

CURRICULUM VITAE
Fabrisia Ambrosio, Ph.D., MPT

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EDUCATION AND TRAINING

UNDERGRADUATE:

<i>Dates Attended</i>	<i>Name/Location of Institution</i>	<i>Degree Received, Year</i>
1993-1996	Mansfield University Mansfield, PA	BS Biology/ Minor in Chemistry, 1996

GRADUATE:

<i>Dates Attended</i>	<i>Name/Location of Institution</i>	<i>Degree Received, Year</i>
1996-1998	Laval University Québec City, Québec, Canada	Master of Science- Physiology/Endocrinology, 1998
1997-1999	Medical College of Pennsylvania and Hahnemann University Philadelphia, PA	Master of Physical Therapy, 1999
2001-2005	University of Pittsburgh Pittsburgh, PA	PhD- Rehabilitation Science and Technology, 2005

APPOINTMENTS AND POSITIONS

ACADEMIC:

<i>Years Inclusive</i>	<i>Name/Location of Institution/Organization</i>	<i>Rank/Title/Position</i>
2001-2003	Human Engineering Research Laboratories, Department of Rehabilitation Science and Technology University of Pittsburgh, Pittsburgh, PA	Research Assistant
2003-2005	Department of Rehabilitation Science and Technology University of Pittsburgh, Pittsburgh, PA	National Science Foundation IGERT fellow
7/2005-11/2006	Department of Physical Medicine & Rehabilitation. University of Pittsburgh, Pittsburgh, PA	Visiting Instructor
12/2006-11/2015	Department of Physical Medicine & Rehabilitation. University of Pittsburgh, Pittsburgh, PA	Assistant Professor Primary appointment
2007-11/2015	Departments of Physical Therapy University of Pittsburgh, Pittsburgh, PA	Assistant Professor Secondary appointment
2007-11/2015	Department of Orthopaedic Surgery University of Pittsburgh, Pittsburgh, PA	Assistant Professor Secondary appointment
2009-present	McGowan Institute for Regenerative Medicine Pittsburgh, PA	Member
2010-11/2015	Department of Microbiology and Molecular Genetics University of Pittsburgh, Pittsburgh, PA	Assistant Professor, Secondary appointment
2012-present	Clinical and Translational Science Institute University of Pittsburgh, Pittsburgh, PA	Assistant Professor, Secondary appointment
12/2015-present	Department of Physical Medicine & Rehabilitation. University of Pittsburgh, Pittsburgh, PA	Associate Professor Primary appointment

12/2015-present	Departments of Physical Therapy University of Pittsburgh, Pittsburgh, PA	Associate Professor Secondary appointment
12/2015-present	Department of Orthopaedic Surgery University of Pittsburgh, Pittsburgh, PA	Associate Professor Secondary appointment
12/2015-present	Department of Microbiology and Molecular Genetics University of Pittsburgh, Pittsburgh, PA	Associate Professor, Secondary appointment

CERTIFICATION AND LICENSURE

SPECIALTY CERTIFICATION

<i>Certifying Board</i>	<i>Year</i>
Pennsylvania –Physical Therapist Licensure #PT-013308L	1999- present

MEMBERSHIPS IN PROFESSIONAL AND SCIENTIFIC SOCIETIES

<i>Organization</i>	<i>Year</i>
Rehabilitation Engineering Society of North America (RESNA)	2001-2005
International Society for Stem Cell Research	2009-2010
American Physical Therapy Association	1997-1998 2006- present

HONORS

<i>Title of Award</i>	<i>Year</i>
Mansfield University- Mansfield University Scholarship	1993
Mansfield University- Magna Cum Laude Honors	1996
Laval University- Faculté des Études Supérieures e Postdoctorales (School of Graduate and Postdoctoral Studies)	1996
Laval University- Centre Hospitalier de l'Université Laval (Center Hospital of Laval University Scholarship)	1997
2012-present Department of Physical Therapy Faculty member of the Neurology Residency program	Assistant Professor
MCP and Hahnemann University- Faculty Recognition Award for strong scholarship, high professional standards and a commitment to the ideals and purposes of physical therapy	1999

Veterans Administration- Travel Scholarship to attend and present at the Veterans Administration Rehabilitation Research & Development Conference for abstract identified as among the most meritorious	2002
Consortium of Multiple Sclerosis Centers- Travel Scholarship awarded to attend and present at the 2nd International Multiple Sclerosis Week CMSC Conference	2002
Winner Best Paper in Research in Multiple Sclerosis, Presented by the Consortium of Multiple Sclerosis Centers Annual Meeting	2002
University of Pittsburgh- Department of Rehabilitation Science and Technology Rory A. Cooper and Dion Johnson Award for Best Paper	2002
Rehabilitation Engineering Society of North America- RESNA Student Scientific Paper Competition Whitaker Award	2004
Pittsburgh Post-Gazette, "The Thinkers" monthly series. " <i>Thinkers: Wheelchairs compound troubles for some users.</i> " This is a monthly series that highlights "people from Western Pennsylvania who are on the forefront of new ideas in their fields."	2007
University of Pittsburgh Institute on Aging- Best Junior Faculty Research Presentation	2008
Eugene Michels Forum plenary session speaker, Combined Sections Meeting, American Physical Therapy Association	2012
Named the Sabrina Cohen Foundation for Stem Cell Research "CELLebrity Doctor"	2012
Carl Storm Underrepresented Minority Fellowship Award – Myogenesis meeting Gordon Research Conference, Lucca, Italy	2013
<i>PT in Motion</i> magazine featured investigator of cover article: " <i>A Growing Concern. Regenerative Medicine: A key to tomorrow's rehabilitation</i> " - <i>PT in Motion</i> is the professional issues magazine of the American Physical Therapy Association (APTA) and is distributed to 90,000+ members.	2013
Foundation for Physical Therapy: " <i>Researcher of the Month</i> "	2013
Drexel University " <i>Alumna profile: Dr. Fabrisia Ambrosio Combines Passions for Physical Therapy and Regenerative Medicine</i> "	2013
<i>PT in Motion</i> magazine featured investigator: " <i>Interdisciplinary education in technology</i> "	2014
Carnegie Science Center Award, <i>Honorable Mention in the Emerging Female Scientist category</i> - This award recognizes a female leader whose cutting-edge work inspires change in math, science, or technology.	2015

PUBLICATIONS

Refereed articles (*Denotes senior/ corresponding author; ++Denotes trainee)

1. Côté, C; **Ambrosio, F**; Perrault, G. Metabolic and Contractile Influence of carbonic anhydrase III in skeletal muscle is age dependent. 1999. *American Journal of Physiology*. 276: R559-565

