

XAVIER THOMPSON, PHD, ATC

CONTACT INFORMATION

Louisiana State University School of Kinesiology
2146 HPL Field House

xthompson@lsu.edu

EDUCATION

University of Virginia

Ph.D. in Education- Kinesiology: Sports Medicine 2020-2024

Dissertation: "The Clinical Utility of Torque-Velocity Relationships Following Anterior Cruciate Ligament Reconstruction"

University of Kentucky

Master of Science in Athletic Training 2015-2017

Graduate Research Thesis: "Relationship Between Rate of Torque Development and Vertical Jump Performance"

The Ohio State University

Bachelor of Science in Athletic Training 2011-2015

RESEARCH EXPERIENCE

Louisiana State University

Assistant Professor of Sports Science 2024-pres

Tenure Track Assistant professor within the School of Kinesiology

University of Virginia

Graduate Research Assistant 2020-2024

For research and as a service to the local community, collected post-surgical ACLR data as a part of the Lower Extremity Assessment Protocol. Experienced in data collection and administrative duties for a variety of protocols.

Clinical Research Trainee/ Coordinator

2018-2020

Served as administrator for Sports as a Laboratory Assessment Model, employing concussion test batteries for athletes at pre- and post-injury. Performed administrative duties and assisted in data collection for studies using neurocognitive tests, postural control measures, instrumented mouthguards, novel ecological momentary assessments, MRI, and PET/CT.

University of Kentucky

Graduate Student 2015-2017

Completed Biodex testing as well as a jump testing protocol utilizing a contact mat system within the Musculoskeletal Laboratory

The Ohio State University

MOVES Biomechanics Lab Assistant 2014-2015

Assisted with projects including the functional pre-participation evaluation initiative and biomechanical analysis of athletic teams and labeled models with Vicon 3D imaging software

SCHOLARSHIP

Refereed Journal Publications

1. Bruce Leicht AS, **Thompson XD**, Queen RM, Rodu J, Higgins MJ, Cross KM, Werner BC, Resch JE, Hart JM. Analysis of Limb Loading and Lower Extremity Strength Recovery Across Time Following Anterior Cruciate Ligament Reconstruction. *Sports Health*. 2024. (In Press).
2. Bruce Leicht AS, **Thompson XD**, Queen RM, Rodu J, Higgins MJ, Cross KM, Werner BC, Resch JE, Hart JM. Comparison of Limb Loading Characteristics and Subjective Functional Outcomes Between Sexes Following ACLR. *JAT*. (In Press).
3. Prinz NW, **Thompson XD**, Bruce Leicht AS, Kuenze CM, Hart JM. Associations Between Race & Socioeconomic Status, Lower Extremity Strength, and Patient Reported Outcomes Following Anterior Cruciate Ligament Reconstruction. *Journal of Athletic Training*. (in press online early)
4. Hopper HM, Bruce Leicht AS, **Thompson XD**, Gwathmey FW, Miller MD, Werner BC, Brockmeier SF, Diduch DR, Hart JM. The effect of factors from different time points on psychological readiness following ACL reconstruction. *Physical Therapy in Sport*. 2024;67:161-166. doi:10.1016/j.ptsp.2024.05.002
5. DeJong Lempke AF, Stephens SL, **Thompson XD**, Hart JM, Hyrvniak DJ, Rodu JS, Hertel J. Transference of outdoor gait-training to treadmill running biomechanics and strength measures: A randomized controlled trial. *Journal of Biomechanics*. 2024;168:112095. doi:10.1016/j.jbiomech.2024.112095
6. Moran TE, Ramamurti P, Wells DK, **Thompson X**, Hart JM, Diduch DR, Brockmeier SF, Miller MD, Gwathmey FW, Werner BC. No Deficits in Functional Outcomes of the Contralateral Limb Are Seen When the Hamstring Is Harvested for Augmentation of Small Diameter Ipsilateral Hamstring Autograft. *Arthroscopy, Sports Medicine, and Rehabilitation*. 2023;5(5):100798. doi:10.1016/j.asmr.2023.100798
7. **Thompson XD**, Bruce Leicht AS, Hopper HM, Kaur M, Diduch DR, Brockmeier SF, MD Miller, Gwathmey FW, Werner BC, Hart JM. Knee Extensor Torque-Velocity Relationships following Anterior Cruciate Ligament Reconstruction. *Clinical Biomechanics*. 2023;108:106058. doi:10.1016/j.clinbiomech.2023.106058
8. Bruce Leicht AS, **Thompson XD**, Kaur M, Hopper HM, Stolzenfield RJ, Wahl AJ, Sroufe MD, Werner BC, Diduch DR, Gwathmey FW, Brockmeier SF, Miller MD, Hart JM. Hip Strength Recovery After Anterior Cruciate Ligament Reconstruction. *Orthop J Sports Med*. 2023;11(7):23259671231169196. Published 2023 Jul 7. doi:10.1177/23259671231169196
9. Sroufe MD, Sumpter AE, **Thompson XD**, Moran TE, Bruce Leicht AS, Diduch DR, Brockmeier SF, Miller MD, Gwathmey FW, Werner BC, Pietrosimone B, Hart JM. Comparison of Patient-Reported Outcomes, Strength, and Functional Performance in Primary Versus Revision Anterior Cruciate Ligament Reconstruction [published online ahead of print, 2023 May 22]. *Am J Sports Med*. 2023;3635465231169535. doi:10.1177/03635465231169535

