphia, PA.
2017 **Zellers JA**. "Differentiation of tendon pathology: Not all tendons and not all people are the same," as part of Silbernagel KG, **Zellers JA**, Houck J, Lundberg M. Achilles tendinopathy: Beyond eccentrics. Education session of American Physical Therapy Association, Combined Sections Meeting, San Antonio, TX.
2018 **Zellers JA**. "What are the key rehabilitation goals and criteria?" as part of Silbernagel KG, **Zellers JA**, Carmont MR. Return to play following Achilles tendon rupture. ESSKA Congress, Glasgow, Scotland.
2019 **Zellers JA**. Anatomy and biomechanics of the foot and ankle. American Orthopaedic Foot & Ankle Society Annual Meeting, Chicago, IL.

- 2020 **Zellers JA.** “Inferior tendon mechanical properties in presence of diabetes in individuals with Achilles Tendinopathy,” as part of Silbernagel KG, Kulig K, Michener L. Research spotlight – the spectrum of tendinopathy: From the young athlete to the sedentary older adult. Education session of American Physical Therapy Association, Combined Sections Meeting, Denver, CO.
- 2020 Ebrahimi A, **Zellers JA.** Co-moderators for “Postdoc to Professorship Workshop,” panelist discussion. American Society of Biomechanics, Virtual Meeting.
- 2021 **Zellers JA.** Achilles tendon and exercise load: Pain or no pain. International Society of Arthroscopy, Knee Surgery and Orthopaedic Sports Medicine (ISAKOS) 2021 Global Congress Sports Rehab Concurrent Course, Virtual Meeting.
- 2021 **Zellers JA.** Tendon diagnostic imaging: A move toward quantitative outcomes. Women’s Health Technologies Research Forum, Washington University School of Medicine, St. Louis, MO.
- 2022 **Zellers JA.** “Tendon structure and systemic factors – how a hyperglycemic systemic environment influences tendon health,” as part of Chimenti R, Cuddeford T, **Zellers JA**, Silbernagel KG. Cause of Achilles tendon pain? What to evaluate with your next patient. Education session of American Physical Therapy Association, Combined Sections Meeting, San Antonio, TX.
- 2022 **Zellers JA.** “Tendon in the diabetic foot” as part of Zellers JA, Meyer G, Jeong HJ, Hastings MK. The diabetic foot update: From bench to bedside. Education session of American Physical Therapy Association, Combined Sections Meeting, San Antonio, TX; offered On-Demand.
- 2022 **Zellers JA**, Bove A, Kobal K, Minick K, Sage-King F, Sprague A, Zarzycki R. Engaging in research and teaching after the DPT – a conversation about career paths. Education session of American Physical Therapy Association, Combined Sections Meeting, San Antonio, TX.
- 2022 **Zellers JA.** “Application of quantitative MRI to characterize tendon,” as part of Reiter D, et al. Advances in noninvasive structure-function assessment of musculoskeletal tissues. International Society for Magnetic Resonance in Medicine/European Society for Magnetic Resonance in Medicine, Annual meeting, London, England.
- 2023 **Zellers, JA.** “We know about eccentric exercises, but what are the other components of rehabilitation for Achilles tendinopathy,” as part of Achilles Mid-Portion Tendinopathy. European Society of Sports Traumatology, Knee Surgery & Arthroscopy – Ankle & Foot Associates webinar, virtual webinar.
- 2023 **Zellers JA.** “Understanding the spectrum of tendon dysfunction: Steps toward personalizing treatment.” REHAB at University of Wisconsin-Madison Fall Seminar Speaker Series, virtual.
- 2023 **Zellers JA.** “Achilles tendonitis clinic.” Big River Running, St. Louis, MO.
- 2024 **Zellers JA.** “Return to sport after Achilles tendon rupture,” as part of Zellers JA, Silbernagel KG, Corrigan P, Smitheman H. Achilles tendon rupture and tendinopathy: Considerations for the athlete. Education session of American Physical Therapy Association, Combined Sections Meeting, Boston, MA.
- 2024 Zellers JA. “Metabolic syndrome in treating musculoskeletal injury.” Orthopaedic Research Society, Annual Meeting, Long Beach, CA.

RESEARCH SUPPORT

ACTIVE

- 2019 Research Division Start Up Fund, Washington University School of Medicine in St. Louis, Program in Physical Therapy
Role: Co-PI (with MK Hastings), Amount: \$1,995.00
- 2022 R21 (Pending), National Institute of Arthritis and Musculoskeletal and Skin Diseases
Role: Co-PI (contact PI; Dr. Quing Zhu, Co-PI), Amount \$274,999.00
Applying photoacoustic imaging to quantify human tendon vasculature

- 2022 ICTS Just-In-Time Core Usage Funding Program, Washington University School of Medicine in St. Louis
Role: PI, Amount \$5,000
Protein Profile of Human Tendon
- 2022 Musculoskeletal Research Center Just-In-Time Core Usage Funding, Washington University School of Medicine in St. Louis
Role: PI, Amount \$1,548
Spatial distribution of Mohawk transcription in human Achilles tendon
- 2023 Musculoskeletal Research Core Pilot & Feasibility Award, Washington University School of Medicine in St. Louis
Role: PI, Amount \$40,000
Human diabetic tendon composition: A data-driven approach
- 2023 Musculoskeletal Research Core, Core B Just-in-Time funds, Washington University School of Medicine in St. Louis
Role: PI, Amount \$1,350
Diabetes-mediated osseous changes in the Achilles tendon

