

## **CURRICULUM VITAE: Mark M Mañago, PT, DPT, PhD, NCS**

Current Position: Assistant Professor, University of Colorado SOM, Physical Therapy Program

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### **EDUCATION**

| <b>Institution</b>   | <b>Degree</b>            | <b>Dates</b> |
|--|--------------------------|--------------|
| Carleton College, Northfield, MN   | BA in Spanish Literature | 1992-1997    |
| University of Colorado Denver<br>Health Sciences Center, Denver, CO                  | MPT in Physical Therapy  | 2003-2005    |
| University of Colorado Denver<br>Health Sciences Center, Aurora, CO                  | DPT in Physical Therapy  | 2005-2007    |
| University of Colorado Denver Graduate School<br>Anschutz Medical Campus, Aurora, CO | PhD in Clinical Science  | 2013-2018    |

### **ACADEMIC APPOINTMENTS**

| <b>Institution</b>   | <b>Rank</b>                 | <b>Dates</b> |
|--|-----------------------------|--------------|
| University of Colorado School of Medicine<br>Physical Therapy Program<br>Anschutz Medical Campus, Aurora, CO | Adjunct Clinical Instructor | 2009-2016    |
| University of Colorado School of Medicine<br>Physical Therapy Program<br>Anschutz Medical Campus, Aurora, CO | Senior Instructor           | 2016-2018    |
| University of Colorado School of Medicine<br>Physical Therapy Program<br>Anschutz Medical Campus, Aurora, CO | Assistant Professor         | 2018-Present |

### **HOSPITAL, GOVERNMENT OR OTHER PROFESSIONAL POSITIONS**

| <b>Institution</b>                                    | <b>Position</b>               | <b>Dates</b> |
|---|-------------------------------|--------------|
| University of Colorado Hospital<br>Aurora, CO         | Physical Therapist            | 2005-2010    |
| University of Colorado Hospital<br>Aurora, CO         | Physical Therapist Specialist | 2010-2016    |
| VA Eastern Colorado Health<br>Care System, Aurora, CO | Research Health Scientist     | 2023-Present |

## **HONORS, SPECIAL RECOGNITIONS AND AWARDS**

| <b>Title</b>  | <b>Dates</b> |
|---|--------------|
| Chancellor Diversity Scholarship, School of Medicine,<br>University of Colorado Denver Health Sciences Center                       | 2004         |
| Top abstract by a trainee, 6th International Symposium<br>on Gait and Balance in Multiple Sclerosis                                 | 2016         |
| Award for Outstanding Article<br>in the <i>International Journal of MS Care</i>   | 2017         |
| President's Fund for the Humanities Award,<br>Office of Academic Affairs, University of Colorado                                    | 2018         |
| Top Abstract by a Trainee, 8th International Symposium<br>on Gait and Balance in Multiple Sclerosis                                 | 2018         |
| Top Platform, Neurology Section, American Physical<br>Therapy Association Combined Sections Meeting                                 | 2020         |
| Best Clinical Research Poster, Degenerative Disease<br>Special Interest Group, Academy of Neurologic Physical<br>Therapy Conference | 2021         |
| Top Platform, Degenerative Disease<br>Special Interest Group, American Physical<br>Therapy Association Combined Sections Meeting    | 2023         |
| The Labe C Scheinberg Award for the Best Work in<br>Neurorehabilitation, Consortium of MS Centers Annual Meeting                    | 2023         |
| Top 3 Poster, Degenerative Disease<br>Special Interest Group, American Physical<br>Therapy Association Combined Sections Meeting    | 2024         |
| Best Research Methods, Academy of Neurologic Physical Therapy<br>Annual Conference Poster Award                                     | 2024         |
| Academy of Neurologic Physical Therapy Degenerative Disease<br>Special Interest Group Research Award                                | 2025         |

## **MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS**

| <b>Organization</b>  | <b>Dates</b> |
|--|--------------|
| American Physical Therapy Association (APTA) Member <ul style="list-style-type: none"> <li>• Colorado Chapter</li> <li>• Education Section</li> <li>• Neurology Section (Degenerative Disease Special Interest Group),</li> <li>• Research Section (Evidence Based Practice Special Interest Group)</li> </ul> | 2005-Present |

Health Volunteers Overseas 2010-2018  

- Allied Healthcare Providers Section

Consortium of Multiple Sclerosis Centers 2017-Present  

- Healthcare Providers Section

## **MAJOR COMMITTEE AND SERVICE RESPONSIBILITIES**

### **Department of Physical Medicine & Rehabilitation Physical Therapy Program Service:**

|  |              |
|--|--------------|
| Chair, Physical Therapy Program, Student Debt Task Force               | 2018-2019    |
| Chair, Physical Therapy Program, Hidden Curriculum Task Force          | 2018–2020    |
| Co-Coordinator, Physical Therapy Program Global Health Elective        | 2019-Present |
| Coordinator, Yamagata Physical Therapy Exchange Program                | 2018-Present |
| Member, Physical Therapy Program, Recruitment and Admissions Committee | 2018-Present |
| Member, Physical Therapy Program, Assessment Committee                 | 2018-2024    |
| Chair, Physical Therapy Program, Assessment Committee                  | 2025-Present |

### **University of Colorado Anschutz Medical Campus Service:**

|                                       |      |
|---------------------------------------|------|
| CCTSI Research Studio Expert Panelist | 2022 |
| PIKE-PREP trainee support             | 2023 |

### **University of Colorado Hospital Service:**

|  |              |
|--|--------------|
| Member, University of Colorado Hospital, Rehabilitation Education Committee,<br>Chair in 2012 and 2014 | 2007-Present |
|--|--------------|

### **Veteran's Affairs Service:**

|   |      |
|---|------|
| Poster Judge, Eastern Colorado Health Care System VA Research Day | 2024 |
|---|------|

### **Professional External Service:**

|   |              |
|---|--------------|
| Member, PCORI Advisory Board, STEP for MS Trial   | 2018-Present |
| Member, Benchmarking Research Advances Value in Education (BRAVE)   | 2019-Present |
| Organizing Committee Member, International Symposium on Gait and<br>Balance in Multiple Sclerosis, Committee Chair 2024-Present | 2019-Present |
| Team member, ECHO MS Mountain Hub, National Multiple Sclerosis Society<br>and Project ECHO®                                     | 2022-Present |
| Advisory Committee, Training in Diversity Education TiDe program (NIH R25),<br>Committee Chair 2024-Present                     | 2023-Present |
| Member, Giants of Multiple Sclerosis Selection Committee, Consortium<br>of MS Centers   | 2024-Present |