10. Troiano M; **Thompson X**, Boukhechba M, Hertel J, Resch JE. An Absence of Persistent Postural Stability Deficits Following a Sport Concussion in Collegiate Athletes. *Journal of Head Trauma Rehabilitation*. 2023 doi: 10.1097/HTR.0000000000000873
11. Neumann KD, Seshadri V, **Thompson XD**, Broshek DK, Druzgal J, Massey JC, Newman B, Reyes J, Simpson SR, McCauley KS, Patrie J, Stone JR, Kundu BK and Resch JE. Microglial activation persists beyond clinical recovery following sport concussion in collegiate athletes. *Front. Neurol.* (2023) 14:1127708. doi: 10.3389/fneur.2023.1127708
12. DeJong Lempke AF, Stephens SL, Fish PN, **Thompson XD**, Hart JM, Hryvniak DJ, Rodu JS, Hertel J. Sensor-Based Gait-Training to Reduce Contact Time for Runners with Exercise-Related Lower Leg Pain: A Randomised Controlled Trial. *BMJ Open Sport & Exercise Medicine*. 2022;8:e001293. doi:10.1136/bmjsem-2021-001293.
13. **Thompson XD**, Newman TM, Donahue CC, Erdman NK, Statuta SM, Resch JE. Kinesiophobia Is Related to Acute Musculoskeletal Injury Incidence Following Concussion. *Journal of Sport Rehabilitation*. Published online September 01, 2022. doi:10.1123/jsr.2022-0134
14. **Thompson XD**, Bruce AS, Kaur M, et al. Disagreement in Pass Rates Between Strength and Performance Tests in Patients Recovering From Anterior Cruciate Ligament Reconstruction. *Am J Sports Med*. 2022;50(8):2111-2118. doi:10.1177/03635465221097712
15. **Thompson XD**, Erdman NK, Walton SR, Broshek DK, Resch JE. Reevaluating clinical assessment outcomes after unrestricted return to play following sport-related concussion, *Brain Injury*, 2021;35:12-13, 1577-1584, DOI: 10.1080/02699052.2021.1975818
16. **Thompson XD**, Gabler CM, Mattacola, CG. The Relationship Between Rate of Torque Development and Vertical Jump Performance: Possible Implications for ACL Injury?. *Athletic Training and Sports Health Care*. 2021; 13(3): 136–143.
17. **Thompson XD**, DiAntonio B. Returning a Division I Hurdler to Sport after Multiple Knee Ligament Injuries. *International Journal of Athletic Therapy and Training*. 2020;1(26-31)
18. Gabler, LF, Huddleston, SH, Dau, NZ, Lessley DJ, Arbogast KB, **Thompson XD**, Resch JE, Crandall JR. On-Field Performance of an Instrumented Mouthguard for Detecting Head Impacts in American Football. *Ann Biomed Eng* (2020). <https://doi.org/10.1007/s10439-020-02654-2>
19. **Thompson XD**, Hunt TN. The Relationship Between Age and GPA on Exerted Effort During Baseline Concussion Assessment. *Athletic Training and Sports Health Care*. 2017;9(2):81-88

Refereed Abstracts/Presentations

International

1. Hopper HM, Bruce AS, **Thompson XD**, Hart JM. The Mechanism of Injury's Role in Jump Landing Mechanics After Anterior Cruciate Ligament Reconstruction. International Society of Arthroscopy, Knee Surgery and Orthopaedic Sports Medicine Congress, Boston, MA. June 2023

