

**EUROPEAN
CURRICULUM VITAE
FORMAT**



PERSONAL INFORMATION

Name	BOTTINELLI ROBERTO
Address	
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E-mail	roberto.bottinelli@unipv.it
Nationality	Italian
Date of Birth	
Gender	M

WORK EXPERIENCE

- Dates (from - to) 2021- to date
• Name and address of the employer University of Pavia, Corso Strada Nuova, 27100 Pavia, Italy
• Type of business or sector Education & Research
• Occupation or position held Head of the Department of Molecular Medicine
• Main activities and responsibilities Strategic planning of research, teaching, and recruitment of academic personnel. Highest administrative functions.
- Dates (from - to) 2012-2021
• Name and address of the employer University of Pavia, Corso Strada Nuova, 27100 Pavia, Italy
• Type of business or sector Education & Research
• Occupation or position held Director of the Specialization School in Sport Medicine, University of Pavia Medical School
• Main activities and responsibilities Organizing and developing education for medical doctors
- Dates (from - to) 2013-2019
• Name and address of the employer University of Pavia, Italy
• Type of business or sector Education & Research
• Occupation or position held Deputy Rector for Research
• Main activities and responsibilities Strategic planning of University of Pavia research and organization of academic personnel recruitment
- Dates (from - to) 2011-2013
• Name and address of the employer University of Pavia, Italy
• Type of business or sector Education & Research
• Occupation or position held Head of the Department of Molecular Medicine
• Main activities and responsibilities Strategic planning of research, teaching, and recruitment of academic personnel. Highest administrative functions.
- Dates (from - to) 2008-2011
• Name and address of the employer University of Pavia, Italy
• Type of business or sector Education & Research
• Occupation or position held Head of the Department of Physiology
• Main activities and responsibilities Strategic planning of research and teaching
- Dates (from - to) 2011- to date

- Name and address of the employer
 - Type of business or sector
 - Occupation or position held
- Main activities and responsibilities
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- Main activities and responsibilities
 - Dates (from - to)

University of Pavia, Italy
 Health care, Education and Research
 Director of the Sport Medicine Center, University of Pavia
 Organization of clinical activity and Research

2005-2008

University of Pavia, Italy
 Education & Research
 Head of the Department of Experimental Medicine
 Strategic planning of teaching and research

2001- to date

University of Pavia, Italy
 Education & Research
 Full Professor – Physiology (BIO/09)
 Teaching Physiology (Medical School). Research in Skeletal muscle plasticity in health and disease

1998-2001

University of Pavia, Italy
 Education & Research
 Associate Professor – Physiology (BIO/09)
 Teaching Physiology (Medical School). Research in Skeletal muscle plasticity in health and disease

1992-1998

University of Pavia, Italy
 Education & Research
 Researcher – Physiology (BIO/09)
 Research in skeletal muscle physiology

1990-1992

University of Pavia
 Education & Research
 Graduated Technician
 Research in skeletal muscle physiology

1987-1992

University of Pavia
 Education & Research
 Post-doc fellow – Physiology (BIO/09)
 Research in skeletal muscle physiology

1986-1987

University of St. Andrews, Scotland UK
 Education & Reserach
 Post-doc fellowship – Wellcome Trust fellowship
 Research- Skeletal muscle physiology

1982-1983

University of Washington, Seattle (WA), USA
 Education & reserach
 Post-doc fellow – Rotary Foundation Fellowship
 Research – Skeletal muscle physiology

EDUCATION AND TRAINING

- Dates (from - to) 1984-1988
- Name and type of organisation providing education and training University of Pavia, Italy
- Principal subjects/occupational skills covered Physiology – skeletal and cardiac muscle physiology
- Title of qualification awarded Ph.D
- Dates (from - to) 1982-1986
- Name and type of organisation providing education and training University of Pavia, Italy
- Principal subjects/occupational skills covered Sport Medicine
- Title of qualification awarded Medical Specialization in Sport Medicine
- Dates (from - to) 1975-1981
- Name and type of organisation providing education and training University of Pavia, Italy
- Principal subjects/occupational skills covered Six years MD degree course
- Title of qualification awarded MD - summa cum laude

PERSONAL SKILLS AND COMPETENCES

MADRELINGUA **ITALIAN**

OTHER LANGUAGES

- Capacità di lettura **English**
excellent
- Capacità di scrittura
excellent
- Capacità di espressione orale
excellent

SOCIAL SKILLS AND COMPETENCES

Naturally inclined to interact with other people, organize and promote people interaction for the good of the whole group. Inclined to devote to strategic development of social groups.

ORGANISATIONAL SKILLS AND COMPETENCES

Coordination and administration of people, projects and budgets; at work, in voluntary work (for example culture and sports) and at home, etc.

Long experience in directing university departments (9 years), high education courses (11 years; Specialization school in sport medicine) and a major area of the whole University (Deputy Rector for Research – 6 years). Coordination of research, teaching and administrative activities of large groups of people (e.g. the University of Pavia has 900 lectures and professors; the Department of Molecular Medicine has 68 professors, 30 Ph.D students; 30 post-docs; 80 MD enrolled in specialization schools; 20 people in administration).

TECHNICAL SKILLS AND COMPETENCES

With computers, specific kinds of equipment, machinery, etc.

Direct experience in experimental models and approaches to study isolated skeletal muscle fibres in health and disease. Expert in coordinating proteomic, genomic and intracellular signaling analyses of skeletal muscle.

DRIVING LICENCE(S) Yes – type B

ADDITIONAL INFORMATION

RESEARCH FIELD: Muscle physiology: the cellular and molecular mechanisms of skeletal muscle plasticity in health and disease, with particular attention to ageing and disuse due to actual or simulated microgravity.

RESEARCH ACTIVITY: He devoted most of his research activity two major, strictly related, topics: (i) the mechanisms of the functional diversity among skeletal myosin isoforms studied at molecular level and at the level of the kinetics of acto-myosin interaction; (ii) the impact of physiologic conditions such as ageing and disuse and of pathologic conditions, such as muscular dystrophy, on structure and function of skeletal muscle and the underlying cellular and molecular mechanisms. All studies have been performed through a wide network of national and international collaborations.

The results of his research work have been published in **143 in extenso publications** in journal indexed in PUB MED and with impact factor; **H index 59 Scopus, 68 Google Scholar; citations: 12.516 (Scopus)**

The most important works were published in Nature (1984, 2006 (2)), Nat Med (2006), Nature Methods (2012), J Clin Invest (2004, 2006), EMBO Journal (1997), Proc Natl Acad Sci USA (2006 (2); 2007), Circulation Research (1984, 1998), Journal of Physiology (London), the leading physiology journal (1991, 1994 (2), 1996 (2), 1997, 2003 (2), 2004, 2006, 2007, 2009, 2010 (1), 2011 (2), 2012, 2014, 2015 (2), 2017 (2)), Science (2003), Nature Methods (2012).

EDITORIAL ACTIVITY: Reviewing Editor of the Journal of Physiology (London) (2004-2006); Senior Editor of the Journal of Physiology (London) (2006-2011); member of the executive committee of the Journal of Physiology (2007-2011); Senior Editor European Journal of Applied Physiology (2003-2010); member of F1000 2006-2016; Associate Editor Frontiers in Skeletal Muscle Physiology (2010).

MOST IMPORTANT ONGOING COLLABORATIONS:

- Marco Narici, University of Padova; skeletal muscle and ageing
- M. Sandri, University of Padova; muscle disuse atrophy
- Marco Bianchi, San Raffaele University, Italy; skeletal muscle regeneration
- Coen Ottenheijm, VU University Medical Center, Amsterdam, The Netherlands; nemaline myopathy
- Julien Gondin, Université Claude Bernard Lyon 1, France; nemaline myopathy
- Lorenzo Puri, Sanford Burnham Prebys, La Jolla, (CA), USA; fibroadipogenic precursors cells (FAPs)
- Luca Madaro, Università di Roma la Sapienza, Italy; spatial transcriptomics

MAJOR CURRENT RESEARCH FUNDING:

- Italian Ministry for Research - PRIN 2020: "Inactivity induced neuromuscular impairment through different ages". Coordinator

GOOGLE SCHOLAR PAGE: <http://scholar.google.it/citations?user=FSfFosAAAAJ>

SELECTED PUBLICATIONS 2014-2024

Bibliometric indexes (Scopus): h-index 59; citations 12.516; number of publications 147

1. Murgia M, Rittweger J, Reggiani C, Bottinelli R, Mann M, Schiaffino S & Narici MV. (2024). Spaceflight on the ISS changed the skeletal muscle proteome of two astronauts. *NPJ Microgravity* **10**, 60.
2. Galli RA, Borsboom TC, Gineste C, Brocca L, Rossi M, Hwee DT, Malik FI, Bottinelli R, Gondin J, Pellegrino MA, de Winter JM & Ottenheijm CAC. (2024). Tirasemtiv enhances submaximal muscle tension in an Acta1:p.Asp286Gly mouse model of nemaline myopathy. *J Gen Physiol* **156**.
3. Sirago G, Pellegrino MA, Bottinelli R, Franchi MV & Narici MV. (2023). Loss of neuromuscular junction integrity and muscle atrophy in skeletal muscle disuse. *Ageing Res Rev* **83**, 101810.
4. Colosio M, Brocca L, Gatti MF, Neri M, Crea E, Cadile F, Canepari M, Pellegrino MA, Polla B, Porcelli S & Bottinelli R. (2023). Structural and functional impairments of skeletal muscle in patients with postacute sequelae of SARS-CoV-2 infection. *J Appl Physiol (1985)* **135**, 902-917.
5. Pilotto AM, Adami A, Mazzolari R, Brocca L, Crea E, Zuccarelli L, Pellegrino MA, Bottinelli R, Grassi B, Rossiter HB & Porcelli S. (2022). Near-infrared spectroscopy estimation of combined skeletal muscle oxidative capacity and O₂ diffusion capacity in humans. *J Physiol*.
6. de Winter JM, Gineste C, Minardi E, Brocca L, Rossi M, Borsboom T, Beggs AH, Bernard M, Bendahan D, Hwee DT, Malik FI, Pellegrino MA, Bottinelli R, Gondin J & Ottenheijm CAC. (2021). Acute and chronic tirasemtiv treatment improves in vivo and in vitro muscle performance in actin-based nemaline myopathy mice. *Hum Mol Genet* **30**, 1305-1320.
7. Careccia G, Saclier M, Tirone M, Ruggieri E, Principi E, Raffaghella L, Torchio S, Recchia D, Canepari M, Gorzanelli A, Ferrara M, Castellani P, Rubartelli A, Rovere-Querini P, Casalgrandi M, Preti A, Lorenzetti I, Bruno C, Bottinelli R,

- Brunelli S, Previtali SC, Bianchi ME, Messina G & Venereau E. (2021). Rebalancing expression of HMGB1 redox isoforms to counteract muscular dystrophy. *Sci Transl Med* **13**.
8. Rittweger J, Albracht K, Fluck M, Ruoss S, Brocca L, Longa E, Moriggi M, Seynnes O, Di Giulio I, Tenori L, Vignoli A, Capri M, Gelfi C, Luchinat C, Francheschi C, Bottinelli R, Cerretelli P & Narici M. (2018). Sarcolab pilot study into skeletal muscle's adaptation to long-term spaceflight. *NPJ Microgravity* **4**, 18.
 9. van den Berg M, Hooijman PE, Beishuizen A, de Waard MC, Paul MA, Hartemink KJ, van Hees HWH, Lawlor MW, Brocca L, Bottinelli R, Pellegrino MA, Stienen GJM, Heunks LMA, Wust RCI & Ottenheim CA. (2017). Diaphragm Atrophy and Weakness in the Absence of Mitochondrial Dysfunction in the Critically Ill. *Am J Respir Crit Care Med*.
 10. Brocca L, Toniolo L, Reggiani C, Bottinelli R, Sandri M & Pellegrino MA. (2017). FoxO-dependent atrogenes vary among catabolic conditions and play a key role in muscle atrophy induced by hindlimb suspension. *J Physiol* **595**, 1143-1158.
 11. Brocca L, McPhee JS, Longa E, Canepari M, Seynnes O, De Vito G, Pellegrino MA, Narici M & Bottinelli R. (2017). Structure and function of human muscle fibres and muscle proteome in physically active older men. *J Physiol* **595**, 4823-4844.
 12. Fuoco C, Rizzi R, Biondo A, Longa E, Mascaro A, Shapira-Schweitzer K, Kossov O, Benedetti S, Salvatori ML, Santoleri S, Testa S, Bernardini S, Bottinelli R, Bearzi C, Cannata SM, Seliktar D, Cossu G & Gargioli C. (2015). In vivo generation of a mature and functional artificial skeletal muscle. *EMBO molecular medicine* **7**, 411-422.
 13. Cannavino J, Brocca L, Sandri M, Grassi B, Bottinelli R & Pellegrino MA. (2015). The role of alterations in mitochondrial dynamics and PGC-1alpha over-expression in fast muscle atrophy following hindlimb unloading. *J Physiol* **593**, 1981-1995.
 14. Brocca L, Longa E, Cannavino J, Seynnes O, de Vito G, McPhee J, Narici M, Pellegrino MA & Bottinelli R. (2015). Human skeletal muscle fibre contractile properties and proteomic profile: adaptations to 3 weeks of unilateral lower limb suspension and active recovery. *J Physiol* **593**, 5361-5385.
 15. Carnio S, LoVerso F, Baraibar MA, Longa E, Khan MM, Maffei M, Reischl M, Canepari M, Loeffler S, Kern H, Blaauw B, Friguet B, Bottinelli R, Rudolf R & Sandri M. (2014). Autophagy impairment in muscle induces neuromuscular junction degeneration and precocious aging. *Cell reports* **8**, 1509-1521.
 16. Cannavino J, Brocca L, Sandri M, Bottinelli R & Pellegrino MA. (2014). PGC1-alpha over-expression prevents metabolic alterations and soleus muscle atrophy in hindlimb unloaded mice. *J Physiol* **592**, 4575-4589.