

BIOGRAPHICAL SKETCH

NAME MUSARO' Antonio http://musarolab-uniroma1.jimdo.com/		POSITION TITLE Professor of Histology, Embryology and Biotechnology	
EDUCATION/TRAINING			
INSTITUTION AND LOCATION	DEGREE (if applicable)	YEAR(s)	FIELD OF STUDY
Lyceum G. Bosco Taranto, Italy.	Diploma	1985	Maturità Classica
Sapienza University of Rome, Biological Science.	Biology	1991	Muscle Biology
Sapienza University of Rome, Medical School	Ph.D.	1996	Biotechnological Sciences
Harvard University, Boston, USA	Research Fellow in Medicine	1996-2000	Molecular biology of aging

A. Positions and Honors**Positions and Employment**

1989–1991	Predoctoral fellow, Dep. of Histology and Medical Embryology; University of Rome.
1991–1995	Doctoral Student / Ph.D. program, Medical School, Sapienza University of Rome.
1996–1999	Postdoctoral training– Research fellow, Cardiovascular Research Center; Harvard University.
1999–2007:	Assistant professor, Sapienza University of Rome –Medical School; –Professor of Histology and Embryology, Medical School, Sapienza University of Rome –Member of the academic committee of PhD program in Morphogenesis, Homeostasis & Tissue Engineering
2002	Visiting Professor, Edith Cowan University, Australia.
2003– present	Professor of Biotechnology; Sapienza University of Rome.
2003–2014	Adjunct Associate Professor (honorary position), School of Biomedical & Sports Science; Faculty of Computing, Health and Science. Edith Cowan University; Western Australia.
2007- present	Associate professor of Medicine, Medical and Biotechnology School, Sapienza University of Rome.

Other Experience and Professional Memberships

2001-present	Expert reviewer for international scientific journals
2004-present	Member, Society of Cell Biology
2005	Lecturer and Instructor of EMBO Practical Course: From Mice to Cells
2010-present	Member of the editorial board of World Journal of Biological Chemistry
2010-present	Member of the editorial board of Skeletal Muscle
2011-present	Member of the editorial board of PlosOne
2011-present	Chief of Interuniversity Institute of Myology (IIM)

Honors

2001	Honour for advance in Biological Research
2003	Award for Scientific Communication (Rotary Club)
2006	Award for Scientific Communication, Foglia di Tabacco
2009	Award Sapienza Ricerca for best research 2009 (Sapienza University of Rome)
2014	La Plejade ANCIS International Award 2014 for Scientific Research

B. Major Research Interests:

Aging and neuromuscular diseases (ALS, muscular dystrophies); role of IGF-1 in the physiopathology of skeletal muscle; cell proliferation and cell differentiation; role of stem cells and tissue niche on muscle regeneration.

C. Publications

h-index =25

Citations= 4476

Selected Publications (over 85 publications)

1. Barton-Davis ER, Shoturma DI, Musarò A, Rosenthal N, Sweeney HL. Viral mediated expression of insulin-like growth factor I blocks the aging-related loss of skeletal muscle function. *Proc Natl Acad Sci U S A*. 1998 95:15603-7.
2. Musarò A., Rosenthal N. Maturation of the myogenic program is induced by postmitotic expression of insulin-like growth factor I. *Mol Cell Biol*. 1999 19(4):3115-24.
3. Musarò A, McCullagh KJ, Naya FJ, Olson EN, Rosenthal N. IGF-1 induces skeletal myocyte hypertrophy through calcineurin in association with GATA-2 and NF-ATc1. *Nature*. 1999; 400: 581-5.
4. Tsao L, Neville G, Musarò A, McCullagh KJ, Rosenthal N. Revisiting calcineurin and human heart failure. *Nature Medicine* 2000; 6: 2-3.
5. Musarò A, McCullagh K, Paul A, Houghton L, Dobrowolny G, Molinaro M, Barton ER, Sweeney HL, Rosenthal N. Localized Igf-1 transgene expression sustains hypertrophy and regeneration in senescent skeletal muscle. *Nature Genetics* 2001; 27: 195-200.
6. Barton ER, Morris L., Musaro A., Rosenthal N., and Sweeney H.L. Muscle specific expression of Insulin-like Growth Factor I counters muscle decline in mdx mice. *J.Cell Biol*. 2002; 157: 137-147.
7. Musarò A, Giacinti C, Borsellino G, Dobrowolny G, Pelosi L, Cairns L, Ottolenghi S, Bernardi G, Cossu G, Battistini L, Molinaro M, Rosenthal N. Muscle restricted expression of mIGF-1 enhances the recruitment of stem cells during muscle regeneration. *Proc Natl Acad Sci U S A* 2004; 101: 1206-1210
8. Dobrowolny G, Giacinti C, Pelosi L, Nicoletti C, Winn N, Barberi L, Molinaro M, Rosenthal N, Musarò A. Muscle expression of a local Igf-1 isoform protects motor neurons in an ALS mouse model. *J Cell Biol*. 2005;168:193-9.
9. Denti MA, Rosa A, D'Antona G, Sthandier O, De Angelis FG, Nicoletti C, Allocca M, Pansarasa O, Parente V, Musarò A, Auricchio A, Bottinelli R, Bozzoni I. Body-wide gene therapy of Duchenne muscular dystrophy in the mdx mouse model. *Proc Natl Acad Sci U S A*. 2006 Mar 7;103(10):3758-63.
10. Pelosi L, Giacinti C, Nardis C, Borsellino G, Rizzuto E, Nicoletti C, Wannenes F, Battistini L, Rosenthal N, Molinaro M, Musarò A. Local expression of IGF-1 accelerates muscle regeneration by rapidly modulating inflammatory cytokines and chemokines. *FASEB J*. 2007; 21(7):1393-402.
11. Pelosi M, Marampon F, Zani BM, Prudente S, Perlas E, Caputo V, Cianetti L, Berno V, Narumiya S, Kang SW, Musarò A, Rosenthal N. ROCK2 and its alternatively spliced isoform ROCK2m positively control the maturation of the myogenic program. *Mol Cell Biol*. 2007; 27:6163-76.
12. Dobrowolny G, Aucello M, Rizzuto E, Beccafico S, Mammucari C, Bonconpagni S, Belia S, Wannenes, F Nicoletti, C Del Prete Z, Rosenthal N, Molinaro M, Protasi F, Fanò G, Sandri M, and Musarò A. Skeletal muscle is a primary target of SOD1G93A -mediated toxicity *Cell Metabolism* 2008; 8:425-36.
13. Aucello M, Dobrowolny G, Musarò A. Localized accumulation of oxidative stress causes muscle atrophy through activation of an autophagic pathway. *Autophagy*. 2009 May;5(4):527-9.
14. Palazzolo I., Stack C., Kong L., Musaro A., Adachi H., Katsuno M., Sobue G., Taylor J.P., Sumner C., Fischbeck K., and Pennuto M. Overexpression of IGF-1 in Muscle Attenuates Disease in a Mouse Model of Spinal and Bulbar Muscular Atrophy. *Neuron* 2009; 13;63(3):316-28.
15. Musarò A, Fulle S and Fanò G. Oxidative stress and muscle homeostasis. *Curr Opin Clin Nutr Metab Care* 2010; 13:236-42.
16. Cacchiarelli D, Martone J, Girardi E, Cesana M, Incitti T, Morlando M, Nicoletti C, Santini T, Sthandier O, Barberi L, Auricchio A, Musarò A, Bozzoni I. MicroRNAs involved in molecular circuitries relevant for the Duchenne muscular dystrophy pathogenesis are controlled by the dystrophin/nNOS pathway. *Cell Metab*. 2010 Oct 6;12(4):341-51.

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17. Bosch-Marcé M, Wee CD, Martinez TL, Lipkes CE, Choe DW, Kong L, Vanmeerbeke JP, Musarò A, Sumner CJ. Increased IGF-1 in muscle modulates the phenotype of severe SMA mice. *Hum Mol Genet.* 2011; 20(9):1844-53
18. Carosio S, Berardinelli MG, Aucello M, Musarò A. Impact of ageing on muscle cell regeneration. *Ageing Res Rev.* 2011 Jan;10(1):35-42.
19. Kuraitis D, Giordano C, Ruel M, Musarò A, Suuronen EJ. Exploiting extracellular matrix-stem cell interactions: A review of natural materials for therapeutic muscle regeneration. *Biomaterials.* 2012; 33:428-43.
20. Kuraitis D, Berardinelli MG, Suuronen EJ, Musarò A. A Necrotic Stimulus is Required to Maximize Matrix-Mediated Myogenesis. *Dis Model Mech.* 2013; 6(3):793-801
21. Musarò A. Understanding ALS: new therapeutic approaches. *FEBS J.* 2013 Sep;280(17):4315-22.
22. Kern H, Barberi L, Löfler S, Sbardella S, Burggraf S, Fruhmans H, Carraro U, Mosole S, Sarabon N, Vogelauer M, Mayr W, Krenn M, Cvecka J, Romanello V, Pietrangelo L, Protasi F, Sandri M, Zampieri S, Musaro A. Electrical stimulation counteracts muscle decline in seniors. *Front Aging Neurosci.* 2014;6:189.

D. Patents

1. Rosenthal N, Harvey RP, Palmer S, Musarò A, inventors; Novel molecules expressed during muscle development and genetic sequences encoding the same. (PCT/AU1999/000220).
2. Rosenthal N, Musarò A, Nadine Winn, inventors; IGF-1 novel peptides. (PCT/IB2005/003953.)