National

1. **Thompson XD**, Bruce Leicht AS, Hart J. The Torque-velocity Relationship and Predicting Function Following ACLR. Thematic Poster. American College of Sports Medicine Annual Meeting. Boston MA. May 2024.
2. Bruce Leicht AS, **Thompson XD**, Queen RM, Rodu J, Higgins MJ, Cross KM, Werner BC, Resch JE, Hart JM. Prognostic Value of Limb Loading During Early Functional Assessment For Predicting Later Jump Landing Performance Following ACLR. Thematic Poster. American College of Sports Medicine Annual Meeting. Boston, MA. May 2024.
3. DelBiondo GM, Kelly DK, Smith-Ryan AE, **Thompson X**, Hart JM. "Evaluating Sex Differences In Quadriceps Muscle Fatiguability After Anterior Cruciate Ligament Reconstruction" American College of Sports Medicine Annual Conference, Boston, MA. May 2024.
4. Mishra M, Thoma L, Charity D, **Thompson X**, Hart J, Baez S. Do Kinesiophobia Levels during Recovery Change after Primary Vs. Secondary ACL Reconstruction?. Poster Presentation. Combined Sections Meeting. Boston, MA. Feb 2024.
5. **Thompson XD**, Bruce Leicht AS, Kuenze C, Hart JM. Psychological Readiness Among Patients Following ACLR and ACLR Revision Surgery. National Athletic Trainer's Association Annual Meeting and Clinical Symposium, Indianapolis, IN. June 2023.
6. **Thompson XD**, Bruce Leicht AS, Hart JM. Torque-Velocity Relationship Differences During Isokinetic Extension Between ACL Reconstructed and ACL Revision Knees. Poster Presentation. American College of Sports Medicine Annual Meeting, Denver, CO. May 2023.
7. Bruce Leicht AS, Kelly DK, Thompson A, **Thompson XD**, Hart JM. Differences In Single-leg Balance Measures Between Individuals Following Anterior Cruciate Ligament Reconstruction and Healthy Controls. Poster Presentation. American College of Sports Medicine Annual Meeting, Denver, CO. May 2023.
8. **Thompson XD**, Bruce AS, Kaur M, Hopper HM, Hart JM. Knee Extensor Force Velocity Relationship is altered in patients recovering from ACLR. National Athletic Trainer's Association Annual Meeting and Clinical Symposium, Philadelphia, PA. June 2022.
9. Bruce AS, **Thompson XD**, Kaur M, Hart JM. Hip Strength Recovery During Rehabilitation after ACL Reconstruction. National Athletic Trainers' Association Annual Meeting and Clinical Symposium. Philadelphia, PA. June 2022.
10. Bruce AS, **Thompson XD**, Kaur M, Hart JM. The Relationship Between Lower Extremity Strength Ratios and Patient Reported Function After Anterior Cruciate Ligament Reconstruction. American College of Sports Medicine Annual Meeting, San Diego, CA. June 2022.
11. **Thompson XD**, Bruce AS, Kaur M, Hopper HM, Hart JM. Patient Reported Outcomes Among Patients With Disagreeing Pass Rates Among Performance Tests In Patients With ACLR. American College of Sports Medicine Annual Meeting, San Diego, CA. June 2022.

