

Jonathon (Jack) W. Senefeld, Ph.D.

Curriculum Vitae

PRIMARY POSITION Assistant Professor
Department of Kinesiology and Community Health
University of Illinois at Urbana-Champaign

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RESEARCH IMPACT* **Citations:** 3,842 (total number of citations)
H-Index: 26 (*h* papers have been cited at least *h* times)
i10-Index: 43 (number of publications with 10 or more citations)
*According to Google Scholar updated 17 July 2023

I. EDUCATION

Postdoctoral Research Fellow *Mayo Clinic*, Rochester, Minnesota 2019 – 2021
Human and Integrative Physiology and Clinical Pharmacology Laboratory
Department of Anesthesiology and Perioperative Medicine
Director: Professor Michael J. Joyner, M.D.

Postdoctoral Research Fellow *Marquette University*, Milwaukee, Wisconsin 2018 – 2019
Neuromuscular Physiology of Human Movement Laboratory
Department of Physical Therapy
Director: Professor Sandra K. Hunter, Ph.D.

Doctor of Philosophy *Marquette University*, Milwaukee, Wisconsin 2013 – 2018
Clinical & Translational Rehabilitation Health Science
Dissertation: 'Mechanisms of fatigability in people with type 2 diabetes and prediabetes'
Advisor: Professor Sandra K. Hunter, Ph.D.

Bachelor of Science *Marquette University*, Milwaukee, Wisconsin 2009 – 2013
Exercise Physiology

II. ACADEMIC, SCHOLARLY AND PROFESSIONAL EXPERIENCE

Associate Consultant I *Mayo Clinic*, Rochester, Minnesota 08.2021 – 08.2023
Departments of Anesthesiology and Perioperative Medicine & Physiology and Biomedical Engineering

Assistant Professor *Mayo Clinic*, Rochester, Minnesota 06.2021 – 08.2023
College of Medicine

Clinical Assistant Professor *Marquette University*, Milwaukee, Wisconsin 06.2019 – 06.2020
College of Health Sciences, Department of Physical Therapy

Assistant Planning Director *Marquette University*, Milwaukee, Wisconsin 05.2018 – 05.2019
Athletic and Human Performance Research Center

III. PUBLICATIONS

A. REFEREED PUBLICATIONS

2023

82. Joyner MJ, Wiggins CC, Baker SE, Klassen SA, **Senefeld JW**. Exercise and experiments of nature. *Comprehensive Physiology*, 13(3):4879-4907, 2023.
[ABSTRACT](#) • [PDF](#) • [DOI: 10.1002/CPHY.C220027](#)
81. **Senefeld JW**, Joyner MJ. SARS-CoV-2 antibody replacement therapy for immunocompromised patients. *Clinical Infectious Diseases*.

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80. Ramsook AH, Dominelli PB, Angus SA, **Senefeld JW**, Wiggins CC, Joyner MJ. The oxygen transport cascade and exercise: Lessons from comparative physiology. *Comparative Biochemistry and Physiology Part A: Molecular & Integrative Physiology*, 282: 111442, 2023. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1016/j.cbpa.2023.111442](#)
79. Sullivan DJ, Franchini M, **Senefeld JW**, Joyner MJ, Casadevall A, Focosi D. Plasma after both SARS-CoV-2 vaccination and COVID-19 potently neutralizes BQ.1.1 and XBB.1. *Journal of General Virology*, 104(5). 2023. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1099/jgv.0.001854](#) • [PREPRINT](#)
78. Casadevall A, Joyner MJ, Pirofski L, **Senefeld JW**, Shoham S, Sullivan D, Focosi D. Convalescent plasma therapy in COVID-19: unraveling the data using the principles of antibody therapy. *Expert Review of Respiratory Medicine*, 17(5):381-395, 2023. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1080/17476348.2023.2208349](#)
77. Sullivan DJ, Franchini M, **Senefeld JW**, Joyner MJ, Casadevall A, Focosi D. Outpatient treatment of confirmed COVID-19. *Annals of Internal Medicine*, 176(5):eL230099, 2023. [ABSTRACT](#) • [PDF](#) • [DOI: 10.7326/L23-0099](#)
76. Nokoff NJ, **Senefeld J**, Krausz CG, Hunter SK, Joyner MJ. Sex differences in athletic performance: perspectives on transgender athletes. *Exercise and Sport Sciences Reviews*, 51(3):85-95, 2023. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1249/JES.0000000000000317](#)
75. **Senefeld JW**, Hunter SK, Lambelet Coleman D, Joyner MJ. Case studies in physiology: Male to female transgender swimmer in college athletics. *Journal of Applied Physiology*, 134(4): 1032-1037, 2023. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1152/JAPPLPHYSIOL.00751.2022](#)
74. Pruter WW, Klassen SA, Dominelli PB, Wiggins CC, **Senefeld JW**, Roy TK, Joyner MJ, Baker SE. Attenuated cardiac autonomic function in humans with high affinity hemoglobin and compensatory polycythemia. *American Journal of Physiology Regulatory, Integrative and Comparative Physiology*, 324(5): R625-R634, 2023. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1152/AJPCRGU.00113.2022](#)
73. Bloch EM, Focosi D, Shoham S, **Senefeld JW**, Tobian AAR, Baden LR, Tiberghien P, Sullivan D, Cohn C, Dioverti V, Henderson J, So-Osman C, Juskewitch JE, Razonable RR, Franchini M, Goel R, Grossman B, Casadevall A, Joyner MJ, Avery RK, Pirofski L, Gebo K. Guidance on the use of convalescent plasma to treat immunocompromised patients with COVID-19. *Clinical Infectious Diseases*, 76(11): 2018-2024, 2023. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1093/CID/CIAD066](#)
72. Johnson PW, Kunze KL, **Senefeld JW**, Sinclair JE, Isha S, Satashia PH, Bhakta S, Cowart JB, Bosch W, O'Horo J, Shah SZ, Wade H, Edwards MA, Pollock BD, Edwards AJ, Scheitel-Tulledge S, Clune CG, Hanson SN, Arndt R, Heyliger A, Kudrna C, Bierle DM, Buckmeier JR, Seville MTA, Orenstein R, Libertin C, Ganesh R, Franco PM, MD, Razonable RR, MD, Carter RE, Sanghavi DK, Speicher LL. Association of neutralizing anti-spike monoclonal antibody treatment with Covid-19 hospitalization and assessment of the monoclonal antibody screening score. *Mayo Clinic Proceedings: Innovations, Quality & Outcome*, 7(2): 109-121, 2023. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1016/j.mayocpiqo.2022.12.007](#)
71. **Senefeld JW**, Franchini M, Mengoli C, Cruciani M, Zani M, Gorman EK, Focosi D, Casadevall A, Joyner MJ. COVID-19 convalescent plasma for the treatment of immunocompromised patients. *JAMA Network Open*, 6(1): e2250647, 2023. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1001/JAMANETWORKOPEN.2022.50647](#)
70. Focosi D, Franchini M, **Senefeld JW**, Casadevall A, Joyner MJ. Convalescent plasma for COVID-19 in oncohematological patients: a call for revision of the European Conference on Infections in Leukemia-9 (ECIL-9) guidelines. *Journal of Clinical Virology Plus*, 3(1): 100128, 2023. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1016/j.jcvp.2022.100128](#)
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69. **Senefeld JW**, Paneth NS, Carter RE, Wright RS, Fairweather D, Bruno KA, Joyner MJ. Late treatment of COVID-19 with convalescent plasma. *Chest*, 162(5): e283-e284, 2022. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1016/j.chest.2022.07.029](#)
68. Bock JM, Wiggins CC, **Senefeld JW**. Accounting for COVID-19 in physiological research: another drop in the bucket? *Journal of Applied Physiology*, 133(5):1222-1225, 2022. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1152/JAPPLPHYSIOL.00536.2022](#)
67. Focosi D, **Senefeld JW**, Joyner MJ, Sullivan D, Casadevall A, Franchini M. Lower anti-spike levels in B-cell depleted patients after convalescent plasma transfusion suggest the need for repeated doses. *British Journal of Haematology*, 200(2): e22-e24, 2023. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1111/BJH.18544](#)
66. Jeltama JL, Gorman EK, Ovrom EA, Ripoll JG, Dominelli PB, Joyner MJ, Welch BT, **Senefeld JW**, Wiggins CC. Greater central airway luminal area in people with COVID-19: a case-control series. *Scientific Reports*, 12(1):17970, 2022. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1038/s41598-022-22005-6](#)
65. Ripoll JG, Gorman EK, Juskewitch JE, Razonable RR, Ganesh R, Theel ES, Stubbs JR, Winters JL, Parikh SA, Kay NE, Joyner MJ, **Senefeld JW**. Vaccine-boosted convalescent plasma therapy for patients with immunosuppression and protracted COVID-19. *Blood Advances*, 6(23):5951-5955, 2022. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1182/BLOODADVANCES.2022008932](#)