PAST

- 2014-2018 Research assistant and short term researcher/postdoctoral researcher for mentor's projects (PI: KG Silbernagel) funded from: NIH NIAMS (R21AR067390, R01AR072034), Foundation for Physical Therapy (Foundation Research Grant), University of Delaware Research Foundation
- 2018-2019 NIH T32 HD007434
Role: Postdoctoral Trainee, 11/2018-9/2019 (C Lang – PI)
- 2019-2021 NIH F32 DK123916, National Institute of Diabetes and Digestive and Kidney Diseases
Role: PI, Amount: \$122,836.00
Diabetes-related tendon changes: Integrating ex vivo and in vivo approaches
- 2019-2022 Mallinckrodt Institute of Radiology Development Fund, Washington University School of Medicine in St. Louis
Role: Co-PI (with MK Hastings), 8 hours of MRI scanning time (\$5,680.00 equivalent)
- 2019-2022 ICTS/MIR Just-In-Time Core Usage Funding Program, Washington University School of Medicine in St. Louis
Role: Co-PI (with MK Hastings), Amount: \$9,940.00

CLINICAL TITLE AND RESPONSIBILITIES:

- 2010-2014 Physical Therapist/Advanced Clinician I; Thomas Jefferson University Hospital, Philadelphia, PA
Responsibilities included assisting with start-up of therapy services at Jefferson Comprehensive Concussion Center, vestibular therapy provision, co-chair of the Employee Satisfaction Committee, staff competencies (left ventricular assist device training)
- 2014-2018 Physical Therapist (PRN); University of Delaware Physical Therapy, Newark, DE

TEACHING TITLE AND RESPONSIBILITIES:

- 2011-2012 Laboratory Instructor, Functional Mobility; Drexel University, Philadelphia, PA
- 2015-2017 Teaching Assistant and Lecturer: "Foot Basic Evaluation," PHYT 624 Basic Evaluation Techniques; University of Delaware, Newark, DE

- 2016-2017 Teaching Assistant, PHYT608 Musculoskeletal Evaluation & Treatment; University of Delaware, Newark, DE
- 2017 Teaching Assistant, PHYT634 Electrotherapy; University of Delaware, Newark, DE
- 2016-2017 Laboratory Proctor, PHYT808 Spine Management; University of Delaware, Newark, DE
- 2019 Laboratory Assistant, PT638 Diagnosis and Management of Musculoskeletal Conditions in PT III, Foot/Ankle Unit; Washington University School of Medicine in St. Louis, St. Louis, MO
- 2019 Lecturer: "Mechanical Properties of Tendon and Ligament," PT606 Kinesiology I; Washington University School of Medicine in St. Louis, St. Louis, MO
- 2020 Speaker: "Transition to Postdoc," Movement Science Program Seminar; Washington University School of Medicine in St. Louis, St. Louis, MO
- 2020 Lecturer for tendon/ultrasound content and case study presentation, PT654 Case Integration III – MSI Special Topics Focused Study Group; Washington University School of Medicine in St. Louis, St. Louis, MO
- 2021 Lecturer for systematic review content, Diagnosis & Evidence Analysis III; Washington University School of Medicine in St. Louis, St. Louis, MO
- 2021 Laboratory Assistant, PT628 Case Integration I, Diabetic Foot Screening lab; Washington University School of Medicine in St. Louis, St. Louis, MO
- 2021 Lecturer: "Muscle and Tendon Biomechanics," Biomechanics; Teachers College, Columbia University, New York, NY
- 2022 Lecturer for systematic review content, Diagnosis & Evidence Analysis III; Washington University School of Medicine in St. Louis, St. Louis, MO
- 2022 Speaker: "Reflections on Experiences so Far: Pursuing a Unique Path Forward," Movement Science Program Seminar; Washington University School of Medicine in St. Louis, St. Louis, MO
- 2022 Laboratory Instructor: PT638 Diagnosis and Management of Musculoskeletal Conditions III, foot and ankle content; Washington University School of Medicine in St. Louis, St. Louis, MO
- 2022 Laboratory Instructor: Total contact casting; Washington University School of Medicine in St. Louis, St. Louis, MO
- 2022 Lecturer: Advanced Topics in Foot and Ankle, PT654 Case Integration III – MSI Special Topics Focused Study Group; Washington University School of Medicine in St. Louis, St. Louis, MO

TRAINING / MENTEE RECORD:

- 2021 USF Muma College of Business Certificate Program in Diversity, Equity, and Inclusion in the Workplace

Current Trainees/Mentees

- 2022-present Menghan Chen; Doctor of Physical Therapy Student, Research Assistant
- 2023-present Neil Narayanan; Undergraduate Engineering Student, Research Assistant
- 2023-present Sophia McSpedon, Doctor of Physical Therapy Student, Research Assistant
- 2024-present Yi Kang; Movement Science Program, PhD Student

Past Trainee/Mentees

- 2014-2018 Primary mentor to undergraduate research scholars, University of Delaware: Courtney Cox, Samantha Dargis, Tyler Tice, Phoebe Balascio, Rene Lopez, Sheridan Parker, Luke Tucker
- 2018-2020 Primary mentor to doctor of physical therapy students, Washington University School of Medicine in St. Louis: Nick Youmans, Alexa York
- 2021-2024 Reika McNish; Doctor of Physical Therapy Student, Research Assistant