12. **Thompson XD**, Bruce AS, Hopper HM, Hart JM. Pass rates among different components of return to sports test batteries after ACLR in Adolescent Patients. ACL Research Retreat IX: The Pediatric Athlete. Conference. March 2022.
13. Bruce AS, **Thompson XD**, Kaur M, Hart JM. Physical Activity Level and Sex Differences Impacting Pediatric Patient Outcomes After Anterior Cruciate Ligament Reconstruction (ACLR). ACL Research Retreat IX: The Pediatric Athlete. Conference. March 2022.
14. Hopper HM; Bruce AS MS; **Thompson XD** MS, ATC; Hart JM PhD, ATC. Mechanism Of Injury Impact On Outcome Following ACL Reconstruction In Adolescents ACL Research Retreat IX: The Pediatric Athlete. Conference. March 2022
15. Kaur, M., Krepkovich, E., Richardson, N., Olowin, A., Manalich, P., Bruce, A., **Thompson, X.**, Saliba, S., Hart, J. Video Game-Based EMG-Biofeedback in Patients with Knee Osteoarthritis. Poster Presentation. Combined Sections Meeting. February 2022.
16. **Thompson XD**, Bruce AS, Hopper HM, Sullivan JL, Hart JM. Disagreement in Pass Rates Among Different Components of Return to Sports Test Batteries After ACLR. National Athletic Trainer's Association Annual Meeting. Virtual Conference. June 2021. (**NATA Foundation Post-Professional Terminal Degree Student Free Communication Award Winner**)
17. Bruce AS, **Thompson XD**, Hopper HM, Stolzenfeld RL, Moler CB, Wahl AJ, Hart JM. Weight Distribution Progression During Bilateral Squatting Tasks Post-Anterior Cruciate Ligament Reconstruction. Poster Presentation. American College of Sports Medicine Annual Meeting. Virtual Conference. June 2021.
18. **Thompson, XD**, Bruce, AS, Hart, JM. Force Velocity Modulation Differences During Isokinetic and Isometric Extension Between ACL Reconstructed and Healthy Knees. Poster Presentation. American College of Sports Medicine Annual Meeting. Virtual Conference. June 2021.
19. Bruce AS, **Thompson XD**, Hopper HM, Stolzenfeld RL, Moler CB, Wahl AJ, Hart JM. Weight Distribution Progression During Bilateral Squatting Tasks Post-Anterior Cruciate Ligament Reconstruction. Poster Presentation. American College of Sports Medicine Annual Meeting. Virtual Conference. June 2021.
20. Monge JL, Donahue CC, Erdman NK, **Thompson XD**, Walton SR, Resch JE. Concussion Modifiers Associated with Prolonged Recovery from Sport Concussion. National Athletic Trainer's Association Annual Meeting. Virtual Conference. June 2021.
21. Newman TM, Donahue CC, **Thompson XD**, Resch JE. The Effects of the COVID-19 Pandemic on ImpACT Performance in Collegiate Athletes. National Athletic Trainer's Association Annual Meeting. Virtual Conference. June 2021.
22. **Thompson XD**, Erdman NK, Walton SR, Resch JE. Kinesiophobia is Unrelated to Acute Musculoskeletal Injury Incidence Post-Concussion. National Athletic Trainers' Association Annual Meeting and Clinical Symposium, Virtual Conference. July 2020.

23. **Thompson XD**, Erdman NK, Walton SR, Resch JE. Persistent Neurological Impairment Six Months Following Unrestricted Return-to-Play from Concussion. National Athletic Trainers' Association Annual Meeting and Clinical Symposium, Las Vegas, NV. June 2019.
24. Carrington H, **Thompson XD**, Erdman NK, Walton SR, Resch JE. Predicting Time to Symptom Resolution in Collegiate Athletes Diagnosed with Sport Concussion: A Cross Validation Study. National Athletic Trainers' Association Annual Meeting and Clinical Symposium, Las Vegas, NV. June 2019.
25. Carrington HW, Broshek DK, Erdman NK, **Thompson XD**, Walton SR, Resch JE. The Influence of Hormonal Contraceptives on Baseline ImPACT Performance. Society of Neurological Surgeons (SNS) 110th Annual Meeting, Seattle, Washington. May 2019.
26. Manetz K, Walton SR, Erdman NK, **Thompson XD**, Resch JE. The Influence of Concussion History on Kinesiophobia in Collegiate Athletes. National Athletic Trainers' Association Annual Meeting and Clinical Symposium, Las Vegas, NV. June 2019.
27. Monge J, Green RM, Walton SR, Erdman NK, **Thompson XD**, Marshall AN, Hertel JN, Resch JE. Predicting Time to Symptom Resolution in Collegiate Athletes Diagnosed with Sport Concussion: A Cross-Validation Study. National Athletic Trainers' Association Annual Meeting and Clinical Symposium, Las Vegas, NV. June 2019
28. Memmini AM, **Thompson XD**. Keeping Runners Healthy: Environmental and Overuse Injuries. National Athletic Trainers' Association Annual Meeting and Clinical Symposium, New Orleans, LA. June 2018.
29. **Thompson XD**, DiAntonio B, TL Uhl. Returning a Division I Hurdler to Sport after Multiple Knee Ligament Injury. National Athletic Trainers' Association Annual Meeting and Clinical Symposium, Houston, TX. June 2017.
30. Memmini AK, DiAntonio B, **Thompson XD**, Black WS. Insidious onset of a grade III femoral stress fracture in a Division I male cross-country runner athlete. National Athletic Trainers' Association Annual Meeting and Clinical Symposium, Houston, TX. June 2017.
31. **Thompson XD**, Clifton DR, Onate JA. Relationship Between Weight-Bearing Ankle Dorsiflexion and Deep Squat Performance. National Athletic Trainers' Association Annual Meeting and Clinical Symposium, St. Louis, MO. June 2015.
32. **Thompson XD**, Hunt TN. The Relationship Between Age and GPA on Exerted Effort During Baseline Concussion Assessment. American College of Sports Medicine Annual Meeting, Orlando, FL. May 2014