### **Community Service:**

|                                 |           |
|---------------------------------|-----------|
| 9 Health Fair Faculty Preceptor | 2016-2019 |
|---------------------------------|-----------|

## **LICENSURE AND BOARD CERTIFICATION**

### **Licensure**

|                               |              |
|-------------------------------|--------------|
| Physical Therapist – Colorado | 2005-Present |
|-------------------------------|--------------|

## **Certifications**

|   |              |
|---|--------------|
| Credentialed Medical Interpreter (Spanish), University of Colorado Hospital | 2005-Present |
| APTA Credentialed Clinical Instructor                                       | 2007-Present |
| ABPTS Neurologic Clinical Specialist  | 2009-Present |
| APTA Advanced Credentialed Clinical Instructor                              | 2011-Present |

## **REVIEW AND REFEREE WORK**

### **Ad Hoc Peer-Review Journal Reviewer**

|  |              |
|--|--------------|
| PLOS One   | 2017-Present |
| Multiple Sclerosis and Related Disorders         | 2018-Present |
| Journal of Clinical Medicine                     | 2018-Present |
| Restorative Neurology and Neuroscience           | 2018-Present |
| Medicine and Science in Sport                    | 2018-Present |
| Physiotherapy Theory and Practice                | 2019-Present |
| Journal of Neurologic Physical Therapy           | 2019-Present |
| Experimental Gerontology                         | 2019-Present |
| The Journal of Head Trauma Rehabilitation        | 2019-Present |
| Physical Therapy                                 | 2020-Present |
| Gait and Posture                                 | 2020-Present |
| Annals of Translational Medicine                 | 2020-Present |
| International Journal of MS Care                 | 2020-Present |
| Journal of Vestibular Research                   | 2021-Present |
| Multiple Sclerosis Journal                       | 2021-Present |
| Archives of Physical Medicine and Rehabilitation | 2021-Present |
| Frontiers of Rehabilitation Science              | 2022-Present |
| Parkinsonism and Related Disorders               | 2022-Present |
| Physiotherapy Canada                             | 2023-Present |
| Contemporary Clinical Trials Communications      | 2023-Present |
| Journal of Neurological Sciences                 | 2023-Present |
| European Journal of Physiology                   | 2024-Present |
| Pilot and Feasibility Studies                    | 2024-Present |
| Quality of Life Research                         | 2024-Present |
| HRB Open Research                                | 2024-Present |
| Clinical Biomechanics                            | 2024-Present |

### **Grant Review Work**

|  |           |
|--|-----------|
| Reviewer, Multiple Sclerosis Research Australia  | 2020      |
| Panel Member, Congressionally Directed Medical Research Programs, Multiple Sclerosis Research Program (CDMRP-MSRP) | 2020-2024 |
| Reviewer, AB Nexus Research Collaboration Grant Program, University of Colorado                                    | 2022      |
| Reviewer, United Kingdom Multiple Sclerosis Society, Doctoral Training Centre in Symptom Management Award          | 2023      |
| Reviewer, Health Research Board of Ireland, Emerging Investigators Awards  | 2024      |

Merit Switzer Research Fellowships for Doctoral Dissertation Research,  
National Institute on Disability, Independent Living, and Rehabilitation Research 2025

### **Abstract Review Work**

Reviewer, American Physical Therapy Association Combined Sections Meeting,  
Academy of Neurologic Physical Therapy 2023-Present

## **INVITED EXTRAMURAL LECTURES, PRESENTATIONS, VISITING PROFESSORSHIPS**

### **Local**

1. Mañago, MM. Physical Therapy Interventions and Stroke Rehabilitation [annual seminar lecture]. Resident Program, Rehabilitation Medicine, University of Colorado Denver Health Sciences Center. Aurora, CO; 2009-2015.
2. Mañago, MM. Physical Therapy for Stroke Survivors: A Lifelong Journey [annual seminar lecture]. National Stroke Association Life-long Education and Advocacy Program (LEAP) for Stroke Survivors. University of Colorado Hospital. Aurora, CO; 2009-2014.
3. Mañago, MM. Assistive Devices and Orthotics [lecture]. Neuromuscular Fellowship Program, Department of Neurology, University of Colorado Denver Health Sciences Center. Aurora, CO; 2010.
4. Mañago, MM. Ankle Foot Orthotics: Clinical Practice and Evidence [lecture]. PM&R Resident Program, University of Colorado Denver Health Sciences Center. Aurora, CO; 2012.
5. Mañago, MM. Vestibular Rehabilitation: Physical Therapy Clinical Decision Making and Intervention [lecture]. Audiology Doctoral Program. University of Colorado Denver Audiology Program. Aurora, CO; 2011-2014.
6. Mañago, MM. Physical Therapy and Stroke Rehabilitation [lecture]. Family Medicine Resident Program, University of Colorado Denver Health Sciences Center. Aurora, CO; 2012.
7. Mañago, MMM. Supportive Services in Neuromuscular Disorders. Neurology Grand Rounds, University of Colorado Denver School of Medicine. Aurora, CO; 2013.
8. Mañago MM. Proximal Movement Compensations During Walking in People with Multiple Sclerosis. 33<sup>rd</sup> Annual Gersten Day Scientific Symposium. University of Colorado Anschutz Medical Campus. Aurora, CO; June 12, 2020.

### **State/Regional**

1. Hebert, J, Mañago, MM. Multiple sclerosis: Clinical management of gait, balance and related problems [Educational Session]. Nebraska Physical Therapy Association Spring Conference. North Platte, NE; 2014.

2. Mañago MM, Herbert, JR. Clinical Management of Gait and Balance in multiple sclerosis: Applying the Evidence. Colorado Physical Therapy Association Fall Conference [Educational Session]. Black Hawk, CO; 2016.
3. Mañago MM. Clinical Mobility Measurement. Invited Guest Lecturer, Colorado State University HES 704B: Advanced Topics in Bioenergetics: Mobility Impairment and Exercise Interventions in Clinical Populations; 2020.
4. Mañago MM. Integrating clinical and biomechanical insights to improve strength training in people with multiple sclerosis [Keynote Lecture]. Rocky Mountain American Society of Biomechanics, Estes Park, CO; April 9, 2022.
5. Mañago MM. Considerations for blood flow restriction in people with neurologic conditions. APTA Colorado Fall Conference, Golden, CO; Sept 30, 2023.