2021-2024	Rachana Vaidya, PhD; Postdoctoral Research Associate (co-mentored with Simon Tang, PhD)
2022	Saksham Pruthi; TL1 Summer Program trainee
2022	Johnathon Callum; Program in Physical Therapy summer work study student
2022	Stephane Cui, Undergraduate Student, Independent Study
2023	Amelia Ni; Physical Medicine & Rehabilitation Fellow, research experience
2023	Mo Moeslein; Program in Physical Therapy summer work study student
2023-2024	Joana Hadzhilazova, Undergraduate Student, Independent Study; ASPIRE Internship

PUBLICATIONS, PEER REVIEWED

1. Chiarello C, **Zellers J**, Sage-King F. Predictors of Inter-recti Distance in Cadavers. *Journal of Women's Health Physical Therapy*, Sep/Dec 2012, 36(3): 125-30.
2. Pearce CJ, Tourne Y, **Zellers J**, Terrier R, Toschi P, Silbernagel KG. Rehabilitation after anatomical ankle ligament repair or reconstruction. *Knee Surgery, Sports Traumatology, Arthroscopy*, 2016, 24(4):1130-9.
3. **Zellers JA**, Carmont MR, Silbernagel KG. Return to play post-Achilles tendon rupture: A systematic review and meta-analysis of rate and measures of return to play. *Br J Sports Med*, 2016, 50:1325-32.
4. **Zellers JA**, Cortes DH, Silbernagel KG. From acute Achilles tendon rupture to return to play – a case report evaluating recovery of tendon structure, mechanical properties, clinical and functional outcomes. *Int J Sports Phys Ther*, 2016, 11(7):1150-59.
5. **Zellers JA**, van Ostrand K, Silbernagel KG. Calf endurance and Achilles tendon structure in classical ballet dancers. *J Dance Med and Sci*, 2017, 21(2):64-69.
6. Carmont MR, **Zellers JA**, Brorsson A, Olsson N, Nilsson-Helander K, Karlsson J, Silbernagel KG. Functional outcomes of Achilles tendon minimally invasive repair using 4 and 6 strand non-absorbable suture: A cohort comparison study. *Orthop J Sports Med*, 2017, 5(8):2325967117723347. eCollection 2017 Aug.
7. **Zellers JA**, Carmont MR, Silbernagel KG. Achilles tendon resting angle relates to tendon length and function. *Foot & Ankle International*, 2017, 39(2):343-348.
8. **Zellers JA**, Corrigan P, Pontiggia L, Cortes DH, Silbernagel KG. Side-to-side differences in Achilles tendon geometry and mechanical properties following Achilles tendon rupture. *Muscles, Ligaments, and Tendons J*, 2018, 7(3):541-547.
9. **Zellers JA**, Cortes DH, Pohlig RT, Silbernagel KG. Tendon morphology and mechanical properties assessed by ultrasound show change early in recovery and potential prognostic ability for 6 month outcomes. *Knee Surgery, Sports Traumatology, Arthroscopy*, 2019, 27(9):2831-2839.
10. **Zellers JA**, Tucker L, Higginson J, Manal K, Silbernagel KG. Changes in gait mechanics and muscle activity with wedge height in an orthopaedic boot. *Gait & Posture*, 2019, 70:59-64.
11. **Zellers JA**, Marmon A, Ebrahimi A, Silbernagel KG. Lower extremity work along with triceps surae structure and activation is altered with jumping after Achilles tendon repair. *Journal of Orthopaedic Research*, 2019, 37(4):933-941.
12. Corrigan P, **Zellers JA**, Balascio P, Silbernagel KG, Cortes DH. Quantification of mechanical properties in healthy Achilles tendon using continuous shear wave elastography: A reliability and validation study. *J Ultrasound Med & Biol*, 2019, 45(7):1574-1585.
13. Carmont MR, **Zellers JA**, Brorsson A, Silbernagel KG, Karlsson J, Nilsson-Helander K. No difference in strength and clinical outcome between early and late repair after Achilles tendon rupture. *Knee Surgery, Sports Traumatology, Arthroscopy*, 2020, 28(5):1587-1594.

14. **Zellers JA**, Parker S, Marmon A, Silbernagel KG. Muscle activation during maximum voluntary contraction and m-wave related in healthy but not in injured conditions: Implications when normalizing electromyography. *Clinical Biomechanics*, 2019, 69:104-108.
15. **Zellers JA**, Bley BC, Pohlig RT, Alghamdi NH, Silbernagel KG. Frequency of pathology on diagnostic ultrasound and relationship to patient demographics in individuals with insertional Achilles tendinopathy. *Int J Sports Phys Ther*, 2019, 14(5):761-769.
16. **Zellers JA**, Christensen M, Kjær IL, Rathleff MS, Silbernagel KG. Defining components of early functional rehabilitation for acute Achilles tendon rupture: A systematic review. *Orthopaedic Journal of Sports Medicine*, 2019, 7(11): 2325967119884071. eCollection 2019 Nov.
17. **Zellers JA**, Pohlig RT, Cortes DH, Silbernagel KG. Achilles tendon cross-sectional area at 12 weeks post-rupture relates to 1-year heel-rise height, *Knee Surgery, Sports Traumatology, Arthroscopy*, 2020, 28:245-252.
18. **Zellers JA**, Brorsson A, Silbernagel KG. Impact of seated and standing positions on triceps surae muscle activation in unilateral Achilles tendon rupture. *Translational Sports Medicine*, 2020, 3:3-8, doi: 10.1002/tsm2.117.
19. Hastings MK, Jeong H-J, Sorensen CJ, **Zellers JA**, Chen L, Bohnert KL, Snozek D, Mueller MJ. Relationships within and between lower and upper extremity dysfunction in diabetes. *The Foot*, 2020, 44. <https://doi.org/10.1016/j.foot.2020.101680>
20. Carmont MR, **Zellers JA**, Brorsson A, Nilsson-Helander K, Karlsson J, Silbernagel KG. Age and tightness of repair are predictors of heel-rise height after Achilles tendon rupture. *Orthop J Sports Med*, 2020, 8(3):2325967120909556.
21. **Zellers JA**, Mueller MJ, Commean PK, Chen L, Jeong H-J, Hastings MK. Multi-system factors associated with metatarsophalangeal joint deformity in individuals with type 2 diabetes. *Journal of Clinical Medicine*, 2020, 9(4), 1012; <https://doi.org/10.3390/jcm9041012>
22. Christensen M, **Zellers JA**, Kjær IL, Silbernagel KG, Rathleff MS. Resistance exercises in early functional rehabilitation for Achilles tendon ruptures are poorly described: A scoping review. *Journal of Orthopaedic & Sports Physical Therapy*, 2020, 50(12):681-690.
23. Jeong H-J, Mueller MJ, **Zellers JA**, Hastings MK. Midfoot and ankle motion during heel rise and gait are related in people with diabetes and peripheral neuropathy. *Gait & Posture*, 2020, 16(84):38-44.
24. Hastings MK, Commean PK, Chen L, **Zellers JA**, Sinacore DR, Baker JC. Qualitative study of musculoskeletal tissues and their radiographic correlates in diabetic neuropathic foot deformity. *The Foot*, 2021: 101777.
25. Jeong H-J, Mueller MJ, **Zellers JA**, Yan Y, Hastings MK. Heel rise and non-weightbearing ankle plantarflexion tasks to assess foot and ankle function in people with diabetes mellitus and peripheral neuropathy. *Physical Therapy*, 2021, 101(7):pzab096. doi: 10.1093/ptj/pzab096
26. **Zellers JA**, Baxter J, Silbernagel KG. Functional ankle range of motion but not peak Achilles tendon force diminished with heel-rise and jumping tasks after Achilles tendon rupture. *American Journal of Sports Medicine*, 2021, 49(9):2439-2446.
27. **Zellers JA**, Bernhardson HJ, Jeong H-J, Commean PK, Chen L, Mueller MJ, Hastings MK. Association of toe-extension movement pattern magnitude and variability during three functional tasks with diabetic foot complications. *Clinical Biomechanics*, 2021, 85:105371.
28. **Zellers JA**, Commean PK, Chen L, Mueller MJ, Hastings MK. A limited number of slices yields comparable results to all slices in foot intrinsic muscle deterioration ratio on computed tomography and magnetic resonance imaging. *Journal of Biomechanics*, 2021, 129:110750.

29. **Zellers JA**, Eekhoff JD, Walk R, Hastings MK, Tang SY, Lake SP. Human Achilles tendon mechanical behavior more strongly related to collagen disorganization than advanced glycation end-products content. *Scientific Reports*, 2021;11(1):24147.
30. Jeong H-J, Mueller MJ, **Zellers JA**, Commean PK, Chen L, Hastings MK. Body mass index and maximum available midfoot motion are associated with midfoot angle at peak heel rise in people with type 2 diabetes mellitus and peripheral neuropathy. *The Foot*, 2022;51:101912.
31. Eekhoff JD, Abraham J, Schott H, Solon L, Ulloa G, **Zellers JA**, Cannon PC, Lake SP. Fascicular elastin contributes to the magnitude and non-linearity of the elastic stress response of tendon across tendon type and species. *Acta Biomaterialia*, 2022;S1742-7061(22)00156-8. doi: 10.1016/j.actbio.2022.03.025.
32. Jeong H-J, Cha B, **Zellers JA**, Chen L, Hastings MK. Midfoot and ankle movement coordination during heel rise is disrupted in people with diabetes and peripheral neuropathy. *Clinical Biomechanics*. 2022, 96:105662. doi: 10.1016/j.clinbiomech.2022.105772.
33. Vaidya R, Lake SP, **Zellers JA**. Effect of diabetes on tendon structure and function: Not limited to collagen crosslinking. *Journal of Diabetes Science and Technology*, 2023; 17(1):89-98. doi: 10.1177/19322968221100842.
34. Bohnert K, **Zellers JA**, Jeong HJ, Chen L, York A Hastings MK. Remote research: Resources, intervention needs and methods in people with diabetes and peripheral neuropathy. *Journal of Diabetes Science and Technology*. 2023, 17(1):52-58. . doi: 10.1177/19322968221103610.
35. **Zellers JA**, Edalati M, Eekhoff JD, McNish R, Tang SY, Lake SP, Mueller MJ, Hastings MK, Zheng J. Quantitative MRI predicts tendon mechanical behavior, collagen composition, and organization. *Journal of Orthopaedic Research*. doi: 10.1002/jor.25471 [Online ahead of print]
36. Zheng J, Li R, Dickey E, Zayed MA, **Zellers JA**, Hastings MK. Regional skeletal muscle perfusion distribution in diabetic feet may differentiate short-term healed foot ulcers from non-healed ulcers. *European Radiology*. 2023, 33(5):3303-3311. doi: 10.1007/s00330-023-09405-6.
37. Youmans NJ, Vaidya R, Chen L, Jeong H-J, York A, Commean PK, Hastings MK, **Zellers JA**. Rate of tarsal and metatarsal bone mineral density change in adults with diabetes mellitus and peripheral neuropathy: A longitudinal study. *Journal of Foot and Ankle Research*. 2023;16(6). doi:10.1186/s13047-023-00606-2.
38. **Zellers JA**, Czuppon S, Brophy R. Variability in outcome after bilateral, fluoroquinolones-associated Achilles tendon rupture: A case report. *Journal of Orthopaedic & Sports Physical Therapy Cases*. 2023. [Epub ahead of print]
39. Christensen M, Silbernagel KG, **Zellers JA**, Kjær IL, Rathleff MS. Feasibility of an early progressive resistance exercise program for acute Achilles tendon rupture. *Pilot & Feasibility Studies*. 2024. doi:10.1186/s40814-024-01494-4.
40. McNish R, Lohse K, Pruthi S, Hastings MK, Zheng J, **Zellers JA**. Achilles tendon assessment on quantitative MRI: Sources of variability and relationships to tendinopathy. *Scandinavian Journal of Medicine & Science in Sports*. 2024, 34(5). [Epub ahead of print]
41. Kaszyk E, Commean PK, Meyer GA, Smith G, Jeong H-J, York A, Chen L, Mueller MJ, Zellers JA, Hastings MK. Foot intrinsic muscle deterioration in individuals with diabetes mellitus and peripheral neuropathy, *Radiology, in review*.