State

1. Wahl AJ, **Thompson XD**, Hart JM. A Comparison of Return to Sport Measures Following ACL Reconstruction in Patients With and Without Postoperative Complications. Poster Presentation. Virginia Orthopaedic Society Annual Meeting, May 3-5, 2024, Tysons Corner, VA

2. Le RT, Marcum WA, Almario AN, **Thompson XD**, Cross K, Moler C, Gwathmey FW, Werner BC, Su CA, Kuenze C. Area Deprivation Index is Associated with Knee Function and Psychological Readiness for Sport during Early, Mid, and Late Rehabilitation after ACL Reconstruction. Accepted for Oral Podium Presentation. Virginia Orthopaedic Society Annual Meeting, May 3-5, 2024, Tysons Corner, VA
3. Hopper HM, Bruce Leicht AS, **Thompson XD**, Gwathmey FW, Brockmeier SF, Miller MD, Werner BC, Diduch DR, Hart JM. Influences on Psychological Readiness to Return to Play Following Anterior Cruciate Ligament Reconstruction. Virginia Orthopaedic Society 76th Annual Meeting, Hot Springs, VA. April 2023
4. **Thompson XD**, Bruce AS, Hopper HM, Hart JM. Disagreement in Pass Rates Among Different Components of Return to Sports Test Batteries After ACLR. Virginia Athletic Trainer's Association Annual Meeting. Virtual Conference. January 2022. **(Doctoral Student Presentation Award Winner)**
5. Bruce AS, **Thompson, XD**, Hopper, HM, Stolzenfeld, RL, Moler, CB, Wahl, AJ, Hart, JM Side-to-Side differences in Squat Symmetry after ACL-Reconstruction. Virginia Athletic Trainers' Association. Poster Presentation. January 2022.

University

1. **Thompson XD**, Bruce AS, Kaur M, Hopper HM, Hart JM. Patient Reported Outcomes Among Patients With Disagreeing Pass Rates Among Performance Tests In Patients With ACLR. UNC Sports Medicine Institute Conference, Chapel Hill, NC. September 2022.
2. **Thompson XD**, Bruce AS, Hopper HM, Hart JM. Knee Extensor Torque-Velocity Relationships Following ACL Reconstruction. Human Movement Science Research Symposium, Chapel Hill, NC. April 2022.
3. Prinz NW, **Thompson XD**, Bruce AS, Hart JM. Associations Between Race & Socioeconomic Status and Prevalence of Reinjury Following Anterior Cruciate Ligament Reconstruction. Hunter Student Research Conference. Charlottesville, VA. March 2022.
4. Godwin HE, Cravens FK, Bruce AS, **Thompson XD**, Rosenblum DJ, Resch JE, Hart JM. Differences in Postural Stability between Healthy and ACL-Reconstructed Collegiate Athletes. Hunter Student Research Conference. Charlottesville, VA. March 2022.
5. **Thompson XD**, Bruce, AS, Hart, JM. Force Velocity Modulation Differences During Isokinetic and Isometric Extension Between ACL Reconstructed and Healthy Knees. Poster Presentation. Hunter Student Research Conference. March 2021. **(Health Poster Session Winner)**
6. Bruce AS, **Thompson XD**, Hopper HM, Stolzenfeld RL, Moler CB, Wahl AJ, Hart JM. Side-to-Side differences in Squat Symmetry after ACL-Reconstruction. Hunter Student Research Conference. Virtual Conference. March 2021. **(Health Poster Session Winner)**
7. **Thompson XD**, Resch JE. Kinesiophobia is Unrelated to Acute Musculoskeletal Injury Incidence Post-Concussion. Curry Research Conference. Accepted, Cancelled COVID-19.