### **National**

1. Cortes N, Mañago MM, Hurd W, Lee SC, Meardon SA. The effects of fatigue on function and pathology: a cross-disciplinary view. [Educational Session] American Physical Therapy Association Combined Sections Meeting. Anaheim, CA; 2016.
2. Mañago MM. New Insights into Muscle Function for Gait in People with Multiple Sclerosis. American Physical Therapy Association NEXT Meeting [Educational Session]. Chicago, IL; June 12-15, 2019.
3. Mañago MM, Cameron M. Research in the VA Environment: Career Development Awards & Mentoring. Multiple Sclerosis Centers of Excellence (MSCoE) West Regional Meeting [Virtual Lecture]; 2021.
4. Duncan R, Mañago MM. Pain in Neurodegenerative Disease [Education Session]. Academy of Neurologic Physical Therapy Conference [Virtual]; Oct 2021.
5. Mañago MM. Blood Flow Restriction in people with multiple sclerosis [Educational Session]. Consortium of MS Centers Annual Meeting; Aurora, CO; June 2023.
6. Mañago MM. Blood Flow Restriction training for people with multiple sclerosis [Lecture]. Oregon Health Science Center Neurology Grand Rounds; Portland, OR; Sept 2023.
7. Mañago MM, Dunkle Z. Go With the Flow? Blood Flow Restriction Training in People with Neurologic Conditions [Educational Session]. Academy of Neurologic Physical Therapy Annual Conference, Columbus, OH; September 20, 2024
8. Mañago MM. How to start and sustain your MS research program [Invited Panelist]. National Multiple Sclerosis Society 10<sup>th</sup> Annual Tykeson Fellows Conference. Nov 21, 2024
9. Mañago MM. Blood flow restriction for people with Parkinson disease [Virtual Invited Educational Session]. Parkinson's Foundation Continuing Education Series. April 2025.

### **International**

1. Mañago MM. Targeted Strength Training to Improve Gait in People with MS. Aarhus University, Department of Public Health, Section of Sport Science. Aarhus, Denmark; 2019.

### **Patient-Focused**

1. Mañago, MM. Exercise and Inclusion Body Myositis [lecture]. Inclusion Body Myositis Support Group. Swedish Hospital. Denver, CO; 2012-2013.
2. Mañago, MM. Exercise in Multiple Sclerosis. Rocky Mountain Multiple Sclerosis Center Spring Educational Summit. Denver, CO; 2015.
3. Mañago, MM. Physical Therapy Management in Amyotrophic Lateral Sclerosis. Muscular Dystrophy Association ALS Summit. University of Colorado Hospital. Aurora, CO; 2017.
4. Mañago, MM. Physical Therapist Management in Fascio-Scapular Humeral Muscular Dystrophy. World FSHD Day Colorado Chapter Meeting. University of Colorado Anschutz Medical Campus. Aurora, CO; 2019.
5. Mañago, MM. Physical Therapist Management of Charcot Marie Tooth's Disease, Fascio-Scapular Humeral Muscular Dystrophy, and Inclusion Body Myositis. University of Colorado Department of Neurology Neuromuscular Symposium. University of Colorado Anschutz Medical Campus. Aurora, CO; 2019.
6. Mañago, MM. Using Technology for Monitoring Mobility in Persons with Multiple Sclerosis: How, What, and Why. 9<sup>th</sup> International Symposium on Gait and Balance Patient Seminar. National Multiple Sclerosis Society. Denver, CO; 2019.
7. Mañago, MM. Rehabilitation for Fatigue in People with Multiple Sclerosis. 10<sup>th</sup> International Symposium on Gait and Balance Patient Seminar [Virtual]. National Multiple Sclerosis Society. Denver, CO; 2020.
8. Mañago, MM. Ask the Experts ALS Panel. ALS Association Experts Symposium. Denver, CO; 2020.
9. Mañago, MM. Staying active with multiple sclerosis: Physical therapy and beyond. Rocky Mountain MS Center Empower Lecture Series [Virtual]. Rocky Mountain MS Center. Denver, CO; 2020.
10. Mañago, MM. Blood Flow Restriction Training in People with Advanced Parkinson's Disease. Davis Phinney Foundation Leadership Circle [Virtual]; 2023
11. Mañago, MM. Understanding and Addressing Mobility Challenges in MS. Rocky Mountain MS Center Fall Education Summit. Aurora, CO; 2023
12. Mañago, MM. Shah S. Ask an MS Expert: Preventing Falls for Veterans with MS. National MS Society Ask an MS Expert Series [Virtual]; March 2024.
13. Mañago MM, et al. Sustaining exercise and physical activity with Parkinson disease. Parkinson's Pointe Wellbeing Symposium; March 2025.

### **TEACHING RECORD**

#### **University of Colorado Physical Therapy Program - Residential**

| Course                                   | Year         | Credit Hours | Teaching Role  | Learners     | Number of Learners |
|--|--------------|--------------|--|--------------|--------------------|
| Neuromuscular Conditions I (DPTR 6501)   | 2009-2016    | 3.0          | Lab instructor                                       | DPT Students | ~40-60/yr.         |
| Neuromuscular Conditions III (DPTR 6503) | 2009-2016    | 3.0          | Lab instructor                                       | DPT Students | ~40-60/yr.         |
| Scientific Inquiry I (DPTR 5601)         | 2011-2016    | 1.0          | Lab instructor                                       | DPT Students | ~7-9/yr.           |
| Scientific Inquiry II (DPTR 6602)        | 2011-2016    | 2.0          | Lab instructor                                       | DPT Students | ~40-60/yr.         |
| Scientific Inquiry III (DPTR 6603)       | 2011-2016    | 2.0          | Lab instructor                                       | DPT Students | ~40-60/yr.         |
| Patient Care Seminar III (DPTR 7613)     | 2015         | 2.0          | Lab instructor                                       | DPT Students | ~40-60/yr.         |
| Integrated Practice (DPTR 7641)          | 2016-2020    | 3.0          | Lecturer, Lab instructor                             | DPT Students | ~65-75/yr.         |
| Clinical Reasoning Capstone (DPTR 6531)  | 2016-2020    | 4.0          | Lab instructor                                       | DPT Students | ~7-9/yr.           |
| Telerehabilitation Elective (DPTR 7212)  | 2020         | 1.0          | Facilitator  | DPT Students | ~7-9/yr.           |
| Neuromuscular Conditions II (DPTR 6502)  | 2011-2022    | 3.0          | Lecturer, Lab Instructor                             | DPT Students | ~65-75/yr.         |
| Global Health Elective (DPTR 7212)       | 2010-Present | 1.0          | Language Interpreter, Program Guide, Co-Coordinator  | DPT Students | ~10-12/yr.         |
| Evidence-Based Practice (DPTR 5621)      | 2016-Present | 3.0          | Coordinator (2016-2024), Lecturer, Lab instructor    | DPT Students | ~65-75/yr.         |
| Clinical Reasoning I (DPTR 5631)         | 2016-Present | 1.0          | Lab instructor                                       | DPT Students | ~65-75/yr.         |
| Clinical Reasoning II (DPTR 6632)        | 2016-Present | 1.0          | Coordinator (2025 Present), Lecturer, Lab instructor | DPT Students | ~65-75/yr.         |
| Clinical Reasoning III (DPTR 6633)       | 2016-Present | 2.0          | Coordinator (2025-Present), Lecturer, Lab instructor | DPT Students | ~65-75/yr.         |