PUBLICATIONS, NON-PEER REVIEWED

1. Connolly D, Martin L, Brake T, Baxter-Jones K, Quinn B, Priest N, **Zellers J**. Development and Analysis of Mouse Models of Human Epithelial Ovarian Cancer. *Fox Chase Cancer Center Scientific Report* 2006, 2006: 163-166.

BOOK CHAPTERS

- 2015 **Zellers JA** and Grävare Silbernagel K. Foot and Ankle Injury. In *Idrottsskador från prevention till säker återgång i idrott*. Annette Heijneoch, Eva Rasmusen Barr, eds. Studentlitteratur. [Printed in Swedish]
- 2018 Carmont MR, **Zellers JA**, Fanchini M, Karlsson J, Silbernagel KG. Return to football following Achilles tendon rupture. In *Return to play in football: An evidence-based approach*. Volker Musahl, Jón Karlsson, Werner Krutsch, Bert R. Mandelbaum, João Espregueira-Mendes, Pieter d'Hooghe, eds. Springer.
- 2020 **Zellers JA** and Grävare Silbernagel K. Rehabilitation of foot and ankle injuries in the basketball player. In *The Basketball Sports Medicine and Science Book*. Lior Laver, Baris Kocaoglu, Jeff Bytomski, Brian Cole, Amy Arundale, Ned Amendola, eds. Springer.
- 2020 **Zellers JA**, Eekhoff JD, Tang SY, Hastings MK, Lake SP. Clinical complications of tendon tissue mechanics due to collagen cross-linking in diabetes. In *Mechanobiology of Diabetes and Its Complications: From Cells to Systems*. Amit Gefen, ed. Elsevier.
- 2021 **Zellers JA**, Grävare Silbernagel K. Achilles Tendinopathy. In *Physical Therapy Management of Tendinopathies*. Guy G. Simoneau, Dhinu Jayaseelan, ed. American Physical Therapy Association.

CONFERENCE PRESENTATIONS, PEER-REVIEWED

1. Chiarello C, Sage-King F, **Zellers J**. Predictors of Inter-recti Distance in Cadavers. APTA Combined Sections Meeting 2011, New Orleans, LA, February 2011. Platform presentation.
2. Hewston L, Wolfram B, **Zellers J**, Bradley B, Callan A. A Partnership Model for Student Clinical Visits During an Entry-level DPT Cardiovascular and Pulmonary Class. APTA Education Leadership Conference 2012, Greenwich, CT, October 2012. Platform presentation.
3. Cortes DH, Suydam SM, **Zellers JA**, Silbernagel KG, Buchanan TS, and Elliott DM. Evaluation of tendon injuries using shear wave elastography: Preliminary results in human Achilles and semitendinosus tendons. Summer Biomechanics, Bioengineering, and Biotransport Conference 2015, Snowbird, UT. Platform presentation.
4. **Zellers JA**, Cortes DH, and Silbernagel KG. Viscoelastic properties of healing Achilles tendon: A case series. Center for Biomechanical Engineering Research, Research Symposium 2015, Newark, DE. Poster presentation.
5. **Zellers JA**, Cortes DH, and Silbernagel KG. Biomechanical, clinical, and functional changes with Achilles tendon pathology. American Society of Biomechanics, Annual Meeting 2015, Columbus, OH. Platform presentation.
6. **Zellers JA**, Van Ostrand KM, and Silbernagel KG. Achilles tendon structure and function in classical ballet dancers. International Association of Dance Medicine & Science, Annual Meeting 2015, Pittsburgh, PA. Platform presentation.
7. Cortes DH, Suydam SM, **Zellers JA**, Silbernagel KG, Buchanan TS, and Elliott DM. Continuous Shear Wave Elastography: A Method to Measure in-vivo Viscoelastic Properties of Tendons. International Mechanical Engineering Congress and Exposition 2015, Houston, TX. Platform presentation.
8. **Zellers JA**, Cortes DH, and Silbernagel KG. Relationship between calf endurance and Achilles tendon viscoelastic properties in the heel rise test. American Physical Therapy Association Combined Sections Meeting 2016, Anaheim, CA. Poster presentation.
9. **Zellers JA**, Corrigan P, Cortes DH, and Silbernagel KG. Changes in viscoelastic properties along the length of the Achilles tendon. Orthopaedic Research Society, Annual Meeting 2016, Orlando, FL. Poster presentation.
10. **Zellers JA**, Fish J, Cortes DH, and Silbernagel KG. Recovery of Viscoelastic Properties of Achilles Tendon Following Rupture. International Symposium on Ligaments & Tendons XV 2016, Orlando, FL. Poster presentation.