Other Speaking Engagements

1. Hart JM, **Thompson XD**, Bruce AS. ACL RTP Testing and Programming. National Athletic Trainer's Association Annual Meeting and Clinical Symposium, Philadelphia, PA. Learning Lab. June 2022

GRANTS

Sponsor: Virginia Athletic Trainers' Association

Mentor: Jacob E. Resch, Ph.D.

Role: Primary Investigator

Title: TRACE- Torque-Velocity Relationships and Corticospinal Excitability following ACLR

Status: Funded

Amount: \$750

Period: Fall 2023

Objective: This funding provided funding to incentivize healthy controls for my dissertation.

Sponsor: University of Virginia School of Education

Mentor: Jacob E. Resch, Ph.D.

Role: Primary Investigator

Title: TRACE- Torque-Velocity Relationships and Corticospinal Excitability following ACLR

Status: Funded

Amount: \$1000

Period: Spring 2023

Objective: This funding provided additional equipment costs for supplies to conduct TMS for my dissertation.

Sponsor: Raven Society

Mentor: Jacob E. Resch, Ph.D.

Role: Primary Investigator

Title: Raven Fellowship

Status: Funded

Amount: \$2500

Period: Spring 2023

Objective: This funding provided funding to incentivize ACLR participants and pay for supplies to conduct TMS and central activation ratio testing for my dissertation.

Sponsor: University of Virginia Office of Graduate and Postdoctoral Affairs

Mentor: Jacob E. Resch, Ph.D.

Role: Applicant

Title: Professional Development Award

Status: Funded

Amount: \$1000

Period: Spring 2022

Objective: This funding provided the opportunity to train at the University of North Carolina Chapel Hill in motion capture, MRI segmentation, and other post-ACLR testing.

Sponsor: Black Biomechanists Association & Bertec

Mentor: Jacob E. Resch, Ph.D.

Role: Applicant/ Facilitator

Title: Bringing the Biomechanics of Sport from the Lab to the World

Status: Funded

Amount: \$1000

Period: January 2022- April 2022

Objective: This funding supported a National Biomechanics Day event to introduce high school students from diverse backgrounds using commercially available apps and wearable technology.

Sponsor: The National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS)

PI: Robin Queen, Ph.D.

Role: Paid Consultant

Title: Clinically Assessed Risk Factors for a Second ACL Injury Using an Innovative Wearable Sensor

Status: Funded

Amount: \$1,294,860

Period: July 2021- July 2026

Objective: The goal of the study is to develop a valid and highly accurate prognostic model to predict a second ACL injury. Validity depends on using measures that accurately assess mechanisms known to increase risk for a second ACL injury.

Sponsor: University of Virginia Brain Institute

PI: Jacob E. Resch, Ph.D. and Kiel Neumann, Ph.D.

Role: Sub-Investigator

Title: Concussion-Induced Inflammation: A Clinical and Mechanistic Study

Status: Funded

Amount: \$161,210

Period: March 2018 - July 2021

Objective: To examine the presence neuroinflammation of the brain of concussed collegiate athletes using positron emission tomography in collegiate athletes following clearance for unrestricted return to sport.

Sponsor: Biocore LLC

PI: Jacob E. Resch, Ph.D.

Role: Clinical Research Coordinator

Title: Investigation of a Novel Mouthguard Sensor

Status: Funded

Amount: \$ 129,770

Period: January 2018- January 2021

Objective: To determine the validity of a novel mouthguard accelerometer to detect linear and rotational acceleration in collegiate football athletes. For those athletes who sustained a concussion, biomechanical data were correlated to clinical ground truth measures to validate the occurrence of a concussive event.

Sponsor: Lockheed Martin Advanced Tech. Lab

PI: Laura Barnes, Ph.D.

Role: Clinical Research Coordinator

Title: REaDI Sense

Status: Funded

Amount: \$ 2,611,458

Period: January 2018- March 2021

Objective: To investigate the clinical utility of a smartphone system to detect abnormalities in device use following a diagnosed sport concussion. Clinical ground truth data were used to further validate signal(s) detected by the smartphone.