64. Greenberger LM, Saltzman LA, Gruenbaum L, Xu J, Reddy ST, **Senefeld JW**, Johnson PW, Fields PA, Sanders C, DeGennaro LJ, Nichols GL. Anti-spike T-cell and antibody responses to SARS-CoV-2 mRNA vaccines in patients with hematologic malignancies. *Blood Cancer Discovery*, 3(6):481-489, 2022. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1158/2643-3230.BCD-22-0077](#)
63. Larkey NE, Ewaisha R, Lasho MA, Roforth MM, Granger D, Jerde CR, Wu L, Gorsh A, Klassen SA, **Senefeld JW**, Joyner MJ, Baumann NA, Theel ES, Mills JR. Limited correlation between SARS-CoV-2 serologic assays for identification of high-titer COVID-19 convalescent plasma. *Microbiology Spectrum*, 10(4):e0115422, 2022. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1128/SPECTRUM.01154-22](#)
62. Webb KL, Elshaer AN, Dominelli PB, **Senefeld JW**, Hammer SM, Baker SE, Shepherd JRA, Roy TK, Joyner MJ, Wiggins CC. Muscle oxygenation during normoxic and hypoxic cycling exercise in humans with high affinity haemoglobin. *Experimental Physiology*, 107(8):854-863, 2022. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1113/EP090308](#)
61. **Senefeld JW**, Casadevall A, Joyner MJ. Convalescent plasma to deliver therapeutic antibodies against COVID-19. *Trends in Molecular Medicine*, 28(5):435-436, 2022. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1016/j.MOLMED.2022.02.005](#)
60. Ma T, Wiggins CC, Kornatowski BM, Hailat RS, Clayburn AJ, Guo WL, Johnson PW, **Senefeld JW**, Klassen SA, Baker SE, Bruno KA, Fairweather D, Wright RS, Carter RE, Li C, Joyner MJ, Paneth NS. The role of disease severity and demographics in the clinical course of COVID-19 patients treated with convalescent plasma. *Frontiers in Medicine*, 8:707895, 2022. [ABSTRACT](#) • [PDF](#) • [DOI: 10.3389/FMED.2021.707895](#)
59. Webb KL, Dominelli PB, Baker SE, Klassen SA, Joyner MJ, **Senefeld JW**, Wiggins CC. Influence of high hemoglobin-oxygen affinity on humans during hypoxia. *Frontiers in Physiology*, 12:763933, 2022. [ABSTRACT](#) • [PDF](#) • [DOI: 10.3389/FPHYS.2021.763933](#)
58. Klompas AM, van Helmond N, Juskewitch JE, Pruthi RK, Sexton MA, Diaz Soto JC, Klassen SA, Senese KA, van Buskirk CM, Winters JL, Stubbs JR, Hammel SA, Joyner MJ, **Senefeld JW**. Coagulation profile of human COVID-19 convalescent plasma. *Scientific Reports*, 12(1):637, 2022. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1038/S41598-021-04670-1](#)
57. Joyner MJ, Paneth NS, **Senefeld JW**, Fairweather D, Bruno KA, Wright RS, Carter RE, Casadevall A. Concerns about estimating relative risk of death associated with COVID-19 convalescent plasma. *Nature Medicine*, 28(1):51-52, 2022. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1038/S41591-021-01638-6](#)

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56. **Senefeld JW**, Johnson PW, Kunze KL, Bloch EM, van Helmond N, Golafshar MA, Klassen SA, Klompas AM, Sexton MA, Diaz Soto JC, Grossman BJ, Tobian AAR, Goel R, Wiggins CC, Bruno KA, van Buskirk CM, Stubbs JR, Winters JL, Casadevall A, Paneth NS, Shaz BH, Petersen MM, Sachais BS, Buras MR, Wiczorek MA, Russoniello B, Dumont LJ, Baker SE, Vassallo RR, Shepherd JRA, Young PP, Verdun NC, Marks P, Haley NR, Rea RF, Katz L, Herasevich V, Waxman DA, Whelan ER, Bergman A, Clayburn AJ, Grabowski MK, Larson KF, Ripoll JG, Andersen KJ, Vogt MNP, Dennis JJ, Regimbal RJ, Bauer PR, Blair JE, Buchholtz ZA, Pletsch MC, Wright K, Greenshields JT, Joyner MJ, Wright RS, Carter RE, Fairweather D. Access to and safety of COVID-19 convalescent plasma in the United States Expanded Access Program: a national registry study. *PLoS Medicine*, 18(12):e1003872, 2021. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1371/JOURNAL.PMED.1003872](#)
55. Greenberger LM, Saltzman LA, **Senefeld JW**, Johnson PW, DeGennaro LJ, Nichols GL. Anti-spike antibody response to SARS-CoV-2 booster vaccination in patients with B cell-derived hematologic malignancies. *Cancer Cell*, 39(10):1297-1299, 2021. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1016/j.CCELL.2021.09.001](#)
54. Juskewitch JE, **Senefeld JW**, Johnson PW, Mills JR, Joyner MJ, Gandhi MJ. HLA antibody rates are not increased amongst a regional group of male COVID-19 convalescent plasma donors. *Mayo Clinic Proceedings*, 96(10):2727-2728, 2021. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1016/j.MAYOCP.2021.08.004](#)
53. Kunze KL, Johnson PW, van Helmond N, **Senefeld JW**, Petersen MM, Klassen SA, Wiggins CC, Klompas AM, Bruno KA, Mills JR, Theel ES, Buras MR, Golafshar MA, Sexton MA, Diaz Soto JC, Baker SE, Shepherd JRA, Verdun NC, Marks P, Paneth NS, Fairweather D, Wright RS, van Buskirk CM, Winters JL, Stubbs JR, Senese KA, Pletsch MC, Buchholtz ZA, Rea RF, Herasevich V, Whelan ER, Clayburn AJ, Larson KF, Ripoll JG, Andersen KJ, Lesser ER, Vogt MNP, Dennis JJ, Regimbal RJ, Bauer PR, Blair JE, Casadevall A, Carter RE, Joyner MJ. Mortality in individuals treated with COVID-19 convalescent plasma varies with the geographic provenance of donors. *Nature Communications*, 12(1):4864, 2021. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1038/S41467-021-25113-5](#)
52. Joyner MJ, Klompas AM, Klassen SA, **Senefeld JW**, Fairweather D, Wright RS, Carter RE. In reply – how safe is COVID-19 convalescent plasma? *Mayo Clinic Proceedings*, 96(8):2281-2282, 2021. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1016/j.MAYOCP.2021.06.010](#)
51. Greenberger LM, Saltzman LA, **Senefeld JW**, Johnson PW, DeGennaro LJ, Nichols GL. Antibody response to SARS-CoV-2 vaccines in patients with hematologic malignancies. *Cancer Cell*, 39(8):1031-1033, 2021. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1016/j.CCELL.2021.07.012](#)
50. Theel ES, Johnson PW, Kunze KL, Wu L, Gorsh AP, Granger D, Roforth MM, Jerde CR, Lasho M, Andersen KJ, Murphy BM, Haring J, Lake DF, Svarovsky SA, **Senefeld JW**, Carter RE, Joyner MJ, Baumann NA, Mills JR. SARS-CoV-2 serologic assays dependent on dual-antigen binding demonstrate diverging kinetics relative to other antibody detection methods. *Journal of Clinical Microbiology*, 59(9):e0123121, 2021. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1128/JCM.01231-21](#)