2. Souza AL, Boninger ML, Fitzgerald SG, Shimada SD, Cooper RA, **Ambrosio F**. Upper Limb Strength in individuals with spinal cord injury who use manual wheelchairs. 2005. *Journal of Spinal Cord Medicine*. 28(1):26-32
3. **Ambrosio, F**; Boninger, ML; Souza, AL; Fitzgerald, SG; Koontz, AM; Cooper, RA. Biomechanics and strength of manual wheelchair users. 2005. *Journal of Spinal Cord Medicine*. 28: 407-414
4. Zhu J, Li Y, Shen W, Cummins J, Qiao C, **Ambrosio F**, Lavasani M, Nozaki M, Branca M, Xiao X, Huard J. The role of myostatin in injured skeletal muscle- Relationships among TGF- β 1, myostatin and decorin. *J Biol Chem*. 2007 282(35):25852-63
5. **Ambrosio F**, Boninger ML, Fitzgerald SG, Schwid SR, Cooper RA. A comparison of mobility device delivery within the Veterans Administration for individuals with multiple sclerosis versus individuals with a spinal cord injury. *Journal of Rehabilitation Research and Development*. 2007. 44(5): 693-702.
6. Nozaki, M, Li, Y, Zhu, J, **Ambrosio, F**, Fu, FH, Huard, J. Improved muscle healing after contusion injury by the inhibitory effect of suramin on myostatin, a negative regulator of muscle growth. *Am J Sports Med*. 2009 36(12):2354-62
7. **Ambrosio F***, Ferrari RJ⁺⁺, Fitzgerald GK, Carvell GR, Boninger ML, Huard J. Functional overloading of the extensor digitorum longus muscle enhances muscle derived stem cell contribution to contractile functioning of mouse dystrophic skeletal muscle. *Arch Phys Med Rehab*. 2009 90(1): 66-73
8. Deasy BM, Feduska J, **Ambrosio F**, Huard J. Role of VEGF-mediated angiogenesis in muscle stem cell transplantation to Dystrophic Muscle. *Molecular Therapy*. 2009. 17(10): 1788-1798
9. **Ambrosio F***; Ferrari RJ⁺⁺; Plassmeyer J⁺⁺; Fitzgerald GK; Carvell GE; Distefano G⁺⁺; Boninger ML; Huard J. The synergistic effect of treadmill running and stem cell transplantation to heal injured skeletal muscle. *Tissue Eng Part A*. 2010. 16: 839-849
10. **Ambrosio F***, Ferrari RJ⁺⁺, Fitzgerald GK, Carvell GE. A murine model of muscle training using neuromuscular electrical stimulation. *Journal of Visualized Experiments*, 2012. 9(63):e3914
11. Kobayashi T, Uehara K, Shusuke O, Kimimasa T, **Ambrosio F**, Cummins J, Fu F, Huard J. The timing of losartan administration represents a major determinant of the improvement of skeletal muscle healing after injury. *J Appl. Physiol*. 2013. 114(2):262-73
12. Distefano G⁺⁺, Weiss CM⁺⁺, Ferrari RJ⁺⁺, Cao Z⁺⁺, Deasy BM, Carvell GE, Boninger ML, Huard J, Fitzgerald GK, **Ambrosio F***. Neuromuscular electrical stimulation as a method to maximize the beneficial effects of muscle stem cells transplanted into dystrophic skeletal muscle. *Plos One*. 2013. 8(3):e54922
13. Garciafigueroa DY, Klei LR, **Ambrosio F**, Barchowsky A. Arsenic-stimulated lipolysis and adipose remodeling is mediated by G-protein coupled receptors. *Toxicological Sciences*, 2013, 134(2):335-44
14. Sicari BM; Rubin JP; Dearth CL; Wolf MT; **Ambrosio F**; Boninger M; Turner NJ; Weber DJ; Simpson TW; Wyse A; Brown EP⁺⁺; Dziki JL; Fisher LE; Brown S; Badylak SF. An acellular biologic scaffold promotes skeletal muscle formation in mice and humans with volumetric muscle loss. *Science Translational Medicine*, 2014, 30:6(234):234ra58
15. **Ambrosio F***, Brown EP⁺⁺, Stolz D; Ferrari RJ⁺⁺; Goodpaster B; Deasy BM; Distefano G⁺⁺; Roperti A⁺⁺; Cheikhi A; Garciafigueroa Y; Barchowsky A. Arsenic induces sustained impairment of skeletal muscle and muscle progenitor cell ultrastructure and bioenergetics. *Free Radical Biology & Medicine*, 2014, 74:64-73
16. Zhang C; Ferrari RJ⁺⁺; Beezhold K; Stearns-Reider K⁺⁺; D'Amore A; Haschak M⁺⁺; Stolz D; Robbins PD; Barchowsky A; **Ambrosio F***. Arsenic promotes NF- κ B-mediated fibroblast dysfunction and matrix remodeling to impair muscle stem cell function. *Stem Cells*, [ePub ahead of print]
17. Han N⁺⁺; Yabroudi MA⁺⁺; Stearns-Reider K⁺⁺; Helkowski W; Sicari BM; Rubin JP; Badylak SF; Boninger ML; **Ambrosio F***. Electrodiagnostic evaluation of individuals implanted with extracellular matrix for the treatment of volumetric muscle injury. *Physical Therapy Journal*, [ePub ahead of print]

Review manuscripts *Denotes senior/ corresponding author ++Denotes trainee

1. **Ambrosio F***, Kadi F, Lexell J, Fitzgerald GK, Boninger ML, Huard J. The effect of exercise on skeletal muscle regenerative potential: An update of current research findings relating to aging and neuromuscular pathology. *Am J PM&R*. 2009. 88(2): 145-155
2. Markert, C., Atala, A, Cann, J; Christ, C.; Furth, M; **Ambrosio, F**; Childers, MK. Mesenchymal Stem Cells: Emerging Therapy for Duchenne Muscular Dystrophy. *Am J PM&R*. 2009. 1(6): 547-559
3. **Ambrosio F***; Wolf SL; Delitto A; Fitzgerald GK; Badylak SF; Boninger ML; Russell A. The emerging relationship between regenerative medicine and musculoskeletal physical therapeutics: A perspective. *Physical Therapy Journal*. 2010. Dec; 90(12):1807-14
4. Markert C, Call J, **Ambrosio F**, Grange R. Exercise and Duchenne Muscular Dystrophy: Towards Evidence-Based Exercise Prescription. *Muscle & Nerve*, 2011, Apr 43(4): 464-478
5. **Ambrosio F***, Tarabishy A, Kadi F, Brown EP⁺⁺, Sowa GA. Biological basis of exercise-based treatments. *PMR*. 2011. Jun 3(6 Suppl 1):S59-63
6. Modo M, **Ambrosio F**, Friedlander RM, Badylak SF, Wechsler LR. Bioengineering solutions for neuronal repair and recovery in stroke. *Current Opinion in Neurology*, 2013, 26(6):626-631
7. Avin KG⁺⁺; Coen PM; Huang W; Stolz D; Sowa GA; Dube JJ; Goodpaster B; O'Doherty R; **Ambrosio F***. Skeletal muscle as a regulator of the longevity protein, klotho. *Frontiers in Striated Skeletal Muscle Physiology*, 2014, 17;5: 189
8. Gentile NE⁺⁺; Stearns KM⁺⁺; Brown EP⁺⁺, Rubin JP; Boninger ML; Dearth CL; **Ambrosio F**; Badylak SF. Targeted rehabilitation following extracellular matrix scaffold transplantation in patients with volumetric muscle loss. *American Journal of Physical Medicine & Rehabilitation*, 2014, 93(11 Suppl 3):S79-87.
9. Dalise S⁺⁺; **Ambrosio F***; Modo M. Brain plasticity and recovery I preclinical models of stroke. *Arch Ital Biol*. 2015, 152(4):190-215.
10. Ross HH; **Ambrosio F**; Trumbower RD; Reier PJ; Behrman A; Wolf SL. Regenerative Rehabilitation in the Central Nervous System: Physical Therapy as a Logical Partner to Neural Stem Cell Transplantation. *Physical Therapy Journal*, [ePub ahead of print]

Non peer-reviewed manuscripts

1. **Ambrosio F***, Wolf SL, Delitto A, Fitzgerald GK, Badylak SF, Boninger ML, Russell AJ. The emerging relationship between regenerative medicine and physical therapeutics. *Fysiotherapie*. 2011, Jaargang (June) 121, nr 2, p59-66
2. **Ambrosio F***; Russell A. Regenerative Rehabilitation: A call to action. *JRRD*, 2010; 47:xi-xv
3. **Ambrosio F***, Delitto A. Guest editorial: A new form of physical therapy: Regenerative rehabilitation. *Orthopedic Physical Therapy Practice Journal*. October 2011
4. **Ambrosio F***, Boninger ML, Brubaker CE, Delitto A, Wagner WR, Shields RK, Wolf SL, Rando TA. Guest editorial: Emergent themes from the Second Annual Symposium on Regenerative Rehabilitation, Pittsburgh, Pennsylvania. *J Rehabil Res Dev*. June 2013, 50(3): vii-xiv.

Book Chapters

1. Koontz, A; **Ambrosio, F**; Souza, AL; Buning, M; Arva, J; Cooper, RA. Strength and Disability in *Muscle Strength*, 2004. ed. Kumar, S. CRC Press. pp 485-511.
2. **Ambrosio, F**; Li Y; Usas A; Boninger ML; Huard J. Muscle Repair after Injury and Disease in *Musculosekeltal Tissue Regeneration: Biological Materials and Methods*. 2008. Ed. Pietrzac, WS. Humana Press.
3. Childers MK; Markert C; Atala A; Cann J; Christ G; Furth M; **Ambrosio F**. Regenerative Medicine: Implications in Rehabilitation in *Physical Medicine & Rehabilitation: Principles and Practice*, 5th ed. 2010. Ed. Frontera et al. Lippincott Williams & Wilkins.

4. Stearns-Reider; **Ambrosio F**. Regenerative Rehabilitation: Synergizing regenerative medicine therapies with rehabilitation for improved muscle regeneration in muscle pathologies. In *Regenerative Medicine for Degenerative Muscle Diseases*. Ed. Martin K. Childers, Springer

Selected refereed abstracts

1. **Ambrosio, F**; Côté, C. Modulation of Thyroid Status in Rat as a Model to Study Carbonic Anhydrase Function in Skeletal Muscle. Poster presentation at the 40th Annual Meeting of the Canadian Federation of Biological Societies. Québec, Québec CANADA, 1997
2. **Ambrosio, F**; Boninger, ML; Fay, B. Wheelchair Propulsion Biomechanics in Patients with Multiple Sclerosis. Proceedings of the 3rd National VA Rehabilitation Research and Development Meeting, Arlington VA, p111-112, 2002.
3. Algood, D; Cooper, RA; Boninger, ML; Cooper, RC; **Ambrosio, F**; Reeves, SA; Corfman, TA; Spaeth, D. Physiological Comparison of a Pushrim Activated Power Assist Wheelchair and Traditional Manual Wheelchair Propulsion Among Persons with Tetraplegia. Proceedings of the 25th Annual RESNA Conference, Minneapolis, MN, pp. 285-287, 2002
4. **Ambrosio F**, Boninger ML, Fay B, Souza A, Fitzgerald S, Koontz AM, Cooper RA, A Fatigue Analysis During Wheelchair Propulsion In Patients With Multiple Sclerosis, Proceedings of the 25th Annual RESNA Conference, Minneapolis, MN, pp. 282-284, 2002.
5. **Ambrosio, F**; Boninger, ML; Fay, B; Souza, A; Fitzgerald, S; Koontz, AM; Cooper, RA. A Biomechanical Analysis of Wheelchair Propulsion in Patients with Multiple Sclerosis. Proceedings of the Consortium of Multiple Sclerosis Centers Conference, Chicago, IL. *Winner of the Best Paper in Research in Multiple Sclerosis*.
6. **Ambrosio F**, Boninger ML, Fay B, Souza A, Fitzgerald S, Koontz AM, Cooper RA, Wheelchair Propulsion Biomechanics In Patients With Multiple Sclerosis, Proceedings of the 25th Annual RESNA Conference, Minneapolis, MN, pp. 371-373, 2002. *Winner of the Whitaker Best Scientific Student Paper Award*.
7. **Ambrosio, F**; Boninger, ML; Fay, BT; Souza, A; Fitzgerald, S; Koontz, AM; Cooper, RA. A Biomechanical Analysis of Wheelchair Propulsion in People with Multiple Sclerosis. Proceedings of the 14th International World Confederation of Physical Therapists Conference, Barcelona, Spain, 2003.
8. **Ambrosio F**, Boninger ML, Fitzgerald SG, Liu B, Mapa M, Collins DM, Mobility Device as a Determinant of Social Participation in Persons with Multiple Sclerosis, Proceedings of the 26th Annual RESNA Conference, Atlanta, Ga, CD-ROM, 2003.
9. **Ambrosio, F**; Boninger, ML; Koontz, AM; Cooper, RA; Dvorznak, M; Ambrosio, A. A Model-Based Criterion for Assessing Appropriateness of Wheelchair Setup. Proceedings of the 27th Annual RESNA Conference, Orlando, FL, 2004. press CD-ROM. *Winner of the Whitaker Best Scientific Student Paper Award*.
10. **Ambrosio, F**; Boninger, ML; Schwid, S; Cooper, RA; Koontz, A. The Effect of Mobility Device Use on Strength, Fatigue, and Quality of Life in Persons with Multiple Sclerosis. Proceedings of the 19th Annual Meeting of RESJA, Sapporo, Japan, 2004. p217-218
11. Kurowski, B; **Ambrosio, F**; Nagasburamian, S; Fitzgerald, KG; Boninger, ML; Huard, J. Muscle loading as a key to muscle stem cell mediated dystrophin delivery and physiological functioning: a pilot study. Department of Physical Medicine and Rehabilitation Research Day, Pittsburgh, PA June 2006. *Winner of the 2006 Resident Research Award*.
12. Nozaki M, Li Y, Zhu J, **Ambrosio F**, Fu FH, Huard J. The use of suramin to improve skeletal muscle healing after contusion injury. Orthopedic Research Society Meeting, poster presentation, San Diego, CA, Feb. 2007.
13. Nozaki M, Liy Y, Zhu J, **Ambrosio F**, Karthikeyan T, Fu FH, Huard J. The potential of suramin to improve muscle healing. American Orthopedic Society for Sports Medicine, poster presentation, Calgary, Canada 2007

14. **Ambrosio F**; Ferrari RJ; Fitzgerald GK; Carvell G; O'Day T; Boninger ML, Huard J. Muscle loading enhances stem cell contribution to mdx mouse skeletal muscle contractile Function. McGowan Institute for Regenerative Medicine Retreat, Nemaquin, PA, March, 2007
15. **Ambrosio F**, Fitzgerald GK Carvell G, Ferrari RJ, Boninger ML, Huard J. Therapeutic synergy of stem cell transplantation and skeletal muscle loading to rescue dystrophic skeletal muscle: A preliminary study. Hilton Head Workshop, Engineering Tissues: Replace, Repair, & Regenerate. Hilton Head, SC, March 2007
16. **Ambrosio F**; Ferrari RJ; Fitzgerald GK; Carvell G; O'Day T; Boninger ML, Huard J. Muscle loading enhances stem cell contribution to mdx mouse skeletal muscle contractile Function. International Society for Stem Cell Research, Cairns, Australia, 2007
17. Ferrari RJ; Nozaki M; Karthikeyan T; Huard J; **Ambrosio F**. Effects of early treadmill running on the regenerative process after muscle contusion. European Muscle Conference, Stockholm, Sweden, September, 2007
18. Karthikeyan T, **Ambrosio F**, Usas A, Ferrari R, Huard J. Vascularity Influences Myofiber Regeneration and Fibrosis in Skeletal Muscle Injury. Department of Orthopedic Surgery Research Day, University of Pittsburgh, Pittsburgh, PA, April 2007. *Winner of Best Junior Resident Research Award*
19. Nozaki, M; Li Y, Zhu J, Uehara K, **Ambrosio F**, Fu FH, Huard J. Suramin can enhance skeletal muscle healing by blocking myostatin. Orthopedic Research Society Annual Congress, San Francisco, CA Feb 2008
20. Meszaros LB, Karthikeyan, T, Quintero AJ, Usas A, **Ambrosio, F**, Ferrari RJ, Huard J. Influence of Vascularity on Muscle Regeneration, Fibrosis and Heterotopic Ossification. Orthopedic Research Society Annual Congress, San Francisco, CA Feb 2008
21. Wang, D; **Ambrosio, F**; Deasy BM; Wright, VJ. Sexual Dimorphism in MDSC Proliferation and Transplantation Capacity for Tendon Tissue Engineering. Accepted to the Orthopedic Research Society, San Francisco, CA Feb 2008
22. Ferrari, RJ; Locke, C; Nozaki, M; Fitzgerald, G K; Carvell, G E.; Boninger, M L; Huard, J; **Ambrosio, F**. Motor unit activation increases the efficacy of stem cell therapy to heal injured skeletal muscle. Orthopedic Research Society, San Francisco, CA Feb 2008
23. Plassmeyer J, Weiss C, Wright V, Deasy BM, Sowa G, Huard J, **Ambrosio F**. The effects of mechanical strain on muscle derived stem cell proliferation. International Society for Stem Cell Research, Philadelphia, PA. June 2008.
24. Distefano G, Plassmeyer J, Carvell GE, Fitzgerald GK, Huard J, **Ambrosio F**. The effect of electrical stimulation on the myogenic capacity of stem cells transplanted into dystrophic muscle. Federation of Brazilian Societies for Experimental Biology, Fortaleza, Brazil, May 2008
25. Lane T, Ferrari R, Nozaki M, Boyer A, Witt M, Huard J, **Ambrosio F**. The relationship between vascularity and fibrosis formation following skeletal muscle injury. Institute for Rehabilitation Research Day, University of Pittsburgh, August 2008. *Winner of the Best Undergraduate Abstract Award*
26. Plassmeyer J, Groscost D, Brown E, Goodpaster B, Fitzgerald GK, Boninger ML, Huard J, **Ambrosio F**. Neuromuscular Electrical Stimulation Rejuvenates Muscle Stem Cell Regenerative Potential. 2008 Institute on Aging Annual Meeting, University of Pittsburgh Institute on Aging, Pittsburgh, PA December 2008. *Winner of the Best Junior Faculty Presentation Award.*
27. Weiss C, Plassmeyer J, Deasy BM, Chirieleison SM, Huard J, **Ambrosio F**. Paracrine Influences of Normal Muscle Derived Stem Cells Enhance the Myogenic Potential of Stem Cells Isolated from Dystrophic Mice. Orthopedic Research Society, Las Vegas, NV Feb 2009
28. **Ambrosio F**, Plassmeyer J, Groscost D, Brown E, Goodpaster B, Fitzgerald GK, Huard J. Neuromuscular electrical stimulation rejuvenates muscle stem cell regenerative potential. Molecular Mechanisms of Aging and Age-Related Diseases, Puerto Vallarta, Mexico, March 2009. Selected for Oral Presentation

29. Hassinger T, Lane T, Schwartz R, Sethi R, Ferrari R, Bourbeau D, Huard J, **Ambrosio F**, Weber D. Analysis of Gait Kinematics on Stem Cell Transplantation into Injured Muscle: A Methodological Study. Orthopedic Research Society Annual Meeting, Las Vegas, NV February 2009.
30. Distefano G, Plassmeyer J, Carvell GE, Fitzgerald GK, Huard J, **Ambrosio F**. The effect of electrical stimulation on the myogenic capacity of stem cells transplanted into dystrophic muscle. Association of Academic Physiatrists Annual Meeting, Colorado Springs, CO, February 2009. *Winner of Outstanding Poster Presentation.*
31. **Ambrosio F**, Plassmeyer J, Brown E, Deasy BM, Boninger ML, Goodpaster B, Fitzgerald GK, Huard J. Neuromuscular electrical stimulation: The skeletal muscle fountain of youth? Association of Academic Physiatrists Annual Meeting, Colorado Springs, CO, February 2009. Selected for Oral Presentation
32. Distefano G; Weiss CM; Ferrari RJ; Fitzgerald GK; Carvell GE; Boninger ML; Huard J; **Ambrosio F**. Four weeks of neuromuscular electrical stimulation enhances the transplantation of muscle derived stem cells into dystrophic skeletal muscle. IRRDay 2009, University of Pittsburgh, Pittsburgh, PA, June 2009. *Honorable Mention, Best Rehabilitation Research by a pre-doctoral student.*
33. Brown E; Lexell J; Ferrari R; Wang B; Boninger ML; Huard J; **Ambrosio F**. The role of vascularity in skeletal muscle regeneration in adult mice. IRRDay 2009, University of Pittsburgh, Pittsburgh, PA, June 2009. *Winner of Best Rehabilitation Research by a post-doctoral fellow.*
34. Ashoff AW, Ferrari RJ, **Ambrosio F**. Effects of muscle stem cell transplantation and neuromuscular electrical stimulation on skeletal muscle function after severe injury. RI Day 2011, University of Pittsburgh, Pittsburgh PA, June 2011. *Winner of Best Rehabilitation Research in the undergraduate category*
35. **Ambrosio, F**, B. Goodpaster, L. Niedernhofer, B. Van Houten, G. Distefano, E. H. Brown and A. Barchowsky. Cellular, metabolic, and histological evidence for arsenic-induced myopathy. Abstract 2069 The Toxicologist 126: 446, 2012
36. Roperti A, D Stoltz, B Goodpaster, E Brown, G Distefano, A. Barchowsky and **F Ambrosio**. Arsenic Impairs Adult Muscle Stem Cells and Skeletal Muscle Integrity. Abstract 2311 The Toxicologist 132: 494, 2013. *Winner of the Society of Toxicology Undergraduate Student Travel Award.*
37. Stearns K, D'Amore A, Wagner W, Beezhold K, Barchowsky A, **Ambrosio F**. The Effect of Age on Structural and Mechanical Properties of Skeletal Muscle Extracellular Matrix. 13th Annual McGowan Institute for Regenerative Medicine Scientific Retreat. Farmington, PA: March 9-11, 2014
38. Stearns K, Beezhold K, D'Amore A, Wagner W, Koch R, Tsamis A, Vorp D, Barchowsky A, **Ambrosio F**. The Effect of Age on Structural and Mechanical Properties of Skeletal Muscle Extracellular Matrix. 3rd Annual Symposium on Regenerative Rehabilitation. San Francisco, CA: April 10-11, 2014

Other publications

Independent Study Course for the Orthopaedic Section of the American Physical Therapy Association: *Applications of Regenerative Medicine to Orthopaedic Physical Therapy*. A 6 monograph series including:

- **Ambrosio F**; Trumbower R; Wolf S; Wagner W. *Introduction to Regenerative Medicine*, January, 2014
- Avin K; Badylak SV; **Ambrosio F**. *Neuromuscular Tissue Engineering*, January, 2014
- Stearns K; **Ambrosio F**; Fu F. *Tendon and Ligament Biologics*, January, 2014
- Thompson WR; Gottardi R; Stearns KM; Rubin J; **Ambrosio F**; Tuan R. *Bone and Cartilage Biologics*, January, 2014
- Garay E; Boninger ML; Sowa GA **Ambrosio F**. *Mechanotransduction as a tool to influence musculoskeletal tissue biology*, January, 2014

PROFESSIONAL ACTIVITIES

TEACHING:

University of Pittsburgh, Graduate Courses

HRS 2704: Specialized Studies in Upper Extremity Anatomy (Course Director: Dr. Michael Boninger). *Role: teaching assistant.* 2003

HRS 3705: Wheelchair Biomechanics (Course Director: Dr. Michael Boninger). *Role: teaching assistant,* 2004

PT2025: Physiology of Exercise (Course Director: Dr. Patrick Sparto). *Role: lecturer,* 2010, 2011

EPI290: Biology and Physiology of Aging (Course Director: Dr. Anne Newman). *Role: lecturer.* 2009-2010, 2014

HRS3003a: Core Concepts in Disability and Rehabilitation Science I (Course Directors: Drs. Elizabeth Skidmore and Michael McCue). *Role: lecturer.* 2013-2014

HRS3003b: Core Concepts in Disability and Rehabilitation Science II (Course Directors: Drs. Elizabeth Skidmore and Michael McCue). *Role: lecturer.* 2014

EOH3210: Pathophysiology of Environmental Disease (Course Director: Dr. Claudette St. Croix). *Role: lecturer,* 2015

Training and supervision

Medical Residents

2006-2007 Bradley Kurowski, MD, Department of Physical Medicine & Rehabilitation. *Role: research elective primary mentor*

2009 Geeta Sathe, MD, Department of Physical Medicine & Rehabilitation. *Role: research elective primary mentor*

2011- 2012 Edward Garay, MD Department of Physical Medicine & Rehabilitation. *Role: research elective primary mentor*

Post-doctoral fellows

2007-2009 Elke Brown, MD, Department of Physical Medicine & Rehabilitation T32 fellow. *Role: primary mentor*

2009-2010 Zaoxiang Cao, MD, PhD, Department of Physical Medicine & Rehabilitation T32 fellow. *Role: primary mentor*

2012-2013 Keith Avin, PhD, PT, Pittsburgh Claude D. Pepper Older American's Independence Center T32 scholar. *Role: primary mentor*

2012-2014 Kristen Stearns, PhD, PT, Department of Physical Medicine & Rehabilitation. *Role: primary mentor*

2013-present Kevin Beezhold, PhD, Department of Environmental Health and Occupational Safety. *Role: secondary mentor*

International research fellows

01/2014-11/2014	Stefania Dalise, MD, University Hospital of Pisa, Pisa, Italy. <i>Role: primary mentor</i>
3/2014-12/2014	Loredana Cavalli, MD, PhD, University Hospital of Pisa, Pisa, Italy. <i>Role: primary mentor</i>
9/2014-5/2015	Stefano Lai, PhD(c), Scuola Sant'Anna, Italy. <i>Role: co-mentor with Dr. Silvestro Micera, Scuola Sant'Anna, Pisa, Italy</i>
11/2014-present	Nami Han, MD, PhD, Department of Physical Medicine and Rehabilitation, Inje University Busan Paik Hospital, Busan, Republic of Korea. <i>Role: research mentor</i>
07/2015-present	Celestina Mazzotta, PhD(c), University of Florence, Florence, Italy. <i>Role: primary mentor during fellowship</i>

Doctoral students

2009-2012	Joshua Plassmeyer, Department of Physical Therapy. <i>Role: primary mentor</i>
2009-2015	Giovanna Distefano, MS PT, Department of Physical Therapy. <i>Role: research mentor</i>
2008-present	Ricardo Ferrari, MS, PT, Department of Physical Therapy. <i>Role: primary mentor</i>

Medical Students

2008-2011	Amanda Way: <i>Dean's Summer Research program primary research mentor; Scholarly project primary research mentor</i>
2011	Megan Wolf: <i>Dean's Summer Research program primary research mentor</i>
2011-2012	Shanti Pinto: <i>Scholarly project primary research mentor</i>
2012-2014	Natalie Gentile: <i>Scholarly project primary research mentor</i>
2015-present	Devan Patel: <i>Scholarly project primary research mentor</i>

Undergraduate students

2006-2010	Jennifer Bernieri- First Experiences in Research program trainee. <i>Role: faculty mentor</i>
2006-2010	Christopher Weiss – First Experiences in Research trainee. <i>Role: faculty mentor; Department of Biology, Honors college. Role: primary thesis advisor</i>
2006-2010	Tara Lane- First Experiences in Research program trainee. <i>Role: faculty mentor</i>
2006-2008	Aaron Boyer- First Experiences in Research program trainee. <i>Role: faculty mentor</i>
2006-2009	Taryn Hassinger- First Experiences in Research program trainee. <i>Role: faculty mentor</i>

2007-2008	David Groskost- Student researcher. <i>Role: primary mentor</i>
2007-2008	Brian Shidemantle- Student researcher. <i>Role: primary mentor</i>
2010-2014	Alexander Ashoff- First Experiences in Research program trainee. <i>Role: faculty mentor</i>
2010-2014	Varun Ayyaswami – First Experiences in Research trainee. <i>Role: faculty mentor</i> Department of Biology, Honors college. <i>Role: primary thesis advisor</i>
2010-2011	Jaime Bromley- First Experiences in Research program trainee. <i>Role: faculty mentor</i>
2010-2011	Sourab Naranyara- First Experiences in Research program trainee. <i>Role: faculty mentor</i>
2010-2012	Kaitlyn Swisher- First Experiences in Research program trainee. <i>Role: faculty mentor</i>
2011-present	Martin Haschak- First Experiences in Research program trainee. <i>Role: faculty mentor</i>
2014-2015	Jay Vakil- Student researcher. <i>Role: primary mentor</i>
2015-present	Ross Lawrence- Student researcher, <i>Role: primary mentor</i>
2015-present	Lia Winter- Student researcher, <i>Role: primary mentor</i>
2015-present	Jordon Rowe- Student researcher, <i>Role: primary mentor</i>

Doctoral Thesis Committees

2012	Ewa Kulig, Department of Chemistry and Biochemistry, Concordia University, Montreal, Quebec, Canada. <i>Role: committee member</i>
2011-2013	Matthew Wolf, Department of Surgery, University of Pittsburgh, Pittsburgh, PA. <i>Role: committee member</i>
2011-present	Giovanna Distefano, Department of Physical Therapy, University of Pittsburgh, Pittsburgh, PA. <i>Role: committee member and research advisor</i>
2011-present	Ricardo Ferrari, Department of Physical Therapy, University of Pittsburgh, Pittsburgh, PA. <i>Role: committee member and primary research advisor</i>
2014-present	Amin Cheiki, Department of Environmental and Occupational health, University of Pittsburgh, Pittsburgh, PA. <i>Role: committee member</i>
2015-present	La Li, Department of Pathology, University of Pittsburgh, Pittsburgh, PA. <i>Role: committee member</i>
2015-present	Rebecca Duffy, Department of Biomedical Engineering, Carnegie Mellon University, Pittsburgh, PA. <i>Role: committee member</i>
2015-present	Samuel Lopresti, Department of Bioengineering, University of Pittsburgh University, Pittsburgh, PA. <i>Role: committee member</i>

Grants Awarded to Trainees

Keith Avin, PhD, DPT- The effect of mechanical stimulation on circulating klotho levels in aged mice and humans

Claude D. Pepper Center T32 Fellowship Award
 07/2012-06/2013
 Role: primary mentor

Joshua Plassmyer, BS- Electrical stimulation improves skeletal muscle regeneration after a severe injury in aged mice
 Clinical Translational Science Institute, University of Pittsburgh
 07/2010 – 07/2011 and 11/2011 – 11/2012
 Role: mentor

Elke Husch Perreira Brown, MD- Electrical stimulation enhances the regenerative potential of aged muscle stem cells in aged individuals undergoing a total hip arthroplasty
 University of Pittsburgh, Physical Medicine & Rehabilitation T32 Fellowship Award
 03/01/08 – 02/28/10
 Role: primary mentor

Zongxian Cao, MD, PhD- In vitro effects of direct electrical current stimulation on the regenerative potential of aged muscle stem cells
 University of Pittsburgh, Physical Medicine & Rehabilitation T32 Fellowship Award
 06/01/09 -05/31/10
 Role: primary mentor

Trainee Awards:

Student	Award	Role	Organization	Year
Kurowski, B	<i>Resident Research Award</i>	Primary mentor	Institute for Rehabilitation Research	2006
Karthikeyan, T	<i>Best Junior Resident Research Award</i>	Mentor	Department of Orthopaedic Surgery	2007
Lane, T	<i>Best Undergraduate Abstract Award</i>	Primary mentor	Institute for Rehabilitation Research	2008
Distefano, G	<i>Outstanding Poster Presentation.</i>	Primary mentor	Association of Academic Physiatrists	2009
Distefano, G	<i>Honorable Mention, Best Rehabilitation Research by a pre-doctoral student</i>	Primary mentor	Institute for Rehabilitation Research	2009
Brown, E	<i>Winner of Best Rehabilitation Research by a post-doctoral fellow</i>	Primary mentor	Institute for Rehabilitation Research	2009
Ashoff, A	<i>Best Rehabilitation Research in the undergraduate category</i>	Primary mentor	Institute for Rehabilitation Research	2011
Roperti, A	<i>Society of Toxicology Undergraduate Student Travel Award</i>	Primary mentor	Society of Toxicology	2013
Ayyaswami, V	<i>Chancellor's Fellowship Award</i>	Primary mentor	University of Pittsburgh	2014

Other teaching-related activities

Course Director: American Physical Therapy Association Combined Sections Meeting, "The 'Bench to Bedside' Trajectory. The importance of physical therapy in the emerging science of regenerative medicine." Feb 11, 2011, New Orleans, LA

McGowan Institute 10th Annual Retreat, Nemacolin Woodlands Resort, Nemacolin, PA March 6-8, 2011- "An update on Regenerative Rehabilitation", Session Director

Stem Cell Education Fellowship Program, Module III, Atlanta, GA, October 21-23, 2011- Instructor
Course Director: The First Annual Symposium on Regenerative Rehabilitation, Pittsburgh, PA, Nov 3-4, 2011

Course Director: The Second Annual Symposium on Regenerative Rehabilitation, Pittsburgh, PA, Nov 12-13, 2012.

Course Director: American Physical Therapy Association Audio Course: *Physical Therapy and the Future of Regenerative Medicine*, October 18, 2012

McGowan Institute for Regenerative Medicine 12th Annual Retreat, Nemacolin Woodlands Resort, Nemacolin, PA March 7-9, 2013- "Regenerative Rehabilitation", Session Director

McGowan Institute for Regenerative Medicine 13th Annual Retreat, Nemacolin Woodlands Resort, Nemacolin, PA March 9-11, 2014- "Regenerative Rehabilitation", Session Director

Course Director: The Third Annual Symposium on Regenerative Rehabilitation, USF Mission Bay Conference Center, San Francisco, CA, April 10-11, 2014.

Co-Course Director (Primary Course Director- Dr. Gerald Schatten, University of Pittsburgh):
Rehabilitative and Regenerative Medicine for Minority Health and Health Disparities, Pittsburgh, PA April 6-10, 2015

Course Director: The Fourth Annual Symposium on Regenerative Rehabilitation, Mayo Clinic, Rochester, MN, September 24-26th, 2015.

RESEARCH:

Grant Number	Grant Title	Role in Project (% effort)	Years Inclusive	Source \$ Amount
<i>Current Grant Support:</i>				
1R01ES025529-01	<i>Dysfunctional Muscle Remodeling and Regeneration in Environmental Disease</i>	PI (30%) (AMBROSIO/ BARCOWSKY)	Pending Council review following 3 rd percentile score	\$2,915,161
1 P2C HD 086843	<i>Alliance for Regenerative Rehabilitation Research & Training</i>	Co-I (30%) (BONINGER/ RANDO)	9/2015-8/2020 (NOA pending)	\$5,868,715

	University of Pittsburgh Medical Center, <i>Mitochondria, Aging and Metabolism Work Group</i>	MPI (4%) (AMBROSIO/VAN HOUTEN/VO)	7/2014-6/2016	\$650,000
R01ES023696-01	<i>Mechanisms of arsenic-induced muscle morbidity and reduced regenerative capacity</i>	MPI (30%) (AMBROSIO/BARCHOWSKY)	12/2013-11/2018	\$2,349,370
R13HD080337	<i>Symposium on Regenerative Rehabilitation</i>	MPI (1%) (AMBROSIO/RANDO)	8/2015-7/2018	\$45,000

Prior Grant Support:

	CR Bard- <i>Muscle Tissue Regeneration with the Use of Biological Scaffolds for Patients Suffering from Massive Loss of Skeletal Muscle Tissue</i>	Co-I (6.25%)	10/2014-3/2015	\$9,669
	Cook Medical- <i>Muscle Tissue Regeneration with the Use of Biological Scaffolds for Patients Suffering from Massive Loss of Skeletal Muscle Tissue</i>	Co-I (6.25%)	10/14-3/15	\$9,669
	Pittsburgh Claude D. Pepper Older Americans Independence Center Pilot grant, <i>Environment and Stem Cells</i>	MPI (10%)	5/2013-6/2014	\$25,000
	Pennsylvania Department of Health/ Health Research Program, Pilot grant, <i>Pathogenic skeletal muscle matrix remodeling in environmental disease</i>	PI (5%)	10/2013-9/2014	\$40,000
R13HD075582	<i>Symposium on Regenerative Rehabilitation</i>	MPI (5%)	9/2012-8/2013	\$15,000
	National Skeletal Muscle Research Center Pilot Grant, <i>Mechanical loading as a critical determinant for functional skeletal muscle formation with a biological scaffold</i>	PI (10%)	5/2012-5/2014	\$25,000
	Department of Interior	Co-I (20%)	3/2010-8/2014	\$239,074

Grant-Musculotendinous Tissue Unit Repair and Reinforcement				
K01AG039477-01	Career Development Award, <i>Electrical stimulation reverses the effect of age on skeletal muscle regeneration</i>	PI (75%)	9/2011-8/2014	\$325,350
	University of Pittsburgh Institute on Aging Pilot Grant, <i>Mechanotransduction for improved skeletal muscle functioning in aged individuals</i>	PI (5%)	07/2010-06/2011	\$20,000
	Institute for Rehabilitation Research Pilot Grant, <i>Mechanical stimulation to enhance stem cell transplantation into injured skeletal muscle</i>	PI (10%)	04/2010-03/2011	\$50,000
	NIH K12 Career Development Award	PI (75%)	01/2008-12/2013	\$251,547
	University of Pittsburgh Institute on Aging Pilot Grant	Co-I (5%)	07/2010-06/2011	\$20,000
	Pepper Research Grant	PI (10%)	03/2008-04/2009	\$37,000
	Foundation for Physical Therapy Research Grant	PI (20%)	01/2008-12/2009	\$40,000
	Pepper Developmental Pilot Project, <i>Electrical stimulation enhances functional muscle regeneration after total hip arthroplasty</i>	PI (10%)	09/2009-08/2011	\$80,000
	Orthopedic Research and Education Foundation-Career Development Award in Musculoskeletal Research	Co-I (10%)	07/2007-06/2008	\$25,000
	Armed Forces Institute for Regenerative Medicine- <i>Muscle stem cell transplantation for Duchenne Muscular Dystrophy</i>	Co-I (5%)	3/2008-3/2013	\$9,100

American Orthopaedic Society for Sports Medicine Research Grant	Co-I (10%)	07/2007-06/2008	\$20,000
Competitive Medical Research Fund New Investigator Research Grant	PI (10%)	07/2007-06/2008	\$20,000
Department of Physical Medicine & Rehabilitation Pilot Grant	PI (5%)	6/2007-5/2008	\$5,000
Ferguson Research Grant	MPI (2%)	07/2007-06/2008	\$5,000
Claude D. Pepper Older Americans Independence Center Research Grant	PI (10%)	07/2006-06/2007	\$10,000
Long-Term Investigator Research Supplement for Minorities and Underrepresented Groups	Minority candidate (77%)	08/2005-07/2007	\$115,000

Seminars and invited lectureships related to research

Local:

Department of Physical Medicine & Rehabilitation Grand Rounds, “*The development of biological therapies for the treatment of Duchenne Muscular Dystrophy*,” June 2006, University of Pittsburgh, Pittsburgh, PA

Department of Physical Therapy Grand Rounds, “*Electrical Stimulation: stem cell therapy without stem cell transplantation*,” March 27, 2009, University of Pittsburgh, Pittsburgh, PA

McGowan Institute for Regenerative Medicine Research Seminar, “*Cellular Rehabilitation to Enhance Musculoskeletal Function*,” January 19, 2010, University of Pittsburgh, Pittsburgh, PA

Geriatric Research, Education and Clinical Center Research Seminar, “*Cellular Rehabilitation to Enhance Musculoskeletal Function*,” March 5, 2010, Veterans Administration, Pittsburgh, PA

Department of Critical Care Medicine Research Seminar, “*Mechanotransduction to enhance skeletal muscle regenerative potential*,” March 23, 2010, University of Pittsburgh, Pittsburgh, PA

Department of Neurobiology Research Seminar, “*Terminal differentiation of a muscle stem cell: Where do we go from here?*” April 20 2010, University of Pittsburgh, Pittsburgh, PA

Basic Biology of Aging Seminar Series, “*Regenerative Rehabilitation: Methods to rejuvenate aged skeletal muscle healing and function*,” May 14, 2010, University of Pittsburgh, Pittsburgh, PA

McGowan Institute 2nd Annual Open Session, “*Regenerative Rehabilitation*,” May 25, 2010, McGowan Institute for Regenerative Medicine, Pittsburgh, PA

CATER Seminar Series, “*Regenerative Rehabilitation: An emerging science*,” Feb. 18, 2011, University of Pittsburgh, Pittsburgh, PA

First Annual Symposium on Regenerative Rehabilitation, “*Cellular rehabilitation for improved muscle stem cell function*.” Nov 3, 2011, Pittsburgh, PA

Southwest District of the Pennsylvania Physical Therapy Association meeting, “*Cellular rehabilitation: A new PT specialization?*” Nov 8, 2011, Pittsburgh, PA

McGowan Institute 11th Annual Retreat, Nemacolin Woodlands Resort, Nemacolin, PA March 4-6, 2012- “*Rehabilitating Stem Cells: Implications for Regenerative Medicine*”, Invited speaker

McGowan Institute *Harvard Women in Power* tour, group speaker, May 10, 2012, McGowan Institute for Regenerative Medicine, Pittsburgh, PA

McGowan Institute *Achievement Rewards for College Scientists Foundation* tour, group speaker, October 18, 2012, McGowan Institute for Regenerative Medicine, Pittsburgh, PA

McGowan Institute *One Young World Summit* tour, group speaker, October 18, 2012, McGowan Institute for Regenerative Medicine, Pittsburgh, PA

Carnegie Mellon University, Stem Cell Engineering course, *Arsenic-induced skeletal muscle and muscle stem cell dysfunction*, November 26, 2013

Chatham University, Department of Physical Therapy Grand Rounds, - “*Regenerative Rehabilitation: the emerging role of physical therapy in regenerative medicine*”, February 27, 2013, Pittsburgh, PA

McGowan Institute 12th Annual Retreat, Session organizer and speaker, “*Mechanobiology’s role in the development of clinical rehabilitation protocols to promote tissue regeneration*”, “Regenerative Rehabilitation” Session March 7-10, 2013, Nemacolin Woodlands Resort, Nemacolin, PA

McGowan Institute 13th Annual Retreat, - “*Arsenic induced skeletal muscle and muscle progenitor cell dysfunction*”, “Regenerative Rehabilitation” Session Organizer and speaker, March 9-11, 2014, Nemacolin Woodlands Resort, Nemacolin, PA

University of Pittsburgh, Basic Biology of Aging seminar series, “*A twist of fate: unraveling a role for the longevity protein, Klotho, on muscle stem cell regenerative potential*”, March 4th, 2015, Pittsburgh, PA,

McGowan Institute 14th Annual Retreat, Nemacolin Woodlands Resort, Nemacolin, PA March 8-10, 2015- “*The aged myomatrix is inhibitory for muscle stem cell function*”, “Aging and Stem Cells” Session Organizer and speaker

Department of Physical Medicine & Rehabilitation Panther Rounds invited speaker, “*Toward rejuvenation of skeletal muscle regenerative capacity: measuring and manipulating stem cell function*”, August 19th, 2015, Pittsburgh, PA

National:

Department of Neurology Grand Rounds, invited lecturer, “*Motor unit activation to enhance the myogenic capacity of aged muscle stem cells*”, September 22-23, 2008, Wake Forest University, Greensboro, NC

Association of Academic Physiatrists Annual Meeting, invited lecturer, “*Neuromuscular electrical stimulation: The skeletal muscle fountain of youth?*” February 25-28, 2009, Colorado Springs, CO

Adult MSC: Regenerative Medicine & Stem Cell Therapy Congress, selected oral presentation, “*Modulating the Niche in Muscular Dystrophy Increases Host Regenerative Capacity*”, August 18 2009, Case Western Reserve University, Cleveland, OH

Walter Reed Symposium on Regenerative Rehabilitation, invited lecturer, “*Cellular Rehabilitation to Enhance Musculoskeletal Function*,” November 13, 2009, Walter Reed Army Medical Center, Washington DC

Association of Academic Physiatrists Annual Meeting, invited lecturer, "*Strength Training & Performance Enhancement: Impact on Health and Sports Medicine*", April 6-9 2010, Bonita Springs, Florida

Claude D. Pepper Older Americans Independence Center Annual Meeting, "*Cellular Rehabilitation: Rejuvenating skeletal muscle regenerative potential*", April 12-13 2010, Bethesda, Maryland

Annual IGERT meeting, alumni panelist, May 24, 2010, Washington DC

Children's Hospital of Boston, invited lecture, "*The synergism of mechanical stimulation and stem cell transplantation to enhance muscle function*," October 21 2010, Harvard University, Boston, MA

Spaulding Hospital Grand Rounds, invited lecturer, "*Regenerative Rehabilitation: Harnessing intrinsic skeletal muscle healing potential*," October 22, 2010, Harvard University, Boston, MA

American Physical Therapy Association Combined Sections Meeting, Funded research and early career development opportunities, oral presentation. Feb 11, 2011, New Orleans, LA

American Physical Therapy Association Combined Sections Meeting, "*Cellular Rehabilitation: A new PT specialization?*" Feb 11, 2011, New Orleans, LA

University of Florida, Rehabilitation Research Seminar Series, invited lecturer, "*Rehabilitating Stem Cells: Implications for Regenerative Medicine*." Dec 15, 2011, Gainesville, FL

American Physical Therapy Association, Combined Sections Meeting, Foundation for Physical Therapy Research Session, "*A firm foundation, courtesy of the Foundation*." Feb 8-10, 2012 Chicago, IL

American Physical Therapy Association, Combined Sections Meeting, Eugene Michels Forum Session Director, "*Regenerative Medicine: State of the Science*." Feb 8-10, 2012 Chicago, IL

Division of Aging Biology, NIA NIH, invited lecturer, "*Electrical stimulation reverses the effect of age on skeletal muscle regeneration*." June 19, 2012, Bethesda, MD

Section on Research Retreat in Regenerative Medicine, invited lecturer, "*Orthopaedic Regenerative Medicine from the PT Perspective*." August 5, 2012, Beaver Hollow, New York

Insurance Rehabilitation Study Group Annual Meeting, invited lecturer, "*Innovations in Medicine & Rehabilitation*", invited lecturer "*Regenerative Medicine Therapies and the Role of Rehabilitation*", May 22, 2013, New Orleans, LA

California Physical Therapy Association, invited lecturer, "*Synergizing rehabilitation and regenerative medicine for the treatment of skeletal muscle injuries*." September 20, 2013, Pasadena, CA

AAPM&R Annual Meeting, invited lecturer, "*Synergizing rehabilitation and regenerative medicine for the treatment of skeletal muscle injuries*", October 3-4, 2013, Washington DC

APTA Student Conclave, invited lecturer, "*Frontiers in Rehabilitation Science and Technology: Regenerative Rehabilitation*", October 23-25, 2013, Lexington, KY

APTA Student Conclave, invited lecturer, "*Lifelong learning: incorporating cutting-edge scientific advances into physical therapy clinical practice*", October 23-25, 2013, Lexington, KY

Ithaca College Doctorate of Physical Therapy program invited speaker, "*Physical Therapy and the Future of Regenerative Medicine*", December 2, 2013, Ithaca College, Ithaca, NY

Rehabilitative and Regenerative Medicine for Minority Health and Health Disparities: A Frontiers Advanced Training Course, invited lecturer, "*Cellular rehabilitation: the effect of mechanical loading on stem cell function and skeletal muscle regeneration*" December 6, 2013, Howard University, Washington DC

Rutgers University Skullhouse Lecture Series, invited lecturer, "*Physical Therapy and the Future of Regenerative Medicine*", March 20, 2014, Newark, NJ.

American College for Sports Medicine Annual Meeting, invited lecturer, "*Translational Research Investigating the Role of Muscle Loading on Skeletal Muscle Stem Cell Function and Regenerative Potential*", May 29, 2014, Orlando, FL

Walter Reed State of the Science Symposium, invited lecturer, "*Regenerative Rehabilitation Approaches to Improve Skeletal Muscle Healing and Functional Recovery*", June 6, 2014, Walter Reed Army Medical Center, Washington DC

Rehabilitative and Regenerative Medicine for Minority Health and Health Disparities: A Frontiers Advanced Training Course, invited lecturer, "*Cellular rehabilitation: the effect of mechanical loading on stem cell function and muscle regeneration*", June 25, 2014, Morehouse School of Medicine, Atlanta, GA

Arcadia University "New Horizons Lecture Series", invited lecturer, "*Regenerative Rehabilitation: the emerging role of physical therapy in regenerative medicine*", January 16, 2015

Annual Meeting of the APTA Orthopaedic Section, invited speaker, May 14-16th, 2015 Phoenix, AZ

Northwestern University/Rehabilitation Institute of Chicago, Biomedical Engineering Department Seminar series, invited speaker, "*Mechanical and biophysical factors controlling age-related declines in muscle stem cell function*," May 24th, 2015, Chicago, IL

4th Annual Symposium on Regenerative Rehabilitation, Course Director and speaker, Sept 24th-26th, Rochester, MN

APTA Combined Sections Meeting, Session organizer: Regenerative Rehabilitation & Genomics, Feb 18th, 2016, Anaheim, CA

Upcoming National Invited Talks:

Neurology and Pediatric Section IV STEP meeting, invited speaker, July 14th-19th, 2016 Columbus, OH

International:

Bi-Annual Seating Symposium, Invited Lecture: "Biomechânica Da Propulsão (Biomechanics of Wheelchair Propulsion)," August, 2007, São Paulo, Brazil

Molecular Mechanisms of Aging and Age-Related Diseases, "Neuromuscular electrical stimulation rejuvenates muscle stem cell regenerative potential." February 2009, Puerto Vallarta, Mexico

World Congress of Biomechanics, Invited Lecture: “*The regenerative potential of aged skeletal muscle is enhanced through the application of neuromuscular electrical stimulation*” August 2010, Singapore, Singapore

Scuola Superiore, Sant’Anna, Invited Lecture: “*Regenerative Rehabilitation: A framework for the translation of biological technologies into clinical practice*”, June 6, 2012, Pisa, Italy

Società Italiana di Analisi del Movimento in Clinica (Italian Society for Clinical Movement Analysis), 14th Annual Congress, Plenary lecturer: “*Mechanical stimulation enhances stem cell function and skeletal muscle regeneration*”, September 27, 2013, Pisa, Italy

American Congress of Rehabilitation Medicine Annual Meeting, “*Exploring Frontiers in Rehabilitation Science & Technology*”, October 10, 2014, Toronto, Canada. Session organizer and lecturer

Japan Study Tour 2015, Keynote lecturer, March 27th, 2015, Kyoto University, Kyoto, Japan

1st Annual Workshop on Regenerative Rehabilitation. Invited speaker, March 29th, 2015, Kyoto University, Kyoto, Japan

Campinas State University, Department of Vascular Medicine. Invited speaker: *Regenerative Rehabilitation. The emerging role of rehabilitation in regenerative medicine.* June 15, 2015. Campinas, Brazil

First Tongji Hospital International Medical Science Summit. Plenary speaker. October 28-30th, 2015. Huazhong University of Science and Technology, Wuhan, China.

SERVICE:

Years inclusive Description

University and Medical School

2011, 2012	Admissions panel, Department of Physical Therapy Doctorate of Physical Therapy program, University of Pittsburgh
2009-present	Department of Physical Medicine & Rehabilitation, Director of Foreign Students Program
2011-present	Grant reviewer Competitive Medical Research Fund, University of Pittsburgh
2013-present	Grant reviewer McGowan Institute for Regenerative Medicine pilot program
2014-present	Program chair of the Annual McGowan Institute for Regenerative Medicine Retreat
2014-present	McGowan Institute for Regenerative Medicine marketing committee
2014-present	Co-founder and organizer of the Stimulating Pittsburgh Research in Geroscience (SPRIG) University of Pittsburgh Medical Center initiative

External

2011-present	Founding Course Director , Annual International Symposium for Regenerative Rehabilitation - The specific objectives of this Symposium are: (1) To catalyze the development of novel interactions and research directions among researchers, clinicians and students conducting research in regenerative
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medicine and/or rehabilitation;

(2) To determine barriers to the development of regenerative rehabilitation approaches and to identify practical methods to overcome these barriers; and
(3) To introduce the concept of regenerative rehabilitation to graduate students, medical students and medical residents in the rehabilitation field.

- 08/2012- 2014 **Workgroup Leader**, American Physical Therapy Association Department of Clinical Practice Workgroup on Regenerative Rehabilitation– This group works to develop online learning tools for a national rehabilitation community, including podcasts and white papers. The objective of these tools are to provide the scientific foundation of principles guiding the field of regenerative rehabilitation.
- 2013- present **Leader of the ‘Regenerative Rehabilitation’ work group**, Think Tank workgroup member: *Frontiers in Rehabilitation Science & Technology*, APTA. - This initiative seeks to advance the profession of physical therapy by enacting a number of educational programs that deal with genomic, regenerative rehabilitation, bioengineering, and telehealth.
- 2014-present NASA Space Biology research program grant reviewer
- 2014-present **Founding Director**, International Consortium for Regenerative Rehab (ICRR). The ICRR is an alliance between 8 international institutions (University of Pittsburgh, Stanford University, University of California, San Francisco, Emory University, the Mayo Clinic, University of Washington, University of Virginia, the University Hospital of Pisa (Pisa, Italy), and Kyoto University (Kyoto, Japan)), which has the goal of expounding and capitalizing on synergies between the fields of rehabilitation and regenerative medicine. We will accomplish this goal by developing a coordinated, international plan for advancing the field of Regenerative Rehabilitation.
- 2015-present **Executive Board of Governors**, American Board of Stem Cell Medicine and Surgery (ABSCMS). ABSCMS is the official certifying body in the United States which provides Board Certification to physicians specializing in stem cell medicine and surgery.

Service to Journals

Reviewer *Stem Cell Research & Therapy*

Reviewer *Muscle & Nerve*

Reviewer *Arch Phys Med & Rehab*

Reviewer *Plos One*

Reviewer *Journal of Gerontology: Biological Sciences*

Reviewer *Experimental Gerontology*

Reviewer *Regenerative Medicine Research*

Reviewer *Stem Cell Reports*

Editorial board memberships:

Journal of Gerontology: Biological Sciences

Co-guest Editor: *Physical Therapy Journal*, Regenerative Rehabilitation & Genomics Special Issue 2015