#### University of Colorado Physical Therapy Program - Hybrid

| Course                                       | Year<br>Rehabilitation<br>Science<br>Program | Credit<br>Hours | Teaching Role                                  | Learners     | Number<br>of<br>Learners |
|--|--|-----------------|--|--------------|--------------------------|
| Evidence-Based Practice (DPTR 5621 - Hybrid) | 2024-Present                                 | 3.0             | Co-Coordinator (2024) Lecturer, Lab instructor | DPT Students | ~30/yr.                  |

#### University of Colorado Rehabilitation Science and Clinical Science Program



| Course                                       | Year         | Credit Hours | Teaching Role                 | Learners     | Number of Learners |
|--|--------------|--------------|-------------------------------|--------------|--------------------|
| Rehabilitation Science Seminar I (RHSC 7001) | 2021-Present | 1.0          | Lecturer                      | PhD Students | 3-5                |
| Professional Skills in Academia (RHSC 7002)  | 2021-Present | 2.0          | Lecturer                      | PhD Students | 5-10               |
| Grant Writing (CLSC 7101)                    | 2024         | 1.0          | Instructor, Group Facilitator | PhD Students | 3-5                |

#### University of Colorado School of Medicine

| Course   | Year      | Credit Hours | Teaching Role | Learners         | Number of Learners |
|--|-----------|--------------|---------------|------------------|--------------------|
| Foundations of Doctoring Clinical Reasoning Curriculum; Humanities, Ethics and Professionalism Thread, Phase I | 2018      | 1.0          | Facilitator   | Medical Students | 8                  |
| Hidden Curriculum, Phase III   | 2018-2019 | 1.0          | Facilitator   | Medical Students | 9                  |

#### **CONTINUING EDUCATION WORKSHOPS CONDUCTED/ORGANIZED**

1. Mañago, MM. The patient with Parkinson's Disease: Evidence based evaluation and treatment [Educational Session]. Centennial Area Health Education Center. University of Colorado Denver Health Sciences Center. Aurora, CO; 2008
2. Mañago MM. Deep Vein Thrombosis: Evidenced Based Management for Physical Therapists [lecture]. 12<sup>th</sup> Annual Rehabilitation Education Forum, University of Colorado Hospital. Aurora, CO; 2010.
3. Mañago, MM. Vertebral Artery Syndrome [lecture]. Professional Advancement Lecture Series. University of Colorado Hospital. Aurora, CO; May 2011.
4. Mañago, MM. Jordan, S. Sawyer, E. Are you Up to Date on Electrotherapy and Other Modalities? Evidence and Clinical Decision Making: Choosing Wisely. University of Colorado Denver Physical Therapy Program Clinical Instructor Update Series. Aurora, CO; 2017.

#### **MENTORING**

##### **Academic Advisor to DPT Students**

- |                                |                                   |
|--------------------------------|-----------------------------------|
| 1. Lisa Bauer (2016-2018)      | 9. Marissa Holliday (2019-2021)   |
| 2. Rebecca Gabler (2016-2018)  | 10. Seven Ngo (2019-2021)         |
| 3. Kaylae Nakamura (2016-2018) | 11. Madison Duffy (2020-2022)     |
| 4. Connie Farrow (2017-2019)   | 12. Isabel Marbaker (2020-2022)   |
| 5. Shiyang Fu (2017-2019)      | 13. Garciela Salinas (2020-2022)* |
| 6. Christina Hunt (2018-2020)  | 14. Kristen Kirby (2021-2023)     |
| 7. Ondre Smith (2018-2020)     | 15. Alyssa Siljendahl (2021-2023) |
| 8. Carrie Elbogen (2019-2021)  | 16. Zachary Shrout (2021-2023)    |

17. Hanna Barritt (2022-2024)
18. Nicole Levar (2022-2024)
19. Justin Lewis (2022-2024)
20. Ashlee Workman (2022-Present)
21. Elizabeth Hunt (2023-Present)

22. David Standerfer (2023-Present)
23. Natalie Telep (2023-Present)
24. Ariel Indebaum (2024-Present)
25. Rachel Stup (2024-Present)
26. Alexys Birmingham (2024-Present)

#### **Faculty Mentor**

1. Elliot (EJ) Gann, DPT (2023-Present)\* \*\*
2. Alex Garbin, DPT, PhD (2023-Present)
3. Talia Strahler, DPT (2021-Present)\* \*\*
4. Robert Will, DPT (2022-Present)\* \*\*
5. Hannah Dwight, DPT (2021-2022)\* \*\*

#### **Research Mentor to PhD students**

1. Chelsey Anderson (2018–2022); Role: Dissertation Committee\* \*\*
2. Andrew Hagen (2022 -Present); Role: Dissertation Committee (Colorado State University)
3. Wesley Thornton (2023-Present); Role: Dissertation Committee Chair \* \*\*
4. Lauren Van Valkenburgh (2023-Present); Role: Primary Mentor \* \*\*

#### **Research Mentor to Post-Doctoral Fellow**

1. Kristin Johnson, DPT, PHD (2023-Present); Role: Co-Mentor

#### **Research Mentor to Master's students**

1. Arianna Odom (2018-2019)  
Role: Dissertation Committee (Colorado State University)

#### **Mentor to Physical Therapy Residents**

1. Nicole Schremp, DPT, Pediatric Resident CU PT (2019-2020)
2. Carissa Wengrovius, DPT, PhD, Faculty Resident CU PT (2022-2023)

#### **Mentor to Clinicians**

1. Renee Peter (King), DPT (2011-2013)
2. Stephanie Glick, DPT (2014-2015)\* \*\*
3. Jane Ott, DPT (2016-2019)\*
4. Bryce Zaffarano, DPT (2019-2020)\*
5. Dominic Diprinzio, DPT (2023-Present)\*

\*Presented work at national conference

\*\*Co-author on a manuscript

### **GRANT SUPPORT**

#### **Current Grant Support**

**Grant:** Paralyzed Veterans of America Education Foundation Grant

**Funding Agency:** Paralyzed Veterans of America Education Foundation

**Title:** *14th International Symposium on Gait and Balance in Multiple Sclerosis*

**Role:** Principal Investigator

**Funding and Effort:** \$19,911 total award; 1% effort

**Dates:** 06/01/24-05/31/25

**Description:** This grant will provide partial support for an annual 1 ½ day multidisciplinary educational meeting focused on gait and balance in multiple sclerosis.

