Wesley Thornton PT, DPT, PhD
Board-Certified Clinical Specialist in Neurologic Physical Therapy
University of Colorado Anschutz Medical Campus
Physical Therapy Program – Residential Campus
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Education

University of Colorado, Aurora, CO	Rehabilitation Sciences, PhD	2021 - 2025
Regis University, Denver, CO	Doctor of Physical Therapy	2011 - 2014
Syracuse University, Syracuse, NY	BFA Musical Theater	1997 - 2001

Licensure Information:

Colorado Physical Therapy License # PTL.0012809, August 2014 – Present

Certifications:

Board-Certified Clinical Specialist in Neurologic Physical Therapy, American Board of Physical Therapy Specialties, June 2017 - Present

Employment and Positions Held

2024 -	Teaching Assistant, Motor Control & Motor Learning University of Colorado Physical Therapy Program, Residential Campus Aurora, CO
2024 -	Teaching Assistant, Neuroscience and Motor Control & Motor Learning University of Colorado Physical Therapy Program, Hybrid Campus Colorado Springs, CO
2021 - 2023	Guest Lecturer, multiple Neuro track courses University of Colorado Physical Therapy Program, Residential Campus Aurora, CO
2021 - 2024	Adjunct Professor South College Doctor of Physical Therapy Program Knoxville, TN
2018 – 2022	Adjunct Professor Baylor University Doctor of Physical Therapy Program Dallas, TX
2014 -	Staff Physical Therapist (currently PRN) Craig Hospital Englewood, CO

Scholarly Agenda

My research interests focus on maximizing functional recovery and elevating the management of individuals with neurologic disorders throughout the continuum of care.

Peer Reviewed Publications:

1. Connor JR, **Thornton WA**, Weber KA, Pfyffer D, Freund P, Tefertiller C, Smith AC. Reliability of SCIseg automated measurement of midsagittal tissue bridges in spinal cord injuries using an external dataset. *Topics in Spinal Cord Injury Rehabilitation* (accepted for publication 3/2025).

2. Smith, A. C., Laguna, J. M., Wesselink, E. O., Scott, Z. E., Jenkins, H., **Thornton, W. A.,** ... & Weber, K. A. (2025). Leg Muscle Volume, Intramuscular Fat and Force Generation: Insights From a Computer-Vision Model and Fat-Water MRI. *Journal of Cachexia, Sarcopenia and Muscle*, *16*(1), e13735.

3. Smith, Andrew C., Clare Morey, **Wesley A. Thornton**, Jordan R. Connor, Dario Pfyffer, Kenneth A. Weber II, Kristin Will, and Candace Tefertiller. 2025. “Responsiveness to Transcutaneous Spinal Stimulation for Upper Extremity Recovery Following Spinal Cord Injury: A Case Series Exploration of Midsagittal Tissue Bridges.” *The Journal of Spinal Cord Medicine*, January, 1–7. doi:10.1080/10790268.2024.2448046.

4. **Thornton, Wesley A.**, Katherine Smulligan, Kenneth A. Weber, Candace Tefertiller, Mark Mañago, Mitch Sevigny, Laura Wiley, Jennifer Stevens-Lapsley, and Andrew C. Smith. "Lesion characteristics are associated with bowel, bladder, and overall independence following cervical spinal cord injury." *The Journal of Spinal Cord Medicine* (2024): 1-9.

5. Swink, L. A., **Thornton, W. A**., Nearing, K. A., & Manago, M. M. (2024). A qualitative study of low-load resistance training with blood flow restriction in people with advanced multiple sclerosis. *Physiotherapy Theory and Practice*, 1–10. doi.org/10.1080/09593985.2024.2341993

6. Smith AC, Draganich C, **Thornton WA**, Berliner JC, Lennarson PJ, Rejc E, Sevigny M, Charlifue S, Tefertiller C, Weber KA. A single dermatome clinical prediction rule for independent walking one year after spinal cord injury. *Archives of Physical Medicine and Rehabilitation*. 2023. doi: 10.1016/j.apmr.2023.06.015.

7. **Thornton WA**, Marzloff G, Ryder S, Best A, Rasheed K, Coons D, Smith AC. The presence or absence of midsagittal tissue bridges and walking: a retrospective cohort study in spinal cord injury. *Spinal Cord*. 2023. doi: 10.1038/s41393-023-00890-6.

