Lisa Ceglia, M.D. Dr. Gerald J. and Dorothy R. Friedman Fellow in Diabetes and Metabolism 2004 - 2006

Education

Dr. Ceglia received her B.A. *cum laude* from Harvard University in 1993 and her M.D. from New York University School of Medicine (New York, NY). She completed her Internal Medicine Residency at New York University Medical Center-Bellevue (New York, NY). After completing her research track Fellowship in Endocrinology at Tufts Medical Center (Boston, MA), Dr. Ceglia pursued further training in Clinical Nutrition at the Jean Mayer USDA Human Nutrition Research Center on Aging (HNRCA) at Tufts University (Boston, MA), which she completed in June 2009. In July 2011, Dr. Ceglia completed a 2-year Master's in Clinical and Translational Science at the Tufts University Sackler School of Graduate Biomedical Sciences (Boston, MA). She is Diplomate of the American Board of Internal Medicine and Subspecialty Board of Endocrinology and Metabolism. She is also a Certified Clinical Densitometrist and is certified in performing muscle biopsies.

Former and Current Position(s) and Academic Interests

Following her Endocrinology Fellowship at Tufts, Dr. Ceglia joined the staff in the Division of Endocrinology at Tufts Medical Center. She is currently an Assistant Professor of Medicine at Tufts University School of Medicine and Scientist II in the Bone Metabolism Laboratory at the HNRCA at Tufts University. Dr. Ceglia has been active in clinical care as the Director of the Metabolic Bone Diseases Clinic at Tufts Medical Center. In 2013, she opened a joint Metabolic Bone and Orthopedics clinic to evaluate patients discharged from the hospital who have had a hip or pelvic fractures.

Her research interests involve the role of nutrition and hormones in aging musculoskeletal health. Dr. Ceglia is a former recipient of the Research Career Development Core Award from the Boston Claude Pepper Older Americans Independence Center. She is also the former recipient of the first KL2 award through the Tufts CTSI. Dr. Ceglia has conducted several intervention studies to examine the effects of vitamin D and/or alkali therapy on aging skeletal muscle tissue in both rodent models and humans in collaboration with Dr. Bess Dawson-Hughes. This year, the research findings have resulted in several original publications. Dr. Ceglia has collaborated with Dr. Anastassios Pittas (Friedman Fellow) on a longitudinal analysis of vitamin D status and its association with body weight and measures of body composition in the Diabetes Prevention Program. She has also collaborated with Drs. Dawson-Hughes and Pittas on two secondary analyses of the STOP/IT and CADDM trials to examine bone turnover markers in pre-diabetes and the effect of vitamin D and calcium on these bone markers. Dr. Ceglia is currently collaborating with Dr. Roger Fielding at the HNRCA on two clinical trials testing new medications inhibiting the activity of myostatin (a negative regular of muscle mass) to improve skeletal muscle mass in older adults. During the winter 2014 she collaborated with Dr. Heike Bischoff-Ferrari on an ancillary study to examine the effects of different formulations of vitamin D vs. placebo on muscle morphoogy, intramyonuclear vitamin D receptor expression, and markers of muscle satellite activation in over 50 younger postmenopausal women.

Dr. Ceglia served as a mentor and thesis committee member for Rachele Pojednic, who successfully completed her doctorate at the Friedman School of Nutrition, and Dr. Rajaa Nahra, a clinical endocrinology fellow, who successfully completed her Master's in Clinical and Translational

Science. She also contributes to the education of medical students as a lecturer in the Skeletal Biology and Endocrinology courses at the Tufts University School of Medicine. She is also a lecturer for the Friedman School graduate students in the Micronutrients course at the Friedman School, for the Pathobiology and the Clinical and Translational Science students at the Sackler School of Graduate Biomedical Sciences at Tufts University.

Dr. Ceglia has been a peer-reviewer for several major medical journals including the *Journal of Clinical Endocrinology and Metabolism* and *Osteoporosis International*. She has also been invited as an expert reviewer for grant applications to the *Wellcome Trust (Physiological Sciences), United Kingdom, Boston Pepper Center Pilot Program,* the *Department of Veterans Affairs (VA) Cooperative Studies Program (CSP),* and *TI Food and Nutrition, Netherlands.* She is an active member of various professional societies including The Endocrine Society and the American Society for Bone and Mineral Research. Dr. Ceglia has given talks internationally at the University of Parma and the Rizzoli Orthopedic Institute in Bologna Italy on her research in vitamin D and muscle. She was awarded a certificate as an Honorary Member of the Society of Medicine and Natural Sciences at the University of Parma.

Honors & Awards

- 2001 Humanism in Medicine Award
- 2008 Research Career Development Core Award, Boston Claude A. Pepper Center
- 2009 KL2 Tufts CTSI Research Career Development Award
- 2012 Friedman Foundation Junior Faculty Award
- 2012 Honorary Member of the Society of Medicine and Natural Sciences at the University of Parma
- 2013 Pilot Grant from the Jean Mayer HNRCA at Tufts University
- 2014 DSM-funded award

Bibliography

- 1. **Ceglia L** and Pfeffer CR. Artists' representations of the impact of family suicide during childhood and adolescence. *J Am Acad Psychoanal* 27(4), 625-656, 1999.
- 2. **Ceglia L**. Case of Vitamin D Deficiency Treated with Sun Lamp Therapy. *EndoTrends*. 2006; 13(3):5.
- 3. **Ceglia L**, Lau J, Pittas AG. Meta-analysis: efficacy and safety of inhaled insulin therapy in adults with diabetes mellitus. *Ann Intern Med* 2006 Nov 7;145(9):665-75.
- 4. Ceglia L, Lau J, Pittas AG. The Authors Reply. Ann Intern Med 2007 June 5:146(11):821-822.
- 5. Dawson-Hughes B, Harris SS, **Ceglia L**. Alkaline diets favor lean tissue mass in older adults. *Am J Clin Nut* 2008 87: 662-665.
- 6. **Ceglia L**, Harris SS, Rasmussen HM, Dawson-Hughes. Activation of the calcium sensing receptor stimulates serum gastrin and gastric acid secretion in healthy participants. *Osteoporos Int* 2009 Jan;20(1):71-8. Epub 2008 Jun 7.

- 7. **Ceglia L**, Harris SS, Abrams SA, Rasmussen M, Dallal GE, Dawson-Hughes B. Potassium bicarbonate attenuates the urinary nitrogen excretion that accompanies an increase in dietary protein and may promote calcium absorption. *J Clin Endocrinol Metab* 2009 Feb;94(2):645-53. Epub 2008 Dec 2.
- 8. **Ceglia L**. Vitamin D and Skeletal Muscle Tissue and Function. *Mol Aspect Med* 2008 Dec;29(6):407-14. Epub 2008 Aug 8.
- 9. **Ceglia L**, Abrams SA, Harris SS, Rasmussen HM, Dallal GE, Dawson-Hughes B. Evaluation of an inexpensive calcium absorption index in healthy older men and women. *Clin Endocrinol (Oxf)*. 2010 Jan;72(1):22-5.
- 10. **Ceglia L**, Abrams SA, Harris SS, Rasmussen HM, Dallal GE, Dawson-Hughes B. A simple serum method to measure of fractional calcium absorption using dual stable isotopes. *Exp Clin Endocrinol Diabetes* 2009 Oct 23 [Epub ahead of print].
- 11. **Ceglia L**. Vitamin D and Its Role in Skeletal Muscle. *Curr Opin Clin Nutr Metab Care*. 2009 Nov;12(6):628-33.
- 12. Dawson-Hughes B, Castaneda-Sceppa C, Harris SS, Palermo NJ, Cloutier G, **Ceglia L**, and Dallal GE. Impact of supplementation with bicarbonate on lower-extremity muscle performance in older men and women. *Osteoporos Int* 2009 Sep 1. [Epub ahead of print].
- 13. **Ceglia L**, Morais MDS, Park L, Morris E, Harris SS, Bischoff-Ferrari H, Fielding RA, Dawson-Hughes B. Multi-step immunofluorescent analysis of vitamin D receptor loci and myosin heavy chain isoforms in human skeletal muscle. *J Molecular Histology*. 2010 Apr;41(2-3):137-42. Epub 2010 Jun 13.
- 14. **Ceglia L**, Chiu G, Harris SS, Aruajo A. Serum 25-hydroxyvitamin D concentration and physical function in adult men. *Clin Endocrinol (Oxf)*. 2011 Mar;74(3):370-6. PMC3066063
- 15. R.U. Simpson and **Ceglia L**. Vitamin D and Skeletal Muscle Function. In <u>Vitamin D</u>, 3rd Ed., eds. Felman D, Pike JW, Adams JS. Elsevier Press, 2011.
- 16. **Ceglia L** and SS Harris. Vitamin D and its role in skeletal muscle. *Calcified Tissue International*, 2013 Feb;92(2):151-62.
- 17. Dawson-Hughes B, Harris SS, Palermo NJ, **Ceglia L**, Rasmussen H. Meal conditions affect the absorption of supplemental vitamin D₃ but not the plasma 25-hydroxyvitamin D response to supplementation. *J Bone Miner Res.* 2013 Aug;28(8):1778-83.
- 18. **Ceglia L**, Niramitmahapanya S, Price LL, Harris SS, Fielding RA, Dawson-Hughes B. <u>An evaluation of the reliability of muscle fiber cross-sectional area and fiber number measurements in rat skeletal muscle. *Biol Proced Online*. 2013 Mar 8;15(1):6. doi: 10.1186/1480-9222-15-6.</u>
- 19. **Ceglia L**, Rivas DA, Pojednic RM, Price LL, Harris SS, Smith D, Fielding RA, Dawson-Hughes B. Effects of alkali supplementation and vitamin D insufficiency on rat skeletal muscle. *Endocrine*. 2013 Oct;44(2):454-464.
- 20. **Ceglia L**, Niramitmahapanya S, Morais MD, Rivas DA, Harris SS, Bischoff-Ferrari H, Fielding RA, Dawson-Hughes B. <u>A</u> randomized study on the effect of vitamin D₃ supplementation on skeletal muscle morphology and vitamin D receptor concentration in older women *J Clin Endocrinol Metab*. 2013 Dec;98(12):E1927-35.
- 21. Dawson-Hughes B, Harris SS, **Ceglia L**, Palermo NJ. Serum sclerostin levels vary with season. *J Clin Endocrinol Metab*. 2014 Jan;99(1):E149-52.

- 22. Pojednic RM, **Ceglia L**.<u>The Emerging Biomolecular Role of Vitamin D in Skeletal Muscle.</u> *Exerc Sport Sci Rev.* 2014 Apr;42(2):76-81.
- 23. Dawson-Hughes B, Harris SS, **Ceglia L**, Palmero NJ. <u>Effect of supplemental vitamin D and calcium on serum sclerostin levels.</u> *Eur J Endocrinol*. 2014 Mar 13;170(4):645-50.