11. Sprague AL, Corrigan DP, **Zellers JA**, Cortes DH, Silbernagel KG. Two-month changes in mechanical properties and clinical outcomes of Achilles tendinopathy. University of Delaware Center for Biomechanical Engineering Research Symposium 2016, Newark, DE. Poster presentation.
12. **Zellers JA**, Carmont MR, and Silbernagel KG. Return to play metrics in Achilles tendon rupture: A systematic review. European Society of Sports Traumatology, Knee Surgery & Arthroscopy (ESSKA) 2016, Barcelona, Spain. ePoster presentation.
13. **Zellers JA**, Cortes DH, and Silbernagel KG. Changes in Achilles tendon viscoelastic properties in individuals with insertional tendinopathy. European Society of Sports Traumatology, Knee Surgery & Arthroscopy (ESSKA) 2016, Barcelona, Spain. ePoster presentation.
14. Corrigan P, Sprague A, **Zellers JA**, Cortes DH, Silbernagel KG. Mechanical properties and clinical outcomes in Achilles tendinopathy. American Society of Biomechanics, Annual Meeting 2016, Raleigh, NC. Poster presentation.
15. Cox C, **Zellers JA**, Cortes DH, and Silbernagel KG. Viscoelastic properties of human patellar tendons measured using continuous shear wave elastography. Summer Biomechanics, Bioengineering and Biotransport Conference 2016. Poster presentation, National Harbor, MD. Finalist for BS-level student poster competition.
16. **Zellers JA**, Van Ostrand KM, Silbernagel KG. Lower limb performance on a standardized functional test battery in classical ballet dancers. Blue Hen Tribute to Dr. John P. Scholz 2016, Newark, DE. Poster presentation.
17. Tice T, Dargis S, **Zellers JA**, Silbernagel KG. Changes in gait pattern and triceps surae activity in immobilization boots. Eastern Athletic Trainers Association Meeting and Clinical Symposium 2017, Philadelphia, PA. Poster presentation.
18. Dreger M, **Zellers JA**, Giordano A, Silbernagel KG. The use of a modified tendon loading program in a patient with complex unilateral Achilles tendon repair. American Physical Therapy Association Combined Sections Meeting 2017. Poster presentation.
19. **Zellers JA**, Pontiggia L, Cortes DH, Silbernagel KG. Clinical measures relate to tendon mechanical properties following Achilles tendon rupture. American Physical Therapy Association Combined Sections Meeting 2017, San Antonio, TX. Poster presentation.
20. **Zellers JA**, Pontiggia LP, Cortes DH, Silbernagel KG. Achilles tendon viscoelastic properties relate to clinical outcomes following rupture. Orthopaedic Research Society, Annual Meeting 2017, San Diego, CA. Poster presentation.
21. Balascio P, **Zellers JA**, Cortes DH, Silbernagel KG. Healthy Achilles tendon properties in vivo: Shear modulus, viscosity, and Young's modulus. Biomedical Engineering Society, Mid-Atlantic Research Day 2017, College Park, MD. Platform presentation. Honorable mention recipient.
22. Corrigan P, Cortes DH, **Zellers JA**, Sprague A, Silbernagel KG. Effects of photobiomodulation therapy on Achilles tendon structure. American Society of Biomechanics, Annual Meeting 2017, Boulder, CO. Poster presentation.
23. **Zellers JA**, Balascio P, Corrigan P, Cortes DH, Silbernagel KG. Relationship between Young's modulus, shear modulus, and viscosity in healthy Achilles tendon. American Society of Biomechanics, Annual Meeting 2017, Boulder, CO. Poster presentation.
24. **Zellers JA**, Gotha H, Silbernagel KG. Use of ankle resting angle as a surrogate for tendon elongation in individuals following Achilles tendon rupture. American Orthopaedic Foot & Ankle Society, Annual Meeting 2017, Seattle, WA. ePoster presentation.
25. Hall ML, Greenspan B, **Zellers J**. 3D printed CAM boot: New media for expressive orthoses. Fashion and Media Symposium 2017, Philadelphia, PA.