**Grant:** IK2 RX004242-01

**Funding Agency:** Veteran's Affairs Career Development Award-2 (VA CDA-2)

**Title:** *Low-Load Resistance Training with Blood Flow Restriction in People with Multiple Sclerosis and Advanced Disability: A Randomized Control Trial*

**Role:** Principal Investigator

**Effort and Funding:** \$802,049 total award; 62.5% effort

**Dates:** 01/03/23-12/31/28

**Description:** The goal of this project is to determine the efficacy of low-load resistance training using blood flow restriction on muscle strength and morphology in people with MS and more advanced disability. This award also supports time to produce additional scholarly work.

**Grant:** National MS Society Mentor Based Postdoctoral Fellowships MB-2205-39515

**Funding Agency:** National Multiple Sclerosis Society

**Title:** *From bench to bedside - mobility control and neurorehabilitation in people with multiple sclerosis*

**Role:** Co-Mentor (PI: Fling)

**Funding and Effort:** \$497,901 total award

**Dates:** 7/1/2023-6/30/2028

**Description:** This award provides multi-year support for a mentor-institution combination to train young clinician scientists to conduct MS-specific rehabilitation research.

**Grant:** 1U01NS113851

**Funding Agency:** NIH/NINDS

**Title:** *Study in Parkinson disease of exercise Phase III clinical trial: SPARX3*

**Role:** Outcomes Assessor (PI: Corcos)

**Funding and Effort:** \$90,118 annual total site award, 5% effort

**Dates:** 9/25/19-07/31/24

**Description:** The study goal is to establish the efficacy of high-intensity endurance exercise as first-line therapy for recently diagnosed people with Parkinson's disease (PD).

### Completed Grant Support

**Grant:** Davis Phinney Foundation Award

**Funding Agency:** Davis Phinney Foundation

**Title:** *Feasibility of low-load resistance training with blood flow restriction in people with advanced disability due to Parkinson's disease*

**Role:** Principal Investigator

**Effort and Funding:** \$99,121 total award; 10% effort

**Dates:** 04/01/23-12/31/24

**Description:** The goal of this project is to determine the feasibility of low-load resistance training using blood flow restriction in people with PD and more advanced disability.

**Grant:** Consortium of Multiple Sclerosis Centers Pilot Award

**Funding Agency:** Consortium of Multiple Sclerosis Centers Pilot Award

**Title:** *Feasibility of low-load resistance training using blood flow restriction for people with multiple sclerosis and marked mobility restriction*

**Role:** Principal Investigator

**Funding and Effort:** \$40,000 total award; 15% effort

**Dates:** 03/01/2021-8/31/22

**Description:** The objectives of this study are to determine feasibility and limited efficacy of a resistance training intervention targeting proximal muscles on walking function, movement patterns, and activity behaviors in people with MS.

**Grant:** K12 HD055931

**Funding Agency:** NIH

**Title:** *Proximal resistance training to improve walking capacity and physical activity in people with multiple sclerosis*

**Role:** Scholar, Mentored Principal Investigator (PI: Harris-Hayes)

**Funding and Effort:** \$284,000 total award; 75% effort

**Dates:** 09/01/2020-10/31/22

**Description:** The objectives of this study are to determine feasibility and limited efficacy of a resistance training intervention targeting proximal muscles on walking function, movement patterns, and activity behaviors in people with MS. This award also supported time used to produce additional scholarly work.

**Grant:** Paralyzed Veterans of America Education Foundation Grant

**Funding Agency:** Paralyzed Veterans of America Education Foundation

**Title:** *10th International Symposium on Gait and Balance in Multiple Sclerosis*

**Role:** Principal Investigator

**Funding and Effort:** \$15,000 total award; 1% effort

**Dates:** 06/01/19-05/31/20

**Description:** This grant provided partial support for an annual 1 ½ day multidisciplinary educational meeting focused on gait and balance in multiple sclerosis.

**Grant:** University of Colorado PM&R Pilot Award

**Funding Agency:** University of Colorado

**Title:** *Instrumented Motion Analysis of Hip and Trunk Movement Compensations for People with Multiple Sclerosis*

**Role:** Principal Investigator

**Funding and Effort:** \$10,000 total award

**Dates:** 09/1/18-08/31/19

**Description:** The goal of this project is to evaluate hip and trunk biomechanical compensatory strategies during functional activities in patients with multiple sclerosis.

## **BIBLIOGRAPHY**

### **Peer Reviewed Publications**

1. Hebert JR, Corboy J, Mañago MM, Schenkman M. Effects of vestibular rehabilitation on Multiple Sclerosis-related fatigue and upright postural control. *Physical Therapy*. 2011;91(8):1166-1183.
2. Ketelhut NB, Kindred JH, Mañago MM, Hebert JR, Rudroff T. Core muscle characteristics of patients with multiple sclerosis during walking. *Journal of Rehabilitation Research and Development*. 2015;52(6):713-724.

