

EUROPEAN CV FORMAT



PERSONAL INFORMATION

Name	Roberto Bonanni
E-mail	roberto.bonanni1288@gmail.com
Nationality	Italian
Birth Date	12, Marzo, 1988

WORK EXPERIENCE

- Dates (from-to)
- Name and Address of Employer
- Type of company or sector
- Type of Employment
- Main Tasks and Responsibilities

NOVEMBER 2021 - TODAY

University of Rome "Tor Vergata" – Via Montpellier 1

Faculty of Medicine - Department of Clinical Sciences and Prevention

PhD Student

- Primary cultures of human osteoblasts and myoblasts isolated from bone and muscle samples taken from patients undergoing surgery;
- Evaluation of mitochondrial activity, oxidative stress and expression by immunostaining and western blot techniques of specific bone and muscle markers;
- Preparation of nerve, bone and muscle tissue sections for histological and immunohistochemical analysis.

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JULY 2020 - NOVEMBER 2021

University of Rome "Tor Vergata" – Via Montpellier 1

Faculty of Medicine – Department of Systems Medicine– Electrophysiology Lab

Collaboration activities

- Research activity aimed at studying the mechanisms involved in the generation, propagation and modulation of neuronal excitability;
- Research activity aimed at studying the acute and chronic effects of a vibratory stimulus on nerve, bone and muscle tissue in a mouse model;
- Manipulation and maintenance of HT22 lineage cells and their treatment with substances to prevent toxicity induced by metastable low molecular weight calcitonin oligomers;
- Assessment of cell viability by MTS assay of HT22 immortalised cells to determine mitochondrial functionality in cells treated with calcitonin amyloid oligomers;

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- Histomorphometric analysis performed on murine muscle biopsies to determine the volume of muscle fibres in mice subjected to chronic vibration training;
- Research activities in the field of physiological adaptations to simulated microgravity using primary human bone and muscle cell cultures exposed to Random Positioning Machine (RPM) treatment to reproduce the biological effects of weightlessness;

MARCH 2019 - JUNE 2020

University of Rome "Tor Vergata" – Via Montpellier 1

Faculty of Medicine – Department of Systems Medicine– Electrophysiology Lab

Graduation Internship

- Study of synaptic transmission and neuronal plasticity and their modulation in hippocampus-entorhinal cortex circuits in experimental mouse models;
- Study of the protective effect of Neuraminidase on the neurotoxic action induced by amyloid prefibrillar oligomers;

MARCH 2019 - JUNE 2020

Istituto Superiore di Sanità - National Centre for Rare Diseases

Ultrastructures Laboratory

Graduation Internship

- Setting up hippocampal cell cultures and studying the neurotoxic effects induced by calcitonin oligomers.
- Treatment of primary hippocampal neurons with substances aimed at preventing excitotoxic damage and cell death induced by amyloid calcitonin oligomers

GENNAIO 2015 – MAGGIO 2015

University of Rome "Tor Vergata" – Via Montpellier 1

Macro Area of Mathematical, Physical and Natural Sciences - Department of Biology - Laboratory of Biochemistry and Biophysics

Graduation Internship

Analysis of changes in intracellular calcium levels in THP-1 monocytes following treatment with antioxidants.

JANUARY 2006 - MAY 2008

Dental Office Nowa Odontoiatrica – Via Giovanni Marradi 20

Dental Technology Laboratory

Attendant

Fabrication of plaster master models and production of fixed and removable prostheses

INSTRUCTION AND TRAINING

- Dates (from-to)
- Name and type of organisation providing education or training
- Activity Performed

1 NOVEMBER 2021 - TODAY

University of Rome 'Tor Vergata' - Via Montpellier 1
Faculty of Medicine and Surgery - Department of Clinical Sciences and Prevention

PhD Student in Medical-Surgical Biotechnology and Translational Medicine

- Dates (from-to)
- Name and type of organisation providing education or training
- Activity Performed
- Vote

NOVEMBER 2020

Macro Area of Mathematical, Physical and Natural Sciences - University of Rome 'Tor Vergata'

Qualification as a specialist biologist
37/50

- Dates (from-to)
- Name and type of organisation providing education or training
- Qualification achieved
- Vote

OCTOBER 2017 - JULY 2020

Macro Area of Mathematical, Physical and Natural Sciences - University of Rome 'Tor Vergata'

Master's Degree in Cell and Molecular Biology

110/110 cum laude with a thesis on 'Effects of neuraminidase on calcitonin oligomer-induced neurotoxicity in an experimental mouse model'

- Dates (from-to)
- Name and type of organisation providing education or training
- Qualification achieved
- Vote

OCTOBER 2007 - MAY 2016

Macro Area of Mathematical, Physical and Natural Sciences - University of Rome 'Tor Vergata'

Bachelor's Degree in Cellular and Molecular Biology

94/110 with Scientific Memoir on 'Role of Baicalein on intracellular calcium levels in THP-1 monocytes'

PERSONAL SKILLS AND COMPETENCES

Acquired in the course of life and career but not necessarily recognised by official certificates and diplomas.

- Excellent ability to manipulate human primary cell cultures of osteoblasts and myoblasts;
- Excellent ability to manipulate SaOs-2, C2C12 and HT22 cell lines;
- Excellent Balb/C mouse model handling and manipulation skills;
- Excellent skills in performing histological and immunohistochemical analyses;

MOTHER TONGUE OTHER LANGUAGES

- Reading ability
- Writing skills
- Oral expression skills

ITALIAN
ENGLISH
GOOD
GOOD
GOOD

**INTERPERSONAL SKILLS
AND COMPETENCES**

Living and working with other people, in a multicultural environment, occupying positions where communication is important and in situations where teamwork is essential (e.g. culture and sports), etc..

**ORGANIZATIONAL SKILLS
AND COMPETENCES**

E.g. coordination and administration of people, projects, budgets; at work, in voluntary activities (e.g. culture and sports), at home, etc.

**TECHNICAL SKILLS AND
COMPETENCES**

With computers, specific equipment, machinery, etc.

DRIVING LICENCE(S)

**PARTECIPATION IN STUDIES
AND RESEARCH PROJECT**

**PARTECIPATION IN EVENT
AND CONGRESS**

Excellent collaborative skills acquired during my time at university and during my internship. Ability to make the work environment stimulating and productive and to adapt to new environments, including multicultural ones.

Good work organisation skills and the ability to coordinate with colleagues or other teams

- Excellent use of IT tools such as Office, Graphpad Prism, Photoshop, scientific databases, World Wide Web, e-mail;
- Good use of Axon Clampex and Clampfit software for electrophysiology recordings and measurements;
- Good use of 'R' software for statistical analysis and chart creation recognised by means of a certificate and open badge issued by Revelo Datalabs srl acquired during the 'R-Statistics' course cycle.

B – Valid until 12/03/2027

- Participation in the University Scientific Research Project 2021 "Brain, bone and muscle adaptations to vibratory training", as PhD holder

- Participation as speaker in the residential course "Osteoporosis and Sarcopenia" with the oral presentation "Biology and pain management in the osteosarcopenic patient" – Appia Park Hotel – Rome 01/10/2022
- Participation in the 17th Ortomed Congress with the poster "Effects of the administration of a neuropeptide cocktail on bone metabolism and the pathogenesis of osteo-articular diseases: an in vitro study" – Florence 15-17 Dicembre 2022
- Participation as speaker at the 1st National Congress "Osteoporosis and osteoarthritis in the Aging Spine: from Basic Science to the Clinic" with the presentation "The Biology of Vertebral Pain" – Villa Modragone – Rome 20-21 Gennaio 2023

TEACHING ACTIVITIES

• ACADEMIC YEAR

- Name and type of organisation providing education or training
- Activity Performed

2021/2022

University of Rome 'Tor Vergata' - Faculty of Medicine and Surgery - Via Montpellier 1, 00133, Rome, Italy.

Participation as teacher in the project "PCTO – Basic Disciplines from a Biomedical Perspective" with the following lectures :

1. The Biology of Neurodegenerative Diseases
2. The World of Viruses

• ACADEMIC YEAR

- Name and type of organisation providing education or training
- Activity Performed

2022/2023

University of Rome 'Tor Vergata' - Faculty of Medicine and Surgery - Via Montpellier 1, 00133, Rome, Italy.

Participation as teacher in the project "PCTO – Basic Disciplines from a Biomedical Perspective" with the following lectures:

1. The Biology of Neurodegenerative Diseases
2. The biology of musculoskeletal pain

• ACADEMIC YEAR

- Name and type of organisation providing education or training
- Activity Performed

2020/2021

University of Rome 'Tor Vergata' - Faculty of Medicine and Surgery - Via Montpellier 1, 00133, Rome, Italy.

Expert in the teaching of the subject 'Neurophysiology of synaptic plasticity' for the Master's Degree Course 'Science and Techniques of Preventive and Adapted Motor Activities - LM-67

• ACADEMIC YEAR

- Name and type of organisation providing education or training
- Activity Performed

2021/2022

University of Rome 'Tor Vergata' - Faculty of Medicine and Surgery - Via Montpellier 1, 00133, Rome, Italy.

Expert in the teaching of the subject 'Neurophysiology of synaptic plasticity' for the Master's Degree Course 'Science and Techniques of Preventive and Adapted Motor Activities - LM-67

EDITORIAL ACTIVITY

- Participation as editor in the 14th Italian edition of the book Guyton and Hall - Medical Physiology;
- Participation as author and reviewer of the book Human Physiology - 1st Edition 2022 Mar - EDIZIONIA.L.E. **Bonanni, R.**; Brunamonti, E.; Cacchio, M.; Cariati, I.; Dalla Volta, R.; Fattorini, L.; Maccarone, R.; Mazzatenta, A.; Pani, P.; Silipo, F.; Verratti, V.
- Participation as reviewer in the Italian edition of the book "ECG Easy - A practical guide for doctors and health professions students" - EDIZIONIA.L.E.
- Participation as reviewer in the Italian edition 'Temporomandibular disorders and the role of the stomatognathic system - Diagnosis and therapy" – EDIZIONIA.L.E.

SCIENTIFIC PUBLICATION

1. Cariati, I.; **Bonanni, R.**; Pallone, G.; Annino, G.; Tancredi, V.; D'Arcangelo, G. Modulation of synaptic plasticity by vibratory training in young and old mice. *Brain Sci.* **2021**, *11*.
2. Cariati, I.; **Bonanni, R.**; Marini, M.; Rinaldi, A.M.; Zarrilli, B.; Tancredi, V.; Frank, C.; D'Arcangelo, G.; Diociaiuti, M. Role of Electrostatic Interactions in Calcitonin Prefibrillar Oligomer-Induced Amyloid Neurotoxicity and Protective Effect of Neuraminidase. *Int. J. Mol. Sci.* **2021**, *22*.
3. Cariati, I.; **Bonanni, R.**; Annino, G.; Scimeca, M.; Bonanno, E.; D'Arcangelo, G.; Tancredi, V. Dose–Response Effect of Vibratory Stimulus on Synaptic and Muscle Plasticity in a Middle-Aged Murine Model. *Front. Physiol.* **2021**, *12*, 766.
4. Diociaiuti, M.; **Bonanni, R.**; Cariati, I.; Frank, C.; D'Arcangelo, G. Amyloid Prefibrillar Oligomers: The Surprising Commonalities in Their Structure and Activity. *Int. J. Mol. Sci.* **2021**, *22*.
5. Cariati, I.; **Bonanni, R.**; Onorato, F.; Mastrogregori, A.; Rossi, D.; Iