BIOGRAPHICAL SKETCH

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NAME Luigi Ferrucci	Scientific Director, National Institute on Aging
eRA COMMONS USER NAME Ferrucci	

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	YEAR(s)	FIELD OF STUDY
University of Florence Faculty of Medicine, Italy	MD	1974-1980	Medicine
University of Florence School of Gerontology	Geriatrics	1980-1984	Geriatric Medicine
Biology and Pathophysiology of Aging, University of Florence, Italy	PhD	1985-1988	Predictors of Physical disability

A. Personal Statement

I am currently the Scientific Director of the National Institute on Aging. I am both an epidemiologist and geriatrician. My area of focus is on the disablement process in all of its multi-faceted aspects but especially the decline of physical function and mobility. Over the last 20 years, I have participated in designing, consolidating, analyzing, and publishing results from some of the largest epidemiological studies on aging performed in the United States and Europe. My current interest is studying the aging phenotypes, including changes in body consumption, energetics, and use dysregulation and neurodegeneration as causes of frailty.

B. Positions and Honors

Positions and Employment

1985 Geriatrician, at the INRCA (National Institute of Research and Care on Aging), Florence, Italy
1986 Geriatrician, Institute of Gerontology, University of Florence, Florence, Italy
1986 Associated Professor at the special School for Physical Therapists, University of Florence
1988-2002 Visiting Scientist and Visiting Associate at the Epidemiology, Demography and Biometry Program of the National Institute on Aging, NIH, Bethesda, Maryland (total 36 months)
Co-researcher in the Established Populations for Epidemiological Studies of the Elderly (EPESE). Analyses focused on understanding the disablement process and looking at new risk factors that affect longevity, active life expectancy, and morbidity
Co-investigator of the Women's Health and Aging Study, participating in the design and conduct of the study, and data management and analysis. Research activity focused on the multifactorial mechanisms by which specific diseases, comorbidity and impairments lead to disability in old age.
Principal Investigator of "InCHIANTI", a population based study of genetic, biological, environmental and socio-economical risk factors for mobility disability in older persons; sponsored by the Italian Ministry of Health and the Italian National Institute on Aging
Co-investigator of the Follow-up of the InCHIANTI study funded as a contract provided by the National Institute on Aging, National Institutes of Health
2003-Present Chief, Longitudinal Studies Section Clinical Research Branch and Director of the BLSA, National Institute on Aging, Baltimore, MD
2005-Present Editor-in-Chief of the *Journal of Gerontology: Medical Sciences*
2011-Present Scientific Director, National Institute on Aging

Honors

2003 NIA Staff Recognition Award, April 24, 2003
2004 NIA Staff Recognition Award, July 7, 2004
2005 NIH Directors Award for Excellence in Mentorship (Awarded July 14, 2005)
2005 DHHS NIH Recognition Certificate for personal and professional commitment to the education and training of students in the NIA 2005 Summer Research Training Program
2008 NIH Directors Award, October 31, 2008
2008 Enrico Greppi Award, Societa Italiana di Geronotologie e Geriatria (Italian Society of Gerontology and Geriatrics), November 26, 2008
2010 NIH Plain Language and Clear Communication Bronze Award for the publication of "Healthy Aging: Lessons from the Baltimore Longitudinal Study of Aging May 26, 2010

C. Selected peer-reviewed publications (Selected from 517 peer-reviewed publications)

1. Milaneschi Y, Bandinelli S, Penninx BW, Corsi AM, Lauretani F, Vazzana R, Semba RD, Guralnik JM, Ferrucci L. The relationship between plasma carotenoids and depressive symptoms in older persons. World J Biol Psychiatry. 2011 Sep 20. PubMed PMID: 21929378
2. Ko SU, Stenholm S, Chia CW, Simonsick EM, Ferrucci L. Gait pattern alterations in older adults associated with type 2 diabetes in the absence of peripheral neuropathy-Results from the Baltimore Longitudinal Study of Aging. Gait Posture. 2011 Oct; 34(4):548-52. PubMed PMID: 21873064; PubMed Central PMCID: PMC318927
3. Walter S, Atzmon G, Demerath EW, Garcia ME, Kaplan RC,Kumari M, Lunetta KL, Milaneschi Y, Tanaka T, Tranah GJ, Völker U, Yu L, Arnold A, Benjamin EJ, Biffar R, Buchman AS, Boerwinkle E, Couper D, De Jager PL, Evans DA, Harris TB, Hoffmann W, Hofman A, Karasik D, Kiel DP, Kocher T, Kuningas M, Launer LJ, Lohman KK, Lutsey PL, Mackenbach J, Marciante K, Psaty BM, Reiman EM, Rotter JI, Seshadri S, Shardell MD, Smith AV, van Duijn C, Walston J, Zillikens MC, Bandinelli S, Baumeister SE, Bennett DA, Ferrucci L, Gudnason V, Kivimaki M, Liu Y, Murabito JM, Newman AB, Tiemeier H, Franceschini N. A genome-wide association study of aging. Neurobiol Aging. 2011 Nov; 32(11):2109.e15-28. Epub 2011 Jul 22. PubMed PMID: 21782286
4. Harries LW, Hernandez D, Henley W, Wood AR, Holly AC, Bradley-Smith RM, Yaghootkar H, Dutta A, Murray A, Frayling TM, Guralnik JM, Bandinelli S, Singleton A, Ferrucci L, Melzer D. Human aging is characterized by focused changes in gene expression and deregulation of alternative splicing. Aging Cell. 2011 Oct;10(5):868-78. doi: 10.1111/j.1474-9726.2011.00726.x. Epub 2011 Jul 19. PubMed PMID: 21668623; PubMed Central PMCID: PMC3173580
5. Najjar SS, Rao SV, Melloni C, Raman SV, Povsic TJ, Melton L, Barsness GW, Prather K, Heitner JF, Kilaru R, Gruberg L, Hasselblad V, Greenbaum AB, Patel M, Kim RJ, Talan M, Ferrucci L, Longo DL, Lakatta EG, Harrington RA; REVEAL Investigators. Intravenous erythropoietin in patients with ST-segmentelevation myocardial infarction: REVEAL: a randomized controlled trial. JAMA. 2011 May 11;305(18):1863-72. PubMed PMID: 21558517
6. Hicks GE, Shardell M, Alley DE, Miller RR, Bandinelli S, Guralnik J, Lauretani F, Simonsick EM, Ferrucci L. Absolute Strength and Loss of Strength as Predictors of Mobility Decline in Older Adults: The InCHIANTI Study. J Gerontol A Biol Sci Med Sci. 2011 Aug 26. [Epub ahead of print] PubMed PMID: 21546582
7. Shardell MD, Alley DE, Hicks GE, El-Kamary SS, Miller RR, Semba RD, Ferrucci L. Low-serum carotenoid concentrations and carotenoid interactions predict mortality in US adults: the Third National Health and Nutrition Examination Survey. Nutr Res. 2011 Mar;31(3):178-89. PubMed PMID: 21481711; PubMed Central PMCID: PMC3081783
8. Dalal M, Semba RD, Sun K, Crasto C, Varadhan R, Bandinelli S, Fink JC, Guralnik JM, Ferrucci L. Endogenous secretory receptor for advanced glycation end products and chronic kidney disease in the elderly population. Am J Nephrol. 2011;33(4):313-8. Epub 2011 Mar 9. PubMed PMID: 21389696; PubMed Central PMCID: PMC3064940
9. Lin FR, Metter EJ, O'Brien RJ, Resnick SM, Zonderman AB, Ferrucci L. Hearing loss and incident dementia. Arch Neurol. 2011 Feb;68(2):214-20. PubMed PMID: 21320988

10. Maggio M, Ceda GP, Lauretani F, Bandinelli S, Corsi AM, Giallauria F, Guralnik JM, Zuliani G, Cattabiani C, Parrino S, Ablondi F, Dall'aglio E, Ceresini G, Basaria S, Ferrucci L. SHBG, sex hormones, and inflammatory markers in older women. J Clin Endocrinol Metab. 2011 Apr;96(4):1053-9. Epub 2011 Jan 14. PubMed PMID: 21239514; PubMed Central PMCID: PMC3070258
11. Studenski S, Perera S, Patel K, Rosano C, Faulkner K, Inzitari M, Brach J, Chandler J, Cawthon P, Connor EB, Nevitt M, Visser M, Kritchevsky S, Badinelli S, Harris T, Newman AB, Cauley J, Ferrucci L, Guralnik J. Gait speed and survival in older adults. JAMA. 2011 Jan 5;305(1):50-8. PubMed PMID: 21205966; PubMed Central PMCID: PMC3080184
12. Ko SU, Ling SM, Schreiber C, Nesbitt M, Ferrucci L. Gait patterns during different walking conditions in older adults with and without knee osteoarthritis--results from the Baltimore Longitudinal Study of Aging. Gait Posture. 2011 Feb;33(2):205-10. Epub 2010 Dec 8. PubMed PMID: 21145241; PubMed Central PMCID: PMC3042510
13. Lauretani F, Cepollaro C, Bandinelli S, Cherubini A, Gozzini A, Masi L, Falchetti A, Del Monte F, Carbonell-Sala S, Marini F, Tanini A, Corsi AM, Ceda GP, Brandi ML, Ferrucci L. LRP5 gene polymorphism and cortical bone. Aging Clin Exp Res. 2010 Aug;22(4):281-8. PubMed PMID: 21116122
14. Milaneschi Y, Bandinelli S, Corsi AM, Lauretani F, Paolisso G, Dominguez LJ, Semba RD, Tanaka T, Abbatecola AM, Talegawkar SA, Guralnik JM, Ferrucci L. Mediterranean diet and mobility decline in older persons. Exp Gerontol. 2011 Apr;46(4):303-8. Epub 2010 Nov 24. PubMed PMID: 21111801; PubMed Central PMCID: PMC3056167

D. Research Support

Completed Research

R37 AGO9901 – Jay Magaziner (PI) 3/15/05-2/28/11
NIA/NIH
Sequelae of hip fracture in men: an epidemiologic study. The primary aim of this study is to describe the trajectories of components of bone strength, including bone mineral density, ultrasound properties, and bone geometry in men with hip fractures during the year after fracture and contrast this with BMD in women with hip fractures.

1R01HL073351-01A1 – Mary McDermott (PI) 9/22/03-8/31/08
Improving Functioning in Peripheral Arterial Disease The primary aim of this study is to determine whether a six-month supervised treadmill exercise program and a supervised lower extremity progressive resistance training program, respectively, improve lower extremity functioning compared to a nutrition control group among 150 PAD patients with and without intermittent claudication.

R01-HL71223-01 – McDermott (PI) 7/1/02-7/31/07
NIH/NHLBI Mechanisms of Disability in Peripheral Arterial Disease - Mary McDermott (PI)
The purposes of this study are a) to define the pathophysiologic effects of arterial ischemia on lower extremity muscle and nerve and b) to identify the specific effects of ischemia-related pathophysiologic findings on lower extremity functioning in PAD.