26. Lopez R, **Zellers JA**, Parker S, Silbernagel KG. Relationship of muscle activation amplitude with elongation and mechanical properties of the Achilles tendon. Biomedical Engineering Society, Annual Meeting 2017, Austin, TX. Poster presentation.
27. Corrigan P, **Zellers JA**, Silbernagel KG. Triceps surae activation during walking and running post Achilles tendon rupture. American Physical Therapy Association Combined Sections Meeting 2018, New Orleans, LA. Poster Presentation.
28. **Zellers JA**, Thoma L, Silbernagel KG. Physical Activity, Gait, and Self-Reported Function Twelve Weeks Following Achilles Tendon Rupture. American Physical Therapy Association Combined Sections Meeting 2018, New Orleans, LA. Platform Presentation.
29. **Zellers JA**, Alghamdi N, Silbernagel KG. Frequency of insertional pathology on ultrasound imaging and functional deficits in individuals with insertional Achilles tendinopathy. American Physical Therapy Association Combined Sections Meeting 2018, New Orleans, LA. Platform Presentation.
30. **Zellers JA**, Silbernagel KG. Achilles tendon cross sectional area and heel rise performance in individuals following surgical repair. Orthopaedic Research Society, Annual Meeting 2018, New Orleans, LA. Poster Presentation.
31. Parker S, **Zellers JA**, Silbernagel KG. Electromyography normalization strategies in individuals with Achilles tendon rupture. World Congress of Biomechanics 2018, Dublin, Ireland. Poster Presentation. Winner of The American Society of Mechanical Engineers Bioengineering Division BS-Level Student Paper Competition award.
32. **Zellers JA**, Ebrahimi A, Silbernagel KG. Hopping performance in individuals with Achilles tendon rupture. American Society of Biomechanics Annual Conference 2018, Rochester, MN. Poster Presentation.
33. Silbernagel KG, **Zellers JA**, Bley BC, Pohlig RT. Frequency of pathology on diagnostic ultrasound in individuals with insertional Achilles tendinopathy. 5th International Scientific Tendinopathy Symposium 2018, Groningen, Netherlands. Poster Pitch and Poster Presentation.
34. Tucker LA, **Zellers JA**, Silbernagel KG. Effect of wedge height on triceps surae activity with walking in an orthopaedic boot. Biomedical Engineering Society Annual Meeting 2018, Atlanta, GA. Poster Presentation.
35. **Zellers JA**, Ebrahimi A, Silbernagel KG. Contributions from lower extremity joints to absolute work in individuals after Achilles tendon rupture: Applying the CLEW approach. American Physical Therapy Association Combined Sections Meeting 2019, Baltimore, MD. Platform Presentation.
36. **Zellers JA**, Marmon AR, Silbernagel KG. Lateral gastrocnemius and soleus compensation, and medial gastrocnemius atrophy after Achilles tendon rupture. American Physical Therapy Association Combined Sections Meeting 2019, Baltimore, MD. Poster Presentation.
37. **Zellers JA**, Edalati M, Eekhoff JD, Lake SP, Zheng J, Hastings MK. Relationship between ex vivo tissue diffusion tensor indexes and material properties in posterior tibialis tendon. American Orthopaedic Foot & Ankle Society Annual Meeting 2019, Chicago, IL. ePoster Presentation.
38. **Zellers JA**, Eekhoff JD, Walk R, Tang SY, Hastings MK, Lake SP. Effects of advanced glycation endproducts on the mechanical properties of posterior tibialis in individuals with diabetes mellitus. American Orthopaedic Foot & Ankle Society Annual Meeting 2019, Chicago, IL. ePoster Presentation.
39. Christensen M, **Zellers JA**, Kjær IL, Silbernagel KG, Rathleff MS. Defining components of Early Functional Rehabilitation for acute Achilles tendon rupture: A systematic review. Dansk Orthopædisk Selskab Kongressen 2019, Bredsten, Denmark. Platform Presentation.
40. Christensen M, **Zellers JA**, Kjær IL, Silbernagel KG, Rathleff MS. How can we implement Early Functional Rehabilitation for Achilles tendon ruptures if the original studies didn't describe what they did? Dansk Orthopædisk Selskab Kongressen 2019, Bredsten, Denmark. Platform Presentation.