3. Mañago MM, Schenkman M, Berliner J, Hebert JR. Gaze stabilization and dynamic visual acuity in people with multiple sclerosis. *Journal of Vestibular Research*. 2016;26(5-6):469-477.
4. Hebert JR, Mañago MM. Reliability and Validity of the Computerized Dynamic Posturography Sensory Organization Test in Persons with Multiple Sclerosis. *International Journal of MS Care*. 2017;19(3):151–157.
5. Mañago MM, Hebert JR, Schenkman M. Psychometric Properties of a Clinical Strength Assessment Protocol in People with Multiple Sclerosis. *International Journal of MS Care*. 2017;19(5):253-262.
6. Mañago MM, Hebert JR, Kittelson J, Schenkman M. Contributions of Ankle, Knee, Hip, and Trunk Muscle Function to Gait Performance in People with Multiple Sclerosis: A Cross-Sectional Analysis. *Physical Therapy*. 2018;98(7):595-604.
7. Mañago MM, Hebert JR, Kittelson J, Schenkman M. Feasibility of a targeted strengthening program to improve gait in people with multiple sclerosis: a brief report. *International Journal of Rehabilitation Research*. 2018;41(4):364-367.
8. Mañago MM, Cameron M, Schenkman M. Association of the Dynamic Gait Index to fall history and muscle function in people with multiple sclerosis: A secondary data analysis. *Disability and Rehabilitation*. 2019; 42(25):3707-3712.
9. Mañago MM, Glick S, Hebert JR, Coote S, Schenkman M. Strength Training to Improve Gait in People with Multiple Sclerosis: A Critical Review of Exercise Parameters and Intervention Approaches. *International Journal of MS Care*. 2019;21(2):47-56.
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11. Mañago MM, Kline PW, Alvarez E, Christiansen CL. Trunk and pelvis movement compensation in people with multiple sclerosis: Relationships to muscle function and gait performance outcomes. *Gait & Posture*. 2020;78:48-53.
12. Maugeri G, D'Agata V, Roggio F, Cortis C, Fusco A, Foster C, Mañago MM, Harris-Love MO, Vleck V, Piancentini MF, Musumeci G. The “Journal of Functional Morphology and Kinesiology” Journal Club Series: PhysioMechanics of Human Locomotion. *Journal of Functional Morphology and Kinesiology*. 2020;5(3):52.
13. Kline PW, Christiansen CL, Hager ER, Alvarez E, Mañago MM. Movement compensations during a step ascent task are associated with stair climbing performance in people with multiple sclerosis. *Gait & Posture*. 2021;87:27-32.
14. Canham LE, Mañago MM, Dannemiller L, Rapport MJ. Holistic Review in Doctor of Physical Therapy Admissions Can Lead to Enhanced Diversity in Admitted Students. *Journal of Physical Therapy Education*. 2021;35(3):195-202.

15. Mañago MM, Kline PW, Harris-Love MO, Christiansen CL. The Validity of the Single-Leg Heel Raise Test in People with Multiple Sclerosis: A Cross-Sectional Study. *Frontiers in Neurology*. 2021;12:650297.
16. Mañago MM, Swink LA, Hager ER, Gisbert R, Earhart GM, Christiansen CI, Schenkman M. The Impact of COVID-19 on Community-Based Exercise Classes for People with Parkinson Disease. *Physical Therapy*. 2021;101(11).
17. Shields RK, Benchmarking Research Advances Value in Education (BRAVE) Group\*, Dudley-Javoroski S. Benchmarking in Academic Physical Therapy: A Multicenter Trial Using the PT-GQ Survey. *Physical Therapy*. 2021;101(12):pzab229.  
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18. Kline PW, Christiansen C, Judd D, Mañago MM. Clinical Utility of the Trendelenburg Test in People with Multiple Sclerosis. *Physiotherapy Theory and Practice*. 2023;39(5):1016-1023.
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20. Anderson CB, Fatone S, Mañago MM, et al. Improving shared decision-making for prosthetic care: A qualitative needs assessment of prosthetists and new lower-limb prosthesis users. *Prosthetics and Orthotics International*. 2023;47(1):26.
21. Mañago MM, Cohen ET, Cameron MH, Christiansen CL, Bade M. Reliability, Validity, and Responsiveness of the Patient-Specific Functional Scale for Measuring Mobility-Related Goals in People with Multiple Sclerosis. *Journal of Neurologic Physical Therapy*. 2023; 47(3):139-145.
22. Mañago MM, Seamon BA, Boncella KL, et al. Ultrasound Measures of Muscle Morphology in People with Multiple Sclerosis are Associated with Muscle Performance and Functional Mobility. *Multiple Sclerosis and Related Disorders*. 2023;75:104759.
23. Chen VL, Hildebrand AD, Mañago MM, Cameron M. Self-assessed Dynamic Gait Index correlates with physical therapist assessed Dynamic Gait Index in people with multiple sclerosis. *Multiple Sclerosis and Related Disorders*. 2023;80:105101.
24. Mañago MM, Cohen ET, Alvarez E, Hager ER, Owens JG, Bade M. Feasibility of Low-Load Resistance Training Using Blood Flow Restriction for People with Advanced Multiple Sclerosis: A Prospective Cohort Study. *Physical Therapy*. 2024; 104(1).
25. Mañago MM, Will R, Strahler T, Van Valkenburgh L, Harris-Love MO, Forster JE, Cameron MH, Christiansen CL. Blood Flow Restriction and Veterans with Multiple Sclerosis (BRaVe-MS) and Advanced Disability: Protocol for a Randomized Controlled Trial. *Physical Therapy*. 2024;6(104):pzae037.
26. Anderson CB, Fatone S, Mañago MM, et al. Development and alpha testing of a patient shared decision aid for prosthesis design for new lower limb prosthesis users. *Prosthetics and Orthotics International*. 2024; Online May 3.

27. Swink LA, Thornton WA, Nearing KA, Mañago MM. A qualitative study of low-load resistance training with blood flow restriction in people with advanced multiple sclerosis. *Physiotherapy Theory and Practice*. 2024;0(0):1-10.
28. Gann EJ, Mañago MM, Allen D, Celnikier MS, Block VJ. Feasibility of Telerehabilitation-Monitored Functional Electrical Stimulation on Walking and Quality of Life in People with Multiple Sclerosis: A Case Series. *International Journal of MS Care*. 2024; In Press.
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31. Mañago MM, Forster JE, Biondi E, Schenkman M, Cameron MH, Christiansen CL. Proximal Muscle Resistance Training to Improve Walking in People With Multiple Sclerosis: A Pilot Study. *Journal of Neurologic Physical Therapy*. Published online November 25, 2024:1-9.
32. Mintken P, Ball W, Mañago MM. Use of blood flow restriction and electrical stimulation in a patient with transverse myelitis: a case report. *Physiotherapy Theory and Practice*. Published online February 20, 2025:1-10.

#### **Peer Reviewed Scientific & Professional Presentations**

1. Hebert JR, Corboy JR, Mañago MM, Schenkman M. Effects of Vestibular Rehabilitation on Multiple Sclerosis-Related Fatigue and Upright Postural Control: A Randomized Controlled Trial. Poster Abstracts from the First International Symposium on Gait and Balance in Multiple Sclerosis. *Int J MS Care*. 2011; 13(4):199-204.
2. Mañago MM, Hebert JR. Concurrent validity of the Patient-Specific Functional Scale and Timed 25 Foot Walk Test in people with multiple sclerosis. Poster Abstracts from the Third International Symposium on Gait and Balance in Multiple Sclerosis. *Int J MS Care*. 2013; 15(4):179-180.
3. Mañago MM, Leibold, MR; Backstrom, KM. Evaluating Clinical Outcomes and Meaningful Change: An Example Using the Neck Disability Index [Poster Presentation]. First Annual Performance Excellence Summit. University of Colorado Hospital, Aurora, CO. November 11, 2014.
4. Mañago MM, Lamb C, Hebert JR. CoreAlign Training for a Person with Multiple Sclerosis: Effects on Strength, Walking, and Participation. Poster Abstracts from American Congress of Rehabilitation Medicine. *Arch Phys Med Rehabil*. 2015; 96(10):e1. DOI: 10.1016/j.apmr.2015.08.292

5. Mañago MM, Hebert JR. Computerized sensory organization test as a measure of fall risk in people with Multiple Sclerosis. Poster Abstracts from APTA Combined Sections Meeting. *JNPT*. 2016; 40(1):56.
6. Mañago MM, Hebert JR. Vestibular rehabilitation in a person with multiple sclerosis and sensation of motion at rest: A case report. Poster Abstracts from APTA Combined Sections Meeting. *JNPT*. 2016; 40(1):56.
7. Glick S, Mañago MM. Improvements in mobility and employment in an adult with fascioscapulohumeral muscular dystrophy (FSHD) following a femur fracture: A case report. [Poster Presentation] American Physical Therapy Association Colorado Spring Conference. Keystone, CO, Apr 15-17, 2016.
8. Mañago MM, Schenkman M, Hebert JR. Evaluating the Functional Capacity of the Vestibulo-Ocular Reflex in Persons with Multiple Sclerosis: Validity and Reliability of Computerized Testing. Poster Abstracts from the International Symposium on Gait and Balance in Multiple Sclerosis. *Int J MS Care*. 2016; 18(6):312-313.
9. Lamb C, Mañago MM. Improvements in Strength, Walking, and Participation Following CoreAlign® Training for a person with Multiple Sclerosis. Poster Abstracts from APTA Combined Sections Meeting. *JNPT*. 2016; 40(1):56.
10. Mañago MM, Hebert JR, Schenkman M. The utility of handheld dynamometry and clinical strength assessments in people with multiple sclerosis. Poster Abstracts from APTA Combined Sections Meeting. *JNPT*. 2017;41(1):75-88.
11. Mañago MM, Hebert JR, Schenkman M. Strengthening of Ankle, Hip, and Trunk to Improve Gait in People with Multiple Sclerosis: A Feasibility Study. Poster Abstracts from the Eight International Symposium on Gait and Balance in Multiple Sclerosis. Sept 15, 2018. *Int J MS Care*. 2018; 20(6):298-299.
12. Mañago M, Coote S, Hebert JR, Schenkman M. A Critical Review of Strength Training to Improve Gait in People with Multiple Sclerosis: Exercise Parameters and Intervention Approaches [Platform]. World Congress of Physical Therapy. Geneva, Switzerland. May 10-13, 2019.
13. Mañago MM, Alvarez E, Kline P, Christiansen C. Proximal movement compensations are related to muscle function and walking capacity in people with multiple sclerosis. Poster abstract from the Consortium of Multiple Sclerosis Annual Meeting. *International Journal of MS Care*. 2020;22(2):74.
14. Kline PW, Christiansen CL, Hager ER, Mañago MM. Compensations during step ascent contribute to stair climbing ability in multiple sclerosis [Poster]. American Society of Biomechanics Annual Meeting, Aug 2020.
15. Canham L, Dannemiller L, Mañago M, Rapport MJ. Using a Holistic Review in Admissions: One Programs' Experience in Enhancing Diversity. [Platform] American Physical Therapy Association Combined Sections Meeting. Denver, CO, Feb 2020.



16. Ott J, Mañago M. Balance, falls, and patient reported outcomes before and after deep brain stimulation in Parkinson's disease: A pilot study. [Poster Presentation] American Physical Therapy Association Combined Sections Meeting. Denver, CO, Feb 2020.
17. Kline PW, Christiansen CL, Hager ER, Mañago MM. Clinical Utility of the single-leg calf raise test in people with multiple sclerosis [Platform]. American Physical Therapy Association Combined Sections Meeting. *Journal of Neurologic Physical Therapy*. 2020;44(1):104-5.
18. Kline PW, Christiansen CL, Hager ER, Mañago MM. Proximal frontal plane movement compensations during gait and step-ups in people with multiple sclerosis. Poster abstract from the 9<sup>th</sup> International Symposium on Gait and Balance in Multiple Sclerosis. *International Journal of MS Care*. 2020;22(2):100-1.
19. Zaffarano B, Mañago M. Trigger point dry needling in a person with multiple sclerosis and functional mobility impairments: a case report. Poster abstracts from the 9<sup>th</sup> International Symposium on Gait and Balance in Multiple Sclerosis. *International Journal of MS Care*. 2020;22(2):100-1.
20. Mañago MM, Callesen J, Dalgas U, Kittelson J, Schenkman M. The impact of disability level on the relationship of muscle strength to walking capacity in people with multiple sclerosis. Poster Abstract from the European Rehabilitation in Multiple Sclerosis Conference. *Multiple Sclerosis Journal*. 2020;26(2S):15-16.
21. Hoffman, RM, Christiansen, CL, Mañago MM. Responsiveness of the Patient-Specific Functional Scale to Changes in Walking Endurance: A Proof-of-Concept Analysis. Poster Abstracts from the 10th International Symposium on Gait and Balance in Multiple Sclerosis. *International Journal of MS Care*. 2021;23(1):45-46.
22. Mañago MM, Swink LA, Hager ER, Gisbert R, Earhart GM, Christiansen CI, Schenkman M. Community-based exercise class participation for people with Parkinson's disease and their class instructors during COVID-19 [Poster]. Academy of Neurologic Physical Therapy Conference [Virtual], Oct 2021.
23. Hoffman, RM, Christiansen, CL, Mañago MM. Psychosocial Aspects of Perceived Fatigue are Associated with Mobility Outcomes in People Multiple Sclerosis [Poster]. Academy of Neurologic Physical Therapy Conference [Virtual], Oct 2021.
24. Swink, LA, Schenkman M, Christiansen CL, Hager ER, Earhart GM, Gisbert R, Mañago MM. Exercise patterns in a virtual world: Barriers and needs for people with Parkinson's disease during the COVID-19 pandemic [Poster]. Occupational Therapy Summit of Scholars, June 2021.
25. Hinrichs L, Rodriguez J, Nordon-Craft A, Mañago M, McDevitt A, Judd D. Blocked scheduling in Physical Therapist education as a curricular adjustment in response to COVID-19 [poster presentation] American Physical Therapy Association Combined Sections Meeting. San Antonio, TX: 2022.
26. Dwight H, Hoffman R, Cohen ET, Owens J, Bade MJ, Mañago MM. Blood Flow Restriction for a Patient with Multiple Sclerosis and Advanced Disability: A Case Report. Poster abstract

from the American Physical Therapy Association Combined Sections Meeting. *Journal of Neurologic Physical Therapy*. 2022;46(1):51-53.

27. Mañago MM, Kimbrell K, Hager ER, Dwight H, Bade MJ. Application and Perceptions of Blood Flow Restriction in People with Neurologic Conditions: A Practitioner Survey. Poster abstract from the American Physical Therapy Association Combined Sections Meeting. *Journal of Neurologic Physical Therapy*. 2022;46(1):51-53.
28. Mañago MM, Cohen ET, Hager ER, Owens JG, Bade MJ. Feasibility of Low-Load Resistance Training with Blood Flow Restriction for People with Severe Multiple Sclerosis [Platform Presentation]. American Physical Therapy Association Combined Sections Meeting. San Diego, CA: 2023
29. Mañago MM, Palmer J, Kinney T, Canham L. Reliability of a holistic admissions rubric for an entry-level physical therapist program [Platform Presentation]. American Physical Therapy Association Combined Sections Meeting. San Diego, CA: 2023
30. Anderson CB, Fatone S, Mañago MM, Swink LA, Kittelson AJ, Magnussen DM, Christiansen, CL. *Development and Alpha Testing of a Patient Shared Decision Aid for Prosthesis Design After Lower Limb Amputation*. [Platform presentation] International Society of Orthotists and Prosthetists, 19th World Congress. March 2023
31. Hanlon SL, Mañago MM, Biondi EA, Hager E, Christiansen CL. Gait Deviations Identified During the Six-Minute Walk Test Using Inertial Measurement Units in Patients with Multiple Sclerosis. Abstracts from the 12<sup>th</sup> Annual International Symposium of Gait and Balance in Multiple Sclerosis. *Mult Scler Rel Disord*. 2023
32. Thornton WA, Mañago MM, Tan AQ, Smith AC. Acute Intermittent Hypoxia and UE Strength and Function changes in Multiple Sclerosis: A Case Report. Gait Deviations Identified During the Six-Minute Walk Test Using Inertial Measurement Units in Patients with Multiple Sclerosis. Abstracts from the 12<sup>th</sup> Annual International Symposium of Gait and Balance in Multiple Sclerosis. *Mult Scler Rel Disord*. 2023
33. Boncella K, Mañago MM, Seamon BA, Wallin MT, Maloni H, Hoover B, Blackman MR, Harris-Love MH. Ultrasound Measures of Muscle Morphology in Multiple Sclerosis and its Relation to Patient Characteristics, Muscle Performance and Functional Mobility. Abstracts from the 12<sup>th</sup> Annual International Symposium of Gait and Balance in Multiple Sclerosis. *Mult Scler Rel Disord*. 2023
34. Chen V, Hildebrnad A, Mañago MM, Serdar A, Cameron MH. Validation of the Self-Assessed Dynamic Gait Index in People with Multiple Sclerosis. Abstracts from the 12<sup>th</sup> Annual International Symposium of Gait and Balance in Multiple Sclerosis. *Mult Scler Rel Disord*. 2023
35. Swink LA, Thornton W, Nearing KA, Mañago MM. *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."* Consortium of Multiple Sclerosis Centers Annual Meeting [Platform]. Aurora, CO; June 2023

36. Chen V, Hildebrand A, Mañago MM, Serdar A, Cameron MH. Validation of the Self-Assessed Dynamic Gait Index in People with Multiple Sclerosis. Consortium of Multiple Sclerosis Centers Annual Meeting [Poster]. Aurora, CO; June 2023
37. Hanlon SL, Mañago MM, Biondi EA, Hager ER, Christiansen CL. Measuring Gait Deviations During the Six-minute Walk Test in Patients with Multiple Sclerosis. American College of Sports Medicine Annual Meeting and World Congress [Poster]. Denver, CO; May 2023.
38. Kiernan L, Borbas V, Will R, Van Valkenburgh L, Strahler T, Christiansen C, Mañago MM. Blood Flow Restriction and Veterans with Advanced Multiple Sclerosis (BRaVe-MS): a Randomized Controlled Trial Protocol. Eastern Colorado Health Care System VA Research Day 2023 [Poster], Aurora, CO. September 28, 2023
39. Diprinzio D, Swink L, Brown J, Novak D, Balfany K, Christiansen CL, Mañago MM. Exploring loneliness in people with Parkinson's disease participating in community exercise classes: A Program Evaluation [Poster]. American Physical Therapy Association Combined Sections Meeting. Boston, MA, 2024.
40. Van Valkenburgh L, Mañago MM. Association of bladder/bowel disability scores with hip and trunk strength in individuals with multiple sclerosis: Baseline analysis of a prospective cohort study [Poster]. University of Colorado Health Rehabilitation Symposium. Aurora, CO, 2024
41. Gann, E, Chao, D, Kleinschmidt, L; Enns, D, Erb-Trefilek, E, Mañago, M. A Program Evaluation of an Outpatient Interdisciplinary Clinic for Functional Neurologic Disorder [Poster]. Academy of Neurologic Physical Therapy Annual Conference, 2024; Columbus, OH.
42. Van Valkenburgh L, Mañago M. Bladder/bowel function, hip/trunk strength, and gait relationships in people with multiple sclerosis [Poster]. Academy of Neurologic Physical Therapy Annual Conference, Columbus, OH; September 20, 2024.

#### **Non-Peer Reviewed Publications**

1. Mañago MM, Gisbert R. Kahlo and Beyond: The Importance of Art and Medical Humanities in Physical Therapy [Commentary]. *Phys Ther*. 2017;97(11):1114. doi:10.1093/ptj/pzx084.