CLINICAL EXPERIENCE

Outreach Athletic Training

Athletic Trainer

2015-2024

Served as an athletic trainer for assorted youth and high school sports

Loudoun Sports Therapy Center

Athletic Trainer

2017-2018

In addition to normal duties of an athletic trainer, purchased and maintained inventory of emergency equipment and clinical supplies. Piloted community health outreach programs, created patient education blogs and videos and assisted in local fundraising efforts

University of Kentucky

Graduate Assistant Athletic Trainer

2015-2017

Served as an athletic trainer for UK Track & Field and cross-country teams and acted as the interim full-time athletic trainer during NCAA championships and US Olympic Trials. Hosted multiple home events including NCAA outdoor east regional track meet. Assisted with athletic training services for athletics teams across the department.

Gatorade

Head Team Leader

2016

Functioned as head team leader for Gatorade summer camps and supervisor for Gatorade Varsity Cheer Camps

Maryland-National Capital Park and Planning Commission

Inclusion Specialist

2013

Facilitated equitable camp experiences for children with disabilities

Athletic Training Student

2012-2015

Served as an athletic training student for Women’s Basketball, Men’s Volleyball, Rowing, Women’s Lacrosse, Women’s Cross Country and Track & Field, local high schools and Ohio Dominican University

TEACHING EXPERIENCE

Institution	Course	Role	Frequency	Years	Students
Louisiana State University	Biomechanical Basis of Kinesiology (KINE 3514-4)	Instructor	Fall, Spring	2024	45
University of Virginia	Emergency Medical Care (KINE 3600)	Instructor of Record	Spring, Fall	2021-2024	50-60
	Foundational Athletic Training Skills (KINE 5700)	Instructor	Summer	2021	24
	Emergency Medical Care (KINE 3600)	Graduate Teaching Assistant	Fall	2020	60
	Emergency Medical Care (KINE 3600)	Guest Instructor	Fall, Spring	2018-2019	50-60
University of North Carolina Chapel Hill	Fundamentals of Sports Medicine (EXSS 265)	Guest Lecturer	Spring	2021	40
Worthington Kilbourne High School	Sports Medicine	Guest Instructor	Spring	2014	20

SERVICE ORGANIZATIONS AND ACTIVITIES

International and National Level

World Federation of Athletic Training and Therapy Global Bodies Initiative	2021-present
Manuscript Reviewer	2020-present
British Association of Sport & Exercise Medicine Journal	
Clinical Biomechanics	
International Journal of Athletic Therapy and Training	
Journal of Athletic Training	
Journal of Sport Rehabilitation	
Measurement in Physical Education and Exercise Science	
Physical Therapy in Sport	
Sport Health	
NATA Ethnic Diversity Advisory Committee Registered Mentor	2018-present

University Level

College of Human Sciences & Education Graduate Scholarship Committee	2024-pres
Tomorrow’s Professor Today	2022-2024
professional development program designed to facilitate the transition from student to academic professional	
UVA Hunter Student Research Conference Outreach/ DEI Committee	2022-2024
hosted a series of outreach workshops for students throughout the academic year	
UVA Hunter Student Research Conference Moderator & Reviewer	2021-2024
UVA EdCouncil- Equity Committee Member	2021-2024
committee helped plan the Healthcare Literacy and Financial Literacy Workshop in conjunction with UVA First Gen	
UVA Sports Medicine Program Volunteer Instructor	2022-2024
UVA Student Chapter of American Society of Biomechanics	
Social Coordinator	2021-2022
Professional Development Chair	2022-present
UVA Kinesiology Social Media Manager	2021-present
UVA MSAT Program Social Justice and DEI Roundtables	2021
UVA School of Education & Human Development Diversity, Equity & Inclusion Committee	2020-present
Teaching As a Graduate Student	2020
Office of Graduate and Postdoctoral Affairs – Diversity Programs Mentoring Institute	2020
The Ohio State University School of Health Rehabilitation Sciences Student Council Treasurer	2013-2014
The Ohio State University Athletic Training Club	2012-2015

Community Involvement

UVA Kinesiology Starr Hill Pathways Sessions	2022-2024
program to provide redress educational inequities in local youth	
Youth Sports Volunteer Coach- YMCA, Little League, Tracion Sports	2021-pres
Flag Football, Basketball, Baseball	
Charlottesville Together We Rise Campaign	Summer 2020

MENTORING

Master’s Students

Student	Institution	Graduate Project Title	Completion
Payton Lear	University of Virginia	Does oral contraceptive use at the time of surgery affect knee function and lower extremity strength following anterior cruciate ligament reconstruction in female patients?	Spring 2024
Andrew Martin	University of Virginia	Sex Disparities in Reinjury and Return to Sport Post-ACL Reconstruction	Spring 2024

		Among Elite Soccer Athletes: A Critically Appraised Topic	
Nick Diebold	University of Virginia	Investigating the Use of Eccentric Performance Variables in the Countermovement Jump as Indicators of Change of Direction Performance	Spring 2023
Joseph Na	University of Virginia	The Role of Cryotherapy in Reduction of Proliferation of the Secondary Damage Response: A Critical Appraisal	Spring 2023
Lindsay Riley	University of Virginia	Individualized Patterns of Functional Performance in Patients With ACLR: A Case Series	Spring 2022
Mia Troiano	University of Virginia	The Application of Sample Entropy to Investigate Recovery of Postural Deficits following Sport Concussion in Athletes	Spring 2021

Undergraduate Students

Student	Institution	Research Interests
Farise Cravens	University of Virginia	ACL and balance performance
Gab DelBiondo	University of Virginia	Clinician practices following ACLR
Ashley Thompson	University of Virginia	Outcomes following ACLR
Haley Godwin	University of Virginia	Sensory reorganization following ACLR
Haleigh Hopper	University of Virginia	Patient-reported outcomes following ACLR
Madison Brna	University of Virginia	Relationship between concussion and musculoskeletal injury
Ellie Stephens	University of Virginia	Patient outcomes following concussion
Jasmine Monge	University of Virginia	Role of modifiers on concussion recovery
McKayla Guerrero	University of Virginia	Patient outcomes following concussion
Holly Carrington	University of Virginia	Role of hormonal contraceptives on concussion recovery
Andrew Gerrin	University of Virginia	Sample entropy in postural control measurements
Kyle Manetz	University of Virginia	Concussion history and kinesiophobia

AWARDS

- Edgar F Shannon Z Society Award 2024
- Gansneder Award for Outstanding Quantitative Dissertation 2024
- Raven Award 2024
- Doctoral Diversity Dinner Honoree 2024
- American Kinesiology Association Local Award Winner 2024
- All-University Graduate Teaching Award 2024
- Gatorade Sports Science Institute Diversity in Sports Science Award 2023-2024

One of Four Students Selected in the Initial Cohort

- Ford Foundation Fellowship Honorable Mention 2023
- ACSM Biomechanics Special Interest Group Student Travel Award 2023
- John T. Casteen III Diversity, Equity and Inclusion Award Nominee 2023
- Nathan E. Johnson Memorial Scholarship 2023
- Brenda Holliday Loyd Award 2022
- UVA Office of Graduate and Postdoctoral Affairs Professional Development Award 2022
- NATA Foundation Scholarship 2022
- VATA Free Communications Doctoral Student Award 2022
- NATA Research Foundation Post-Professional Terminal Degree Student Winner 2021
- Hunter Student Research Conference Poster Award 2021
- UVA School of Education and Human Development Dean’s Fellowship 2020-present
- Phillip Morris Minority Scholarship 2020
- University of Kentucky Lyman T Johnson Fellowship 2016-2017
- The Ohio State University School of Health & Rehabilitation Sciences Award of Merit 2015
- The Ohio State University Bucking The Trend Scholarship 2015
- MARC FASEB Travel Award 2014
- The Ohio State University Billy A Hill Scholarship for Service in Athletic Training 2013
- The Ohio State University Todd A. Bell National Resource Center Certificate of Achievement 2012-2015
- The Ohio State University Slater & Johnson Memorial Scholar 2012

MEMBERSHIPS/CERTIFICATIONS/LICENSES

- International Society of Biomechanics in Sports 2024-present
- American Society of Biomechanics 2024-present
- ACL Reconstruction Rehabilitation Outcomes Workgroup 2023-present
- ANGELS Society 2023-present
- Raven Society 2023-present
- Black Biomechanists of America 2022-present
- UVA Ph.D. Plus Program 2022-present
- American Society of Biomechanics- UVA Student Chapter 2021-present
- Red Cross Instructor 2021-present
- Mid-Atlantic Athletic Trainer’s Association 2017-present
- Virginia Athletic Trainers’ Society 2017-present
- Virginia Board of Medicine License# 0126002813 2017-present
- Graston Technique Level I Certification 2016
- Board of Certification BOC288800 2015-present
- National Provider Identifier 1255942264 2020-present

National Athletic Trainer's Association
CPR/ AED Certification
Current Red Cross BLS

2013-present
2012-present