41. **Zellers JA**, Eekhoff JD, Walk R, Tang SY, Hastings MK, Lake SP. Relationship of advanced glycation end-product accumulation with posterior tibialis tendon mechanics. American Physical Therapy Association Combined Sections Meeting 2020, Denver, CO. Poster Presentation.
42. Christensen M, **Zellers JA**, Kjær IL, Silbernagel KG, Rathleff MS. How can we implement early rehabilitation for Achilles tendon ruptures if original studies didn't describe the content? A systematic review. Sportskongres 2020, Copenhagen, Denmark. Poster presentation.
43. **Zellers JA**, Hastings MK, Silbernagel KG. Inferior tendon mechanical properties in presence of diabetes in individuals with Achilles tendinopathy. American Physical Therapy Association Combined Sections Meeting 2020, Denver, CO. Platform presentation.
44. **Zellers JA**, Eekhoff JD, Walk R, Tang SY, Hastings MK, Lake SP. Accumulation of advanced glycation end-products is associated with impaired energy storage of the human posterior tibialis tendon. Orthopaedic Research Society, Annual Meeting 2020, Phoenix, AZ. Poster presentation.
45. **Zellers JA**, Hastings MK, Silbernagel KG. Decreased shear viscosity with Achilles tendinopathy in individuals with diabetes compared to non-diabetics. International Symposium on Ligaments and Tendons, Annual Meeting, 2020, Phoenix, AZ. Platform presentation.
46. Christensen M, **Zellers JA**, Kjær IL, Silbernagel KG, Rathleff MS. How can we implement Early Functional Rehabilitation for Achilles tendon ruptures if the original studies didn't describe what they did? A systematic review. European Society of Sports Traumatology, Knee Surgery & Arthroscopy (ESSKA), 2020, Milan, Italy. Poster presentation.
47. **Zellers JA**, Zheng J, Youmans N, Tang SY, Lake SP, Hastings MK. Tendon changes with glycation on quantitative magnetic resonance imaging. American Physical Therapy Associations Combined Sections Meeting 2021, held virtually. Poster presentation.
48. Youmans N, Hastings MK, Mueller MJ, Commean PK, **Zellers JA**. Variability in rate of bone mineral density loss between bones in the diabetic foot. American Physical Therapy Associations Combined Sections Meeting 2021, held virtually. Poster presentation.
49. **Zellers JA**, Eekhoff JD, Walk R, Hastings MK, Tang SY, Lake SP. Collagen organization – but not glycation – predicts mechanical behavior in human Achilles tendon. Orthopaedic Research Society, Annual Meeting, 2021, held virtually. Poster presentation.
50. **Zellers JA**, Edalati M, Tang SY, Lake SP, Eekhoff JD, Walk R, Zheng J, Hastings MK. Diffusion tensor imaging reveals collagen content and organization in ex vivo human Achilles tendon. Orthopaedic Research Society, Annual Meeting, 2021, held virtually. Poster presentation.
51. Christensen M, Silbernagel KG, **Zellers JA**, Rathleff MS, Kjaer IL. Feasibility of early progressive resistance exercises for acute Achilles tendon rupture. Danish Orthopedic Society, 2021.
52. Jeong HJ, Baekdong C, **Zellers JA**, Chen L, Hastings MK. Midfoot and ankle coupling during heel rise in people with and without diabetes mellitus. American Physical Therapy Associations Combined Sections Meeting 2022, San Antonio, TX. Platform presentation.
53. Bohnert K, York A, Jeong HJ, **Zellers JA**, Chen L, Hastings MK. Blood glucose control worsens, sedentary time stable over 4 years and COVID. American Physical Therapy Associations Combined Sections Meeting 2022, San Antonio, TX. Poster presentation.
54. Eekhoff JD, **Zellers JA**, Canon PC, Lake SP. Elastic fiber content and distribution in tendon varies by tendon type and tendon compartment. Orthopaedic Research Society, Tendon Section Conference, 2022, Philadelphia, PA. Poster presentation.
55. **Zellers JA**, McNish R, Hastings MK, Zheng JA. Quantitative MRI for Achilles tendon characterization and relationship to function. Orthopaedic Research Society, Tendon Section Conference, 2022, Philadelphia, PA. Poster presentation.

56. Pruthi S, McNish R, Edalati M, Hastings MK, Lohse K, Zheng J, **Zellers JA**. Reproducibility of diffusion tensor magnetic resonance imaging of the Achilles tendon: A preliminary study. American Medical Association Research Challenge, 2022, held virtually. Poster presentation.
57. Kaszyk E, Commean PK, Smith G, Jeong HJ, York A, Chen L, Mueller MJ, **Zellers JA**, Hastings MK. Foot intrinsic muscle deterioration in individuals with type 2 diabetes mellitus and peripheral neuropathy. American Physical Therapy Associations Combined Sections Meeting 2023, San Diego, CA. Platform presentation.
58. McNish RN, Pruthi S, Hastings MK, Mueller MJ, Zheng J, **Zellers JA**. Relationships of functional performance with quantitative MRI in healthy Achilles tendon. American Physical Therapy Associations Combined Sections Meeting 2023, San Diego, CA. Platform presentation.
59. Vaidya RS, Youmans NJ, Chen L, Jeong H-J, York A, Commean P, Hastings MJ, **Zellers JA**. Rate of tarsal and metatarsal bone mineral density change in adults with diabetes mellitus and peripheral neuropathy: A longitudinal study. Orthopaedic Research Society, Annual Meeting 2023, Dallas, TX. Poster presentation.
60. Chen M, McNish R, Pruthi S, Zheng J, **Zellers JA**. Association of tendinopathy and diabetes status on quantitative magnetic resonance imaging measures in in vivo human Achilles tendon. Washington University School of Medicine's Musculoskeletal Research Center, Annual Symposium 2023, St. Louis, MO. Poster presentation.
61. Vaidya R, Cui S, Houston B, North A, Chen M, Baxter J, **Zellers JA**. Assessing the effect of joint angle position on ultrasound shearwave elastography measurement in Achilles and patellar tendon in healthy subjects. Washington University School of Medicine's Musculoskeletal Research Center, Annual Symposium 2023, St. Louis, MO. Poster presentation.
62. Vaidya RS, Gilmore PE, Zhang Q, Lohse KR, Sprung RW, Townsend RR, Backus J, Lake SP, Tang SY, Guilak F, **Zellers JA**. Proteomics reveal region-specific and inter-individual variability in human Achilles tendons: A pilot study. Orthopaedic Research Society, Annual Meeting 2024, Long Beach, CA. Poster presentation.