8. Draganich C, Weber KA, **Thornton WA**, Berliner JC, Sevigny M, Charlifue S, Tefertiller C, Smith AC. Predicting outdoor walking one-year after spinal cord injury: a retrospective multisite external validation study. *Journal of Neurologic Physical Therapy*. 2023. doi: 10.1097/NPT.0000000000000428.

9. Smith AC, O’Dell DR, **Thornton WA**, Dungan D, Robinson E, Thaker A, Gisbert R, Weber KA, Berliner JC, Albin SR. Spinal cord tissue bridges validation study: predictive relationships with sensory scores following cervical spinal cord injury. *Topics in Spinal Cord Injury Rehabilitation*. 2022;28(2):111–115.

Peer Reviewed Scientific and Professional Presentations:

Education Sessions, Platform Presentations & Posters:

1. **Thornton WA**, Smulligan K, Smith AC. Lesion Characteristics Are Associated with Bowel, Bladder, and Overall Independence Following Spinal Cord Injury (APTA SCI SIG Poster Award Winner). American Physical Therapy Association Combined Sections Meeting; February 2024; Boston, MA USA.

2. **Thornton WA**, Marzloff G, Ryder S, Best A, Rasheed K, Coons D, Smith AC. The Presence or Absence of Midsagittal Tissue Bridges and Walking: A Retrospective Cohort Study in Spinal Cord Injury. American Congress of Rehabilitation Medicine; October 2023; Atlanta, GA USA.

3. **Thornton WA**, Mañago MM, Tan AQ, Smith AC. Acute Intermittent Hypoxia and UE Strength and Function changes in Multiple Sclerosis: A Case Report. Academy of Spinal Cord Injury Professionals Annual Conference; September 2023; San Diego, CA USA. 2023

4. Swink, L.A., **Thornton, W.A**., Nearing, K.A., Mañago, M.M. Blood Flow Restriction in People with Advanced Multiple Sclerosis: "Now I Have a Sliver of Hope That I Might be Able to Build Some Strength". The Consortium of Multiple Sclerosis Centers; June 2023; Aurora, CO USA.

5. A review of foundational neuroscience tor neuro-restorative clinical interventions (co-presenters, Andrew Smith, PT, DPT, PhD and Candace Tefertiller, PT, DPT, NCS, PhD), APTA Colorado Rocky Mountain Fall Symposium. Denver, CO USA. 2021

6. Therapeutic Preparation for Rehab and Consideration for Home (co-presenter, Brooke Hjeltnes, Pt, DPT, NCS), APTA Colorado Rocky Mountain Fall Symposium. Keystone, CO USA. 2017

7. Optimizing Interdisciplinary Rehab for Individuals with Dual Injury SCI & ABI (co-presenter, Jason Nupp, Psy.D., ABPP), American Physical Therapy Association Combined Sections Meeting. San Diego, CA USA. 2017

8. Bourgeois G, **Thornton WA**, Pieratt K, DeGrandis CA, Hamilton N, Kirven I, Nelson-Wong E. Neuromuscular Strategies During Frontal Plane Movement in a Subgroup of Subjects with Low Back Pain: Implications of Poor Lumbopelvic Control. American Physical Therapy Association Combined Sections Meeting; February 2014; Las Vegas, NV USA.

<u>Funded Activity</u>

Thornton, Wesley (PI). Lesion Characteristics and Functional Recovery Prognosis in Individuals with Traumatic Spinal Cord Injury. Foundation For Physical Therapy Research. 9/1/2024-8/31/2025 ($15,000). The goal of this study is to precisely determine the predictive value of midsagittal tissues bridges on walking recovery post SCI by developing a quantitative model for clinical use.

Thornton, Wesley (PI). Midsagittal tissues bridges and functional mobility prognosis in individuals with traumatic spinal cord injury. Foundation For Physical Therapy Research. 9/1/2023-8/31/2024 ($7,500). The goal of this project is to evaluate the use of simple imaging analysis in conjunction with previously utilized prognostic tools to improve a clinician's ability to anticipate walking function following a traumatic SCI.

Smith, Andrew (PI). Improving mechanistic understanding of responsiveness to spinal cord stimulation after spinal cord injury. K01 HD055931. 08/2022-07/2026 ($496,980). This study aims to use neuroimaging biomarkers to investigate mechanisms underlying both epidural and transcutaneous spinal cord stimulation and assist in predicting which individuals will optimally respond to spinal cord stimulation following spinal cord injury.

Smith, Andrew (PI). Spinal cord lesion determinants of optimal responsiveness to spinal cord stimulation. Boettcher Foundation Webb-Waring Biomedical Research Award Program. 06/2022-05/2025 ($213,989). The goal of this project is to investigate histological and imaging biomarkers of residual tissue bypassing the lesion site and their influence on responding to spinal cord stimulation.

Memberships in Scientific/Professional Organizations:

American Physical Therapy Association (APTA)	2011-present
• SCI SIG Nominating Committee Member	2023-present
• Neurology Section	2015-present
• Colorado Chapter	2011-present
Academy of Spinal Cord Injury Professionals	2015-2021
• Academy Research Committee Member	2015-2021
• Therapy Leadership Council Committee Member	2015-2021

Service:

Training in Diversity for Rehabilitation Research Education (TiDe) 2023-present
Program Advisory Committee Member

Ad Hoc Journal Reviewer: Disability and Rehabilitation; 2021-2023
Topics in Spinal Cord Injury Rehabilitation;
Physiotherapy Theory and Practice

Regis University School of Physical Therapy 2019-2024
Advisory Board Member

Regis University Doctor of Physical Therapy 2011-2014
Class Liaison

Honors**:**

1. University of Colorado Rehabilitation Sciences Levy Scholarship ($5,000, 1 year award), 2024
2. Foundation for Physical Therapy Promotion of Doctoral Studies II Recipient ($15,000, 1 year award), 2024
3. Foundation for Physical Therapy Promotion of Doctoral Studies I Recipient ($7500, 1 year award), 2023
4. Labe C Scheinberg Award for the Best Work in Neurorehabilitation, Consortium of MS Centers Annual Conference. Aurora, CO USA ($500, 1 time award), 2023
5. University of Colorado School of Medicine HIRS Merit Scholarship ($5000, 1 time award), 2021
6. Regis University Doctor of Physical Therapy Young Alumnus Award, 2017
7. American Physical Therapy Association Minority Scholarship Award ($5000, 1 year award) 2014
8. 2011 Regis University School of Physical Therapy Scholarship ($45000 award)

Continuing Education Attended:

2024 10 Credit Hours in current PhD Rehabilitation Sciences Program
- Spring and Summer 2024

2023 12 Credit Hours in current PhD Rehabilitation Sciences Program
- Spring, Summer, and Fall 2023

2022 17 Credit Hours in current PhD Rehabilitation Sciences Program

- Spring, Summer, and Fall 2022

2021 9 Credit Hours in current PhD Rehabilitation Sciences Program
- Fall 2021

2020 Evidence in Motion: Essentials in Hybrid Learning and Teaching
- July-November 2020

2019 Prognostic Indicators in SCI and TBI: InDepth Series (Presenters: Dr. William Scelza, Dr. Alan Weintraub, Michael Bruno, PT, DPT, NCS)
- Craig Hospital, February 2019

Evaluation and Management of Vestibular, Visual, and Somatosensory Processing in Complex Neurorehabilitation (Presenter: Nicole Miranda, PT, DPT)
- May 2019

Research in Clinical Practice: InDepth Series (Presenters: Jen Coker, MPH, Kim Monden, PhD
- Craig Hospital, June 2019

2017 Integrating Lumbo-pelvic and hip manual interventions to address impairments for the post TBI and SCI patient (Presenter: Cameron McDonald, PT, DPT, GCS, OCS, FAAOMPT)
- March 2017

<u>Current Teaching Responsibilities in the Residential Entry-level Physical Therapy Program</u>:

Fall 1

DPTR 5011: Neuroscience (3 credits): Lecturer
DPTR 5151: Motor Control & Motor Learning (2 credits): Lecturer

<u>Current Teaching Responsibilities at the Hybrid Entry-level Physical Therapy Campus:</u>

Fall 1

DPTR 5011: Neuroscience (3 credits): Course Co-coordinator
DPTR 5151: Motor Control & Motor Learning (2 credits): Lecturer
DPTR 6503: Neuromuscular Conditions III (3 credits): Lecturer