49. Klassen SA, **Senefeld JW**, Senese KA, Johnson PW, Wiggins CC, Baker SE, van Helmond N, Bruno KA, Pirofski L, Shoham S, Grossman BJ, Henderson JP, Wright RS, Fairweather D, Paneth NS, Carter RE, Casadevall A, Joyner MJ. Convalescent plasma therapy for COVID-19: a graphical mosaic of the worldwide evidence. *Frontiers in Medicine*, 8:684151, 2021. [ABSTRACT](#) • [PDF](#) • [DOI: 10.3389/FMED.2021.684151](#)
48. Thompson MA, Henderson JP, Shah PK, Rubinstein SM, Joyner MJ, Choueiri TK, Flora DB, Griffiths EA, Gulati AP, Hwang C, Koshkin VS, Papadopoulos EB, Robilotti EV, Su CT, Wulff-Burchfield EM, Xie Z, Yu PP, Mishra S, **Senefeld JW**, Shah DP, Warner JL, COVID-19 and Cancer Consortium. Association of convalescent plasma therapy with survival in patients with hematologic cancers and COVID-19. *JAMA Oncology*, 7(8):1167-1175, 2021. [ABSTRACT](#) • [PDF](#) • [SUPPLEMENT 1](#) • [SUPPLEMENT 2](#) • [INVITED COMMENTARY](#) • [DOI: 10.1001/JAMAONCOL.2021.1799](#)
47. Casadevall A, Dragotakes Q, Johnson PW, **Senefeld JW**, Klassen SA, Wright RS, Joyner MJ, Paneth N, Carter RE. Convalescent plasma use in the USA was inversely correlated with COVID-19 mortality. *ELife*, 10:e69866, 2021. [ABSTRACT](#) • [PDF](#) • [DOI: 10.7554/ELIFE.69866](#)
46. **Senefeld JW**, Klassen SA, Ford SK, Senese KA, Wiggins CC, Bostrom BC, Thompson MA, Baker SE, Nicholson WT, Johnson PW, Carter RE, Henderson JP, Hartman WR, Pirofski L, Wright RS, Fairweather D, Bruno KA, Paneth NS, Casadevall A, Joyner MJ. Use of convalescent plasma in COVID-19 patients with immunosuppression. *Transfusion*, 61(8):2503-2511, 2021. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1111/TRF.16525](#)
*Recognized by *Transfusion* as “Highly Cited Article”. [LINK](#)
45. **Senefeld JW**, Haischer MH, Jones AM, Wiggins CC, Beifuss R, Joyner MJ, Hunter SK. Technological advances in elite marathon performance. *Journal of Applied Physiology*, 130(6):2002-2008, 2021. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1152/JAPPLPHYSIOL.00002.2021](#)
44. Klassen SA, **Senefeld JW**, Johnson PW, Carter RE, Wiggins CC, Shoham S, Grossman BJ, Henderson JP, Musser J, Salazar E, Hartman WR, Bouvier NM, Liu STH, Pirofski L, Baker SE, van Helmond N, Wright RS, Fairweather D, Bruno KA, Wang Z, Paneth NS, Casadevall A, Joyner MJ. The effect of convalescent plasma therapy on COVID-19 patient mortality: systematic review and meta-analysis. *Mayo Clinic Proceedings*, 96(5):1262-1275, 2021. [ABSTRACT](#) | [PDF](#) | [DOI: 10.1016/J.MAYOCP.2021.02.008](#)
43. **Senefeld JW**, Shepherd JRA, Baker SE, Joyner MJ. Sex-based limits to running speed in the human, horse and dog: the role of sexual dimorphisms. *The FASEB Journal*, 35(5):e21562, 2021. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1096/FJ.202100161R](#)
42. Berardi G, **Senefeld JW**, Hunter SK, Bement MKH. Fitness levels do not explain greater performance fatigability of the upper extremity in fibromyalgia. *European Journal of Applied Physiology*, 121(8):2363-2364, 2021. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1007/S00421-021-04695-4](#)
41. Berardi G, **Senefeld JW**, Hunter SK, Bement MKH. Impact of isometric and concentric resistance exercise on pain and fatigue in fibromyalgia. *European Journal of Applied Physiology*, 121(5):1389-1404, 2021. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1007/S00421-021-04600-Z](#)
40. Ripoll JG, van Helmond N, **Senefeld JW**, Wiggins CC, Klassen SA, Baker SE, Larson KF, Murphy BM, Andersen KJ, Ford SK, Casadevall A, Joyner MJ. Convalescent plasma for infectious diseases: historical framework and use in COVID-19. *Clinical Microbiology Newsletter*, 43(4):23-32, 2021. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1016/J.CLINMICNEWS.2021.02.001](#)
39. Joyner MJ, Carter RE, **Senefeld JW**, Klassen SA, Mills JR, Johnson PW, Theel ES, Wiggins CC, Bruno KA, Klompas AM, Lesser ER, Kunze KL, Sexton MA, Diaz Soto JC, Baker SE, Shepherd JRA, van Helmond N, Verdun NC, Marks P, van Buskirk CM, Winters JL, Stubbs JR, Rea RF, Hodge DO, Herasevich V, Whelan ER, Clayburn AJ, Larson KF, Ripoll JG, Andersen KJ, Buras MR, Vogt MNP, Dennis JJ, Regimbal RJ, Bauer PR, Blair JE, Paneth NS, Fairweather D, Wright RS, Casadevall A. Convalescent plasma antibody levels and the risk of death from Covid-19. *New England Journal of Medicine*, 384(11):1015-1027, 2021. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1056/NEJMOA2031893](#)
38. Klompas AM, Klassen SA, **Senefeld JW**, Joyner MJ, Johnson PW, Carter RE, van Buskirk CM, Winters JL, Stubbs JR. In reply — Micro-thrombosis, perfusion defects and worsening oxygenation in COVID-19 Patients: a word of caution on the use of convalescent plasma! *Mayo Clinic Proceedings*, 96(1):259-261, 2021. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1016/J.MAYOCP.2020.10.036](#)
37. Joyner MJ, Baker SE, **Senefeld JW**, Klassen SA, Wiggins CC. Experiments of nature and within species comparative physiology. *Comparative Biochemistry and Physiology. Part A, Molecular & Integrative Physiology*, 253:110864, 2021. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1016/J.CBPA.2020.110864](#)

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36. Uchida K, Baker SE, Wiggins CC, **Senefeld JW**, Shepherd JRA, Trenerry MR, Buchholtz ZA, Clifton HR, Holmes DR, Joyner MJ, Curry TB. A novel method to measure transient impairments in cognitive function during acute bouts of hypoxia. *Aerospace Medicine and Human Performance*, 91(11):839-844, 2020. [ABSTRACT](#) • [PDF](#) • [DOI: 10.3357/AMHP.5665.2020](#)
35. Joyner MJ, **Senefeld JW**, Klassen SA, Fairweather D, Wright RS, Carter RE. In reply — Limitations of safety update on convalescent plasma transfusion in COVID-19 patients. *Mayo Clinic Proceedings*, 95(12) 2802-2803, 2020. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1016/J.MAYOCP.2020.09.032](#)

34. Andersen KJ, Klassen SA, Larson KF, Ripoll JG, **Senefeld JW**, Clayburn AJ, Shepherd JRA, Tseng AS, Wiggins CW, Murphy BM, Ford SK, Johnson CP, Miller AD, Baker SE, Wright RS, Winters JL, Stubbs JR, Joyner MJ, van Buskirk CM. Recruitment strategy for potential COVID-19 convalescent plasma donors. *Mayo Clinic Proceedings*, 95(11):2343-2349, 2020. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1016/j.MAYOCP.2020.09.021](#)
 33. **Senefeld JW**, Wiggins CC, Regimbal RJ, Dominelli PB, Baker SE, Joyner MJ. Ergogenic effect of nitrate supplementation: a systematic review and meta-analysis. *Medicine and Science in Sports and Exercise*, 52(10):2250-2299, 2020. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1249/MSS.0000000000002363](#)
 32. **Senefeld JW**, Singh-Peters LA, Jones GR, Kenno KA, Hunter SK, Jakobi JM. Greater fatigue resistance of dorsiflexor muscles in people with prediabetes than type 2 diabetes. *Journal of Electromyography and Kinesiology*, 54:102458, 2020. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1016/j.jelekin.2020.102458](#)
 31. Joyner MJ, Bruno KA, Klassen SA, Kunze KL, Johnson PW, Lesser ER, Wiggins CC, **Senefeld JW**, Klompas AM, Hodge DO, Shepherd JRA, Rea RF, Whelan ER, Clayburn AJ, Spiegel MR, Baker SE, Larson KF, Ripoll JG, Andersen KJ, Buras MR, Vogt MNP, Herasevich V, Dennis JJ, Regimbal RJ, Bauer PR, Blair JE, van Buskirk CM, Winters JL, Stubbs JR, van Helmond N, Butterfield BP, Sexton MA, Diaz Soto JC, Paneth NS, Verdun NC, Marks P, Casadevall A, Fairweather D, Carter RE, Wright RS. Safety update: COVID-19 convalescent plasma in 20,000 hospitalized patients. *Mayo Clinic Proceedings*, 95(9):1888-1897, 2020. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1016/j.MAYOCP.2020.06.028](#)
***Recognized by Mayo Clinic Proceedings as “Highly Cited Article”.** [LINK](#)
 30. Kwon M, **Senefeld JW**, Hunter SK. Attenuated activation of knee extensor muscles during fast contractions in older men and women. *European Journal of Applied Physiology*, 120(10):2289-2299, 2020. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1007/S00421-020-04451-0](#)
 29. **Senefeld JW**, Lambalet Coleman D, Johnson PW, Carter RE, Clayburn AJ, Joyner MJ. Divergence in timing and magnitude of testosterone levels between male and female youths. *JAMA*, 324(1):99-101, 2020. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1001/JAMA.2020.5655](#)
 28. **Senefeld JW**, Ryan KS, D’Astice S, Keenan KG, Hunter SK. Greater fatigability and motor unit discharge variability in human with type 2 diabetes. *Physiological Reports*, 8(13):e14503, 2020. [ABSTRACT](#) • [PDF](#) • [DOI: 10.14814/PHY2.14503](#)
 27. Joyner MJ, Wright RS, Fairweather D, **Senefeld JW**, Bruno KA, Klassen SA, Carter RE, Klompas AM, Wiggins CC, Shepherd JRA, Rea RF, Whelan ER, Clayburn AJ, Spiegel MR, Johnson PW, Lesser ER, Baker SE, Larson KF, Ripoll JG, Andersen KJ, Hodge DO, Kunze KL, Buras MR, Vogt MNP, Herasevich V, Dennis JJ, Regimbal RJ, Bauer PR, Blair JE, Van Buskirk CM, Winters JL, Stubbs JR, Paneth NS, Verdun NC, Marks P, Casadevall A. Early safety indicators of COVID-19 convalescent plasma in 5,000 patients. *Journal of Clinical Investigation*, 130(9):4791-4797, 2020. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1172/JCI140200](#)
 26. **Senefeld JW**. Physiology and fast marathons: the role of biological age. *Journal of Applied Physiology*, 128(4):1069-1085, 2020. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1152/JAPPLPHYSIOL.00167.2020](#)
 25. Klassen SA, Wiggins CW, **Senefeld JW**. Does the broad nature of sympathetic discharge affect our understanding regarding the impact of intermittent hypoxia on neurovascular transduction? *Journal of Physiology*, 598(11):2055-2057, 2020. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1113/JP279684](#)
 24. **Senefeld JW**, Joyner MJ. Strength-endurance training classes: health benefits and injury rates of an emerging cornerstone of physical activity. *Mayo Clinic Proceedings*, 95(3):437-439, 2020. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1016/j.MAYOCP.2020.01.021](#)
 23. **Senefeld JW**, D’Astice SE, Harmer AR, Hunter SK. Increased cardiovascular response to a 6-minute walk test in people with type 2 diabetes. *Diabetes Spectrum*, 33(1):104-110, 2020. [ABSTRACT](#) • [PDF](#) • [DOI: 10.2337/DS19-0002](#)
 22. **Senefeld JW**, Smith JR, Wiggins CC, Joyner MJ. Comment on: “Sex dimorphism of VO_{2max} trainability: a systematic review and meta-analysis”. *Sports Medicine*, 50(5):1047-1048, 2020. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1007/S40279-020-01270-3](#)
 21. Senefeld CM, **Senefeld JW**. Very long-chain acyl-CoA dehydrogenase deficiency nomenclature: compound heterozygosity. *Journal of Human Genetics*, 65(4):435-436, 2020. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1038/S10038-020-0727-9](#)
 20. **Senefeld JW**, Wiggins CC, Joyner MJ, Limberg JK. Warm-up exercise in human type 2 diabetes: is high-intensity exercise required? *Journal of Applied Physiology*, 128(1):225-226, 2020. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1152/JAPPLPHYSIOL.00732.2019](#)
 19. **Senefeld JW**, Harmer AR, Hunter SK. Greater lower limb fatigability in people with prediabetes than controls. *Medicine and Science in Sports and Exercise*, 52(5):1176-1186, 2020. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1249/MSS.0000000000002238](#)
- 2019**
18. **Senefeld JW**, Clayburn AJ, Baker SE, Carter RE, Johnson PW, Joyner MJ. Sex differences in youth elite swimming. *PLoS One*. 14(11): e0225724, 2019. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1371/JOURNAL.PONE.0225724](#)
 17. **Senefeld JW**, Hunter SK. Are Masters athletic performances predictive of human aging in men and women? *Movement & Sports Sciences – Science & Motricité*, 104:5-12, 2019. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1051/SM/2019018](#)

16. Rozand V, **Senefeld JW**, Sundberg CW, Smith AE, Hunter SK. Differential effects of aging and physical activity on corticospinal excitability of upper and lower limb muscles. *Journal of Neurophysiology*, 122(1):241-250, 2019. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1152/JN.00077.2019](#)

15. **Senefeld JW**, Limberg JK, Lukaszewicz KM, Hunter SK. Exercise-induced hyperemia is associated with knee extensor fatigability in adults with type 2 diabetes. *Journal of Applied Physiology*, 126(3):658-667, 2019. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1152/JAPPLPHYSIOL.00854.2018](#)

2018

14. Deering RE, **Senefeld J**, Pashibin T, Neumann DA, Cruz M, Hunter SK. Fatigability of the lumbopelvic stabilizing muscles in women 8 and 26 weeks postpartum. *Journal of Women's Health Physical Therapy*, 42(3):128-138, 2018. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1097/JWH.0000000000000109](#)

13. **Senefeld J**, Magill SB, Harkins A, Harmer AR, Hunter SK. Mechanisms for the increased fatigability of the lower limb in people with type 2 diabetes. *Journal of Applied Physiology*, 125(2):553-566, 2018. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1152/JAPPLPHYSIOL.00160.2018](#)
***APS Select Publication.**

12. Deering RE, Cruz M, **Senefeld JW**, Pashibin T, Eickmeyer S, Hunter SK. Impaired trunk flexor strength, fatigability and steadiness in postpartum women. *Medicine and Science in Sports and Exercise*, 50(8):1558-1569, 2018. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1249/MSS.0000000000001609](#)

11. Keenan KG, **Senefeld JW**, Hunter SK. Girls in the boat: sex differences in rowing performance and participation. *PLoS One*, 13(1):e0191504, 2018. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1371/JOURNAL.PONE.0191504](#)

10. **Senefeld J**, Pereira HM, Elliott N, Yoon T, Hunter SK. Sex differences in mechanisms of recovery after isometric and dynamic fatiguing tasks. *Medicine and Science in Sports and Exercise*, 50(5):1070-1083, 2018. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1249/MSS.0000000000001537](#)
***Highlighted in Active Voice Commentary.** [LINK](#)

2017

9. Rozand V, **Senefeld JW**, Hassanlouei H, Hunter SK. Voluntary activation and variability during maximal dynamic contractions with aging. *European Journal of Applied Physiology*, 117(12):2493-2507, 2017. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1007/S00421-017-3737-3](#)

8. **Senefeld J**, Sundberg CW. Predicting human ageing with Masters athletics: 'one size doesn't fit all'. *Journal of Physiology*, 595(22):6813-6815, 2017. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1113/JP274864](#)

7. Deering RE, **Senefeld JW**, Pashibin T, Neumann DA, Hunter SK. Muscle function and fatigability of trunk flexors in males and females. *Biology of Sex Differences*, 8:12, 2017. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1186/S13293-017-0133-Y](#)

6. **Senefeld JW**, Yoon T, Hunter SK. Age differences in dynamic fatigability and variability of arm and leg muscles: associations with physical function. *Experimental Gerontology*, 87(Pt A):74-83, 2017. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1016/J.EXGER.2016.10.008](#)

2016

5. **Senefeld J**, Hunter SK. Molecular underpinnings of diabetic polyneuropathy. *Journal of Applied Physiology*, 121(1):360, 2016. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1152/JAPPLPHYSIOL.00380.2016](#)

4. Lemley KJ, **Senefeld J**, Hunter SK, Bement MH. Only women report increase in pain threshold following fatiguing contractions of the upper extremity. *European Journal of Applied Physiology*, 116(7):1379-1385, 2016. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1007/S00421-016-3389-8](#)

3. **Senefeld J**, Smith C, Hunter SK. Sex differences in participation, performance, and age of ultramarathon runners. *International Journal of Sports Physiology and Performance*, 11(7):635-642, 2016. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1123/IJSP.2015-0418](#)

2. **Senefeld J**, Joyner MJ, Stevens A, Hunter SK. Sex differences in elite swimming with advanced age are less than marathon running. *Scandinavian Journal of Medicine & Science in Sports*, 26(1):17-28, 2016. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1111/SMS.12412](#)

2013

1. **Senefeld J**, Yoon T, Hoeger Bement M, Hunter SK. Fatigue and recovery from dynamic contractions in men and women differ for arm and leg muscles. *Muscle & Nerve*, 48(3):436-439, 2013. [ABSTRACT](#) • [PDF](#) • [DOI: 10.1002/MUS.23836](#)

B. BOOK CHAPTERS

1. Hunter SK, **Senefeld JW**, Neumann DA. 'Chapter 3: Skeletal Muscle: The Ultimate Stabilizer and Mover of the Skeletal System' in DA Neumann, *Kinesiology of the Musculoskeletal System* (3rd edition); Publisher: Elsevier, 2016.

C. CONFERENCE PROCEEDINGS | ABSTRACTS

(Regional or Local Conference Abstracts available [online](#); 19 abstracts)

2023

50. Brown DJ, Toonstra A, **Senefeld JW**, Hammer SM, Taylor BJ, Supervia M, Smith JR. Exercise training to improve inspiratory muscle function in cardiovascular disease: a systematic review and meta-analysis. America College of Sports Medicine, Denver, CO, 2023.
49. Jones AC, Gorman EK, Nokoff NJ, Hunter SK, Joyner MJ, **Senefeld JW**. Association between gender-affirming hormone therapy and changes in physiological characteristics: body composition and muscle strength. America College of Sports Medicine, Denver, CO, 2023.
48. Webb KL, Gorman EK, Morkeberg OH, Klassen SA, Regimbal RJ, Wiggins CC, Joyner MJ, Hammer SM, **Senefeld JW**. The relationship between hemoglobin and VO₂max: a systematic review and meta-analysis. America College of Sports Medicine, Denver, CO, 2023.
47. Klassen SA, Limberg JK, Harvey RE, Wiggins CC, Iannarelli NJ, **Senefeld JW**, Nicholson WT, Curry TB, Joyner MJ, Shoemaker JK, Baker SE. Central alpha-2 adrenergic mechanisms affect human sympathetic neuronal discharge strategies. American Physiology Summit, Long Beach, CA, 2023.
46. Zaremba S, Miller AJ, Ostrom EA, **Senefeld JW**, Wiggins CC, Dominelli PB, Joyner MJ, Welch BT, Ramsook AH. Airway luminal area in long COVID patients compared to acute COVID-19 patients. American Physiology Summit, Long Beach, CA, 2023. *Physiology*, 38(S1), 2023. DOI: [10.1152/PHYSIOL.2023.38.S1.5731335](https://doi.org/10.1152/PHYSIOL.2023.38.S1.5731335)
***Respiration Section abstract of distinction**
45. Miller AJ, Ostrom EA, **Senefeld JW**, Wiggins CC, Dominelli PB, Joyner MJ, Welch BT, Ramsook AH. Sex differences in central airway luminal area among people with interstitial lung disease. American Physiology Summit, Long Beach, CA, 2023. *Physiology*, 38(S1), 2023. DOI: [10.1152/PHYSIOL.2023.38.S1.5731276](https://doi.org/10.1152/PHYSIOL.2023.38.S1.5731276)
***Respiration Section abstract of distinction**
44. Gorman EK, **Senefeld JW**, Ostrom EA, Clayburn AJ, Joyner MJ, Burr JF, Wiggins CC. The association between ischemic precondition and exercise performance: a systematic review and meta-analysis. American Physiology Summit, Long Beach, CA, 2023.

2022

43. Reddy S, Saltzman LA, DeGennaro LJ, Nichols GL, Scott J, **Senefeld JW**, Johnson PW, Greenberger LM. Breakthrough COVID-19 infections in patients with hematologic malignancies during the Omicron (B.1.1.529) surge: Data from the patient-reported Leukemia & Lymphoma Society National Registry. American Society of Hematology, New Orleans, LA, 2022.
42. Morkeberg O, **Senefeld JW**, Husen M, Wiggins CW, Gorman EK, Johnson PW, Joyner MJ. Context dependent trade-offs in body size within Olympic sports. America College of Sports Medicine, San Francisco, CA, 2022.
41. Webb KL, Regimbal RJ, Morkeberg OH, **Senefeld JW**, Baker SE, Joyner MJ, Wiggins CC. Central hemodynamic response during submaximal and exhaustive exercise in humans with high affinity hemoglobin and compensatory polycythemia *Experimental Biology*, Philadelphia, PA, 2022.
40. Pruter WW, Klassen SA, Dominelli PB, Wiggins CC, **Senefeld JW**, Roy TK, Joyner MJ, Baker SE. Cardiac baroreflex sensitivity and heart rate variability are lower in humans with high affinity hemoglobin compared to typical affinity hemoglobin. *Experimental Biology*, Philadelphia, PA, 2022.

2021

39. Greenberger LM, Saltzman LA, **Senefeld JW**, Johnson PW, DeGennaro LJ, Nichols GL. SARS-CoV-2 antibody levels in blood cancer patients after a third SARS-CoV-2 "booster" vaccination – observational data from the LLS national registry. American Society of Hematology, Atlanta, GA, 2021.
38. Greenberger LM, Saltzman LA, **Senefeld JW**, Johnson PW, DeGennaro LJ, Nichols GL. Impaired serological response to SARS-CoV-2 mRNA vaccination in patients with hematologic malignancies. American Association for Cancer Research- National Cancer Institute-European Organization for Research and Treatment of Cancer, Virtual Meeting, 2021.
37. Larkey NE, Ewaisha R, Lasho MA, Roforth MM, Granger D, Jerde CR, Wu L, Gorsh A, Klassen SA, **Senefeld JW**, Joyner MJ, Baumann NA, Theel ES, Mills JR. Limited correlation between SARS-CoV-2 serologic assays for identification of high-titer COVID-19 convalescent plasma. American Association of Clinical Chemistry, Atlanta, GA, 2021.

2020

36. Klein S, Minichiello J, Anderson J, Murphy EK, Rashedi N, Sun Y, Hamlin A, Joyner MJ, Curry TB, Johnson CP, Regimbal RJ, Wiggins CC, **Senefeld JW**, Shepherd JRA, Baker SE, Elliott J, Halter RJ, Vaze V, Paradis N. Noninvasive impedance, near-infrared spectroscopic and standard physiologic monitoring in a lower body negative pressure model of occult hemorrhage. Military Health System Research Symposium, Kissimmee, FL, 2020.

35. Murphy EK, Klein S, Hamlin A, Anderson J, Minichiello J, Joyner MJ, Curry TB, Johnson CP, Regimbal RJ, Wiggins CC, **Senefeld JW**, Shepherd JRA, Baker SE, Elliott J, Halter RJ, Vaze V, Paradis N. Electrical impedance during lower body negative pressure model of progressive hemorrhage in healthy humans. Military Health System Research Symposium, Kissimmee, FL, 2020.
34. Wiggins CC, Dominelli PB, **Senefeld JW**, Shepherd JRA, Uchida K, Baker SE, Joyner MJ. Skeletal muscle blood flow during handgrip exercise in hypoxia: influence of high-affinity hemoglobin. Okanagan Cardiovascular and Respiratory Symposium, Okanagan, CAN, 2020.
33. Wiggins CC, Dominelli PB, **Senefeld JW**, Shepherd JRA, Baker SE, Uchida K, Joyner MJ. Skeletal muscle endurance and oxygen uptake kinetics during cycling in patients with high affinity hemoglobin. American College of Sports Medicine, San Francisco, CA, 2020. *Medicine and Science in Sports and Exercise*, 52(7S):207.
32. Butterfield BP, Shepherd JRA, **Senefeld JW**, Wiggins CC, Joyner MJ, Curry TB, Convertino VA, Baker SE. Exogenous infusion of epinephrine augments cardiac output during simulated hemorrhage in humans. Experimental Biology, San Diego, CA, 2020. *The FASEB Journal*, 34(S1):1.
31. Wiggins CC, Dominelli PB, **Senefeld JW**, Shepherd JRA, Baker SE, Uchida K, Curry TB, Joyner MJ. Skeletal muscle blood flow and vascular conductance during handgrip exercise in hypoxia: effect of high-affinity hemoglobin. Experimental Biology, San Diego, CA, 2020. *The FASEB Journal*, 34(S1):1.
30. Regimbal RJ, **Senefeld JW**, Wiggins CC, Dominelli PB, Baker SE, Joyner MJ. Nitrate supplementation enhances exercise performance: a systematic review and meta-analysis. Experimental Biology, San Diego, CA, 2020. *The FASEB Journal*, 34(S1):1.
29. Clayburn AJ, **Senefeld JW**, Baker SE, Carter RE, Johnson PW, Joyner MJ. Sex differences in elite youth swimming. Experimental Biology, San Diego, CA, 2020. *The FASEB Journal*, 34(S1):1.

2018

28. **Senefeld J**, Keenan KG, Negro F, Ryan KS, Hunter SK. Fatigability and motor unit behavior of lower limb muscles in people with type 2 diabetes. Integrative Physiology of Exercise, San Diego, CA, 2018.
27. **Senefeld J**, Keenan KG, Ryan KS, Hunter SK. Fatigability and motor unit behavior of the dorsiflexor muscles in people with type 2 diabetes. International Motoneuron Society, Boulder, CO, 2018.
26. Kwon M, Delgadillo JD, **Senefeld J**, Sundberg CW, Hunter SK. Activation of knee extensor muscles during rapid force development in young and old men and women. International Motoneuron Society, Boulder, CO, 2018.
25. Berardi G, Eble C, **Senefeld J**, Hunter SK, Bement MKH. Are isometric and dynamic contractions equally effective in providing acute pain relief? American Pain Society Scientific Summit, Anaheim, CA, 2018.
24. Ryan K, **Senefeld J**, D'Astice S, Schlinder-Delap B, Hunter SK. Fatigability of the dorsiflexor muscles in people with type 2 diabetes and controls. American College of Sports Medicine, Minneapolis, MN, 2018. *Medicine and Science in Sports and Exercise*, 50(5S):642.
23. D'Astice S, **Senefeld J**, Harmer AR, Hunter SK. Increased cardiovascular response to a 6-minute walk test in people with type 2 diabetes. Combined Sections Meeting, New Orleans, LA, 2018.

2017

22. **Senefeld J**, Lukaszewicz KM, Limberg JK, Hunter SK. Leg blood flow and fatigability in people with type 2 diabetes. American College of Sports Medicine, Denver, CO, 2017. *Medicine and Science in Sports and Exercise*, 49(5S):912.
***Non-Invasive Neuromuscular Interest Group Poster Award Winner.**
21. Kwon M, Delgadillo JD, **Senefeld J**, Sundberg C, Hunter SK. Activation of knee extensor muscles during rapid force development in men and women. American College of Sports Medicine, Denver, CO, 2017. *Medicine and Science in Sports and Exercise*, 49(5S):192.

2016

20. Deering R, **Senefeld J**, Pashibin T, Cruz M, Brazauskas R, Neumann D, Hunter SK. Strength and fatigability of the trunk flexor muscles in postpartum women is impaired up to 26 Weeks after delivery. CTSI Regional Research Forum, Milwaukee, WI, 2016.
19. **Senefeld J**, Harmer AR, Hunter SK. Greater fatigability among type 2 diabetics without neuropathy is not associated with neuromuscular propagation or corticomotor excitability. International Society of Electromyography and Kinesiology, Chicago, IL, 2016.
18. Rozand V, **Senefeld J**, Hassanlouei H, Hunter SK. Is there an age difference in voluntary activation during maximal dynamic contractions with elbow flexor muscles? International Society of Electromyography and Kinesiology, Chicago, IL, 2016.
17. Deering R, **Senefeld J**, Pashibin T, Nisivaco S, Lemens J, Bement M, Neumann D, Hunter SK. Novel clinical test of fatigability of the lumbopelvic stabilizing muscles in postpartum and nulliparous women. Wisconsin Physical Therapy Association, Middleton, WI, 2016.

16. Deering R, **Senefeld J**, Pashibin T, Cruz M, Neumann D, Bement M, Hunter SK. Postpartum women demonstrate decreased abdominal muscle strength and decline in self-reported physical activity between 8 weeks and 26 weeks postpartum. Wisconsin Association for Perinatal Care, Elkhart Lake, WI, 2016.
15. Deering R, **Senefeld J**, Pashibin T, Lemley K, Cruz M, Neumann D, Hunter SK. Strength and fatigability of the trunk flexor muscles in postpartum women. American Physical Therapy Association, Anaheim, CA, 2016.

2015

14. **Senefeld J**, Pereira HM, Elliott N, Yoon T, Hunter SK. Mechanisms of knee extensor muscle fatigability in men and women after isometric and dynamic contractions. Society for Neuroscience, Chicago, IL, 2015.
13. Hassanlouei H, Sundberg CW, **Senefeld J**, Kuplic A, and Hunter SK. Motor cortical input-output characteristics in young and old. Society for Neuroscience, Chicago, IL, 2015.
12. Deering R, **Senefeld J**, Pashibin T, Pereira HM, Hoeger Bement M, Eickmeyer S, Hunter SK. Fatigability and steadiness of the trunk flexor muscles in young, healthy adults. American College of Sports Medicine, San Diego, CA, 2015. *Medicine and Science in Sports and Exercise*, 47(5S): 194.
11. Pereira HM, Esser TJ, Schlinder-Delap B, **Senefeld J**, Sundberg C, Deering R, Hunter SK. Cognitive demand decreases steadiness and dexterity with aging. American College of Sports Medicine, San Diego, CA, 2015. *Medicine and Science in Sports and Exercise*, 47(5S): 601.
10. **Senefeld J**, Smith C, Hunter SK. Sex differences in ultra-marathon running: performance and participation. American College of Sports Medicine, San Diego, CA, 2015. *Medicine and Science in Sports and Exercise*, 47(5S): 947.
9. Harmer AR, **Senefeld J**, Harkins A, Schlinder-Delap B, Deering R, Danduran M, Hunter SK. Heightened cardiovascular stress during the six-minute walk test among people with type 2 diabetes. World Congress in Physical Therapy 2015, Suntec City, Singapore, 2015. *Physiotherapy*, 101(S1):533-534.

2014

8. **Senefeld J**, Harmer AR, Pereira HM, Yoon T, Schlinder-Delap B, Deering R, Harkins A, Danduran M, McGill S, Kidambi S, Hunter SK. Sex differences in fatigability in individuals with type 2 diabetes and pre-diabetes. Integrative Physiology of Exercise Conference, Miami Beach, FL, 2014.
7. **Senefeld J**, Harmer AR, Pereira HM, Yoon T, Schlinder-DeLap B, Deering R, Buzzard A, Harkins A, Danduran M, Magill S, Kidambi S, Hunter SK. Neuromuscular fatigue in individuals with and without type 2 diabetes. American College of Sports Medicine, Orlando, FL, 2014. *Medicine and Science in Sports and Exercise*, 46(5S): 545.

2013

6. **Senefeld J**, Harmer AR, Pereira HM, Yoon T, Schlinder-DeLap B, Deering R, Buzzard A, Harkins A, Danduran M, Hunter SK. Neuromuscular fatigue in individuals with and without type 2 diabetes. American College of Sports Medicine: Midwest Chapter, Merrillville, IN, 2013.
***Most Outstanding Master Poster Presentation**
5. Stevens AA, **Senefeld J**, Joyner MJ, Hunter SK. Sex differences in World's fastest swimming with advanced age. American College of Sports Medicine, Indianapolis, IN, 2013. *Medicine and Science in Sports and Exercise*, 45(5S): 478.
4. Elliott N, **Senefeld J**, Pereira H, Yoon T, Harmer AR, Hunter SK. Sex differences and supraspinal fatigue of the knee extensor muscles in young adults. American College of Sports Medicine, Indianapolis, IN, 2013. *Medicine and Science in Sports and Exercise*, 45(5S): 95-96.
***Non-Invasive Neuromuscular Interest Group Poster Award Winner**
3. **Senefeld J**, Elliott N, Pereira H, Yoon T, Harmer AR, Hunter SK. Sex differences following dynamic contractions of knee extensor muscles. American College of Sports Medicine, Indianapolis, IN, 2013. *Medicine and Science in Sports and Exercise*, 45(5S): 363.

2012

2. **Senefeld J**, Yoon T, Bement MKH, Hunter SK. Sex differences in fatigue during dynamic contractions differs between arm and leg muscles. American College of Sports Medicine, San Francisco, CA, 2012. *Medicine and Science in Sports and Exercise*, 44(5S):212.
1. Yoon T, **Senefeld J**, Bement MKH, Hunter SK. Age differences in fatigue during dynamic contractions in arm and leg muscles. American College of Sports Medicine, San Francisco, CA, 2012. *Medicine and Science in Sports and Exercise*, 44(5S):212.

IV. RESEARCH FUNDING

A. ACTIVE FUNDING

Currently funded by philanthropic funds associated with the UnitedHealth Group.

B. COMPLETED FUNDING

EXTRAMURAL FUNDING

4. **National Institute of Health F32, NHLBI** [HL154320-01] 08.2021-05.2022
Title: *Skeletal muscle performance and cellular adaptations to high hemoglobin-oxygen affinity*
Direct and Indirect Costs: \$117,096
Role: PI (Mentor: Dr. Michael J Joyner, M.D.)
3. **Biomedical Advanced Research and Development Authority Contract, BARDA** [75A50120C00096] 05.2020-04.2022
Title: *A Nationwide Expanded Access Program (EAP) to Facilitate the Use of Human Convalescent Plasma to Treat Hospitalization Coronavirus-2 (SARS-CoV-2) COVID-19 Patients*
Total Costs: \$48,927,887 (\$30,772,256 Direct)
Role: Other Significant Contributor (PI: Dr. Michael J Joyner, M.D.)
2. **Biomedical Advanced Research and Development Authority Contract, BARDA** [75A50121P00001] 07.2020-06.2021
Title: *Expanded Access Program (EAP) Supplement for nAb Testing and Treatment/Control Study*
Total Costs: \$17,509,398 (\$11,012,200 Direct)
Role: Other Significant Contributor (PI: Dr. Michael J Joyner, M.D.)
1. **National Institute of Health T32, NIDDK** [T32 DK07352] 06.2019-08.2021
Title: *Diabetes and Metabolism*
Role: Trainee (PI: Dr. Michael D Jensen, M.D.)

INTRAMURAL GRANTS

3. **Athletic & Human Performance Research Pilot Award, Marquette University** 11.2018-05.2019
Title: *The role of vascular dysfunction in fatigue in adults with prediabetes and type 2 diabetes*
Direct and Indirect Costs: \$15,000
Role: PI (Co-PI with Dr. Kathleen Lukaszewicz, M.P.T., Ph.D.)
2. **Richard W. Jobling Distinguished Research Assistantship, Marquette University** 09.2017-05.2018
Title: *Mechanisms of fatigability in people with type 2 diabetes and prediabetes*
Direct and Indirect Costs: \$19,000
Role: PI
1. **Summer Fellowship, Marquette University Graduate School & Vice President for Research and Innovation** 05.2016-09.2016
Title: *Cardiovascular limits of exercise in people with type 2 diabetes*
Direct and Indirect Costs: \$5,000
Role: PI

V. PRESENTATIONS (ORAL)

A. INTERNATIONAL PRESENTATIONS (OUTSIDE THE USA)

1. **Organization for the Study of Sex Differences Annual Meeting**, Montreal, Canada 05.16.2017
Symposium: *Sex differences with aging in human motor performance from the frail to the elite athlete*
Title: *Sex differences with aging among elite athletes: both physiological differences and participation matter*

B. NATIONAL PRESENTATIONS (IN THE USA)

2. **Association for the Advancement of Blood & Biotherapies Annual Meeting**, Orlando, Florida 10.03.2022
Title: *COVID-19 convalescent plasma and Emergency Use Authorization for immunosuppressed population*
1. **American College of Sports Medicine Annual Meeting**, Orlando, Florida 05.31.2019
Title: *Motor unit activity in leg muscles of people with type 2 diabetes*

C. LOCAL AND REGIONAL

3. **Endocrine Research Seminar, Mayo Clinic**, Rochester, Minnesota 03.03.2020
Title: *Mechanisms of skeletal muscle fatigability in humans with type 2 diabetes and prediabetes*

- | | | |
|----|---|------------|
| 2. | Biology Seminar Series, Winona State University , Winona, Minnesota
Title: <i>Human skeletal muscle performance: (biological) sex matters</i> | 09.26.2019 |
| 1. | Diabetes Symposium of Wisconsin, Medical College of Wisconsin , Milwaukee, Wisconsin
Title: <i>Exercise: the panacea for diabetes</i> | 05.10.2018 |

VI. TEACHING

A. COURSE DIRECTOR | GRADUATE

1. **Techniques in the Neural Control of Movement** (CTRH 6931, 3 credits)
Term(s): Spring 2017
Institution: Marquette University | College of Health Sciences | Department of Physical Therapy

B. COURSE DIRECTOR | UNDERGRADUATE

1. **Undergraduate Research Experience** (EXS 4111, 2 credits)
Term(s): Fall 2022
Institution: High Point University | Congdon School of Health Sciences | Department of Exercise Science

C. TEACHING ASSISTANT | GRADUATE

2. **Physiology of Activity** (PHTH 7518, 3 credits)
Term(s): Fall 2013-2017
Institution: Marquette University | College of Health Sciences | Department of Physical Therapy
1. **Advanced Exercise Physiology** (EXPH 5195, 3 credits)
Term(s): Fall 2013-2018
Institution: Marquette University | College of Health Sciences | Department of Physical Therapy

D. TEACHING ASSISTANT | UNDERGRADUATE

1. **Advanced Exercise Physiology** (EXPH 4195, 3 credits)
Term(s): Fall 2013-2018
Institution: Marquette University | College of Health Sciences | Department of Physical Therapy

E. GUEST LECTURER | GRADUATE

1. **Neurophysiological Principles in Disease and Rehabilitation** (CTRH 6201, 3 credits)
Duty: 1 lecture × 120 min
Term(s): Spring 2019
Institution: Marquette University | College of Health Sciences | Department of Physical Therapy

F. GUEST LECTURER | UNDERGRADUATE

2. **Exercise and Chronic Disease** (EXPH 494, 3 credits)
Duty: 1 lecture × 90 min
Term(s): Spring 2017-2019
Institution: Concordia University of Wisconsin | College of Arts and Sciences | Department of Health & Human Performance
1. **Clinical Exercise Physiology for Special Populations** (EXPH 4187, 3 credits)
Duty: 1 lecture × 120 min
Term(s): Fall 2013-2018
Institution: Marquette University | College of Health Sciences | Department of Physical Therapy

VII. MENTORING

A. CURRENT MENTOR | ADVISOR | COMMITTEE MEMBER

*denotes co-author on peer-reviewed publication(s)

POST- BACCALAUREATE | MAYO CLINIC

- | | | |
|----|---------------------|----------------|
| 3. | Alexander J. Miller | 2022 – present |
| 2. | Ellen K. Gorman* | 2021 – present |

- Riley J. Regimbal* 2019 – present

MEDICAL STUDENTS | MAYO CLINIC

- Erik A. Ovrom* 2022 – present
- Jeffrey L. Jeltema* 2021 – present

B. PREVIOUS MENTOR | ADVISOR | COMMITTEE MEMBER

MASTER’S LEVEL | MARQUETTE UNIVERSITY

- Kevin S. Ryan, M.S.* 09.2017-05.2019
“Fatigability of the dorsiflexor muscles in people with type 2 diabetes”

MEDICAL STUDENTS | MAYO CLINIC

- Shane K. Ford* 2020 – 2023
- Brenna M. Murphy* 2020 – 2021
- Kylie J. Andersen* 2020 – 2021

POST- BACCALAUREATE | MAYO CLINIC

- Olaf H. Morkeberg 2021 – 2022
- Katherine A. Senese* 2020 – 2021
- Michaela C. Pletsch* 2020 – 2021
- Joshua J. Dennis* 2020 – 2021
- Zachary A. Buchholtz* 2019 – 2021
- Andrew J. Clayburn* 2019 – 2020

UNDERGRADUATE LEVEL | MARQUETTE UNIVERSITY

- Rachel Beilfuss* 2019
- Cassandra Goodrich 2019
- Sarah D’Astice* 2017-2019
- Sloane Carlson 2017-2018
- Christine Eble 2015-2017
- Courtney Linzmeier 2015
- Isaac Pierre 2013-2014
- Anna Buzzard 2013

VIII. PROFESSIONAL ACTIVITIES AND SERVICE

A. MEMBERSHIPS IN PROFESSIONAL SOCIETIES

- American Physiological Society 2020 – present
- Organization for the Study of Sex Differences 2017 – 2019
- International Society of Electromyography and Kinesiology 2016 – 2018
- American Heart Association 2016 – 2018
- Society for Neuroscience 2015 – 2017
- American College of Sports Medicine 2011 – present
 Member of Mid-West Regional Chapter 2013 – present

B. OTHER PROFESSIONAL ORGANIZATIONS, ACTIVITIES, AND SERVICE

MANUSCRIPT REVIEWER | AD HOC

- | | |
|---|---|
| Advances in Nutrition | European Journal of Sports Science |
| Age | Experimental Aging Research |
| Applied Physiology, Nutrition, and Metabolism | Experimental Gerontology |
| BMC Sports Science, Medicine and Rehabilitation | Frontiers in Physiology |
| Cancer Control | Frontiers in Neuroscience |
| Cancer Investigation | Influenza and Other Respiratory Viruses |
| Chinese Journal of Physiology | International Journal of Sports and Exercise Medicine |
| European Journal of Applied Physiology | Journal of Musculoskeletal and Neuronal Interactions |

TOTAL NUMBER OF MANUSCRIPTS REVIEWED EACH YEAR FOR PEER REVIEWED JOURNALS

2013	1	2016	10	2019	5	2022	12
2014	12	2017	5	2020	8	2023	7
2015	13	2018	0	2021	10		

IX. INSTITUTIONAL SERVICE

A. INSTITUTIONAL SERVICE

3. **Graduate Funding Distribution Task Force Member:** Marquette University 2016-2017
2. **Vice President of Student Affairs Search Committee:** Marquette University 2016-2017
1. **Innovation Council Review Board:** Marquette University 2016-2017

B. COLLEGE SERVICE

1. **President of the Graduate Student Organization:** Marquette University 2016-2017

C. PROGRAM | DEPARTMENT SERVICE

1. **Student Graduation Speech:** Marquette University, Exercise Science Program, Dept. of Physical Therapy 05.19.2013

D. COMMUNITY SERVICE

4. **Sacristan and Lector:** Old Saint Mary Parish, Milwaukee, WI 2017 - 2019
3. **Children's Liturgy Lay Minister:** Old Saint Mary Parish, Milwaukee, WI 2017 - 2019
2. **Sunday School Teacher:** Old Saint Mary Parish, Milwaukee, WI 2016 - 2019
1. **Lay Eucharistic Minister:** Old Saint Mary Parish, Milwaukee, WI 2015 - 2019

X. AWARDS AND HONORS

8. **Team Science Award:** Mayo Clinic 2021
7. **Clinical and Translational Rehabilitation Health Sciences Student Travel Award:** Marquette University 2014 - 2017
6. **Department of Physical Therapy Student Travel Award:** Marquette University 2014 - 2017
5. **Marquette University Graduate Student Travel Award** 2014 - 2017
4. **Clinical and Translational Rehabilitation Health Sciences Student Research Award:** Marquette University 2013 - 2018
3. **Marquette University Exercise Science Professionalism Award** 2013
2. **Marquette University Exercise Science Research Award** 2013
1. **Marquette University Summer Research Program Fellowship** 2011 - 2012

XI. INTERVIEWS AND CITATIONS IN POPULAR MEDIA

2. **Inside Higher Ed.** 01.27.2022
'A trans swimmer roils women's sports', *Josh Moody*.
<https://www.insidehighered.com/news/2022/01/27/what-success-trans-swimmer-lia-thomas-means-ncaa>
1. **Cancer Therapy Adviser.** 12.17.2020
'Study shows convalescent plasma is beneficial for COVID-19 patients with hematological malignancies', *Sarah Elizabeth Richards*.
<https://www.cancertherapyadvisor.com/home/cancer-topics/hematologic-cancers/blood-cancer-covid19-convalescent-plasma-beneficial-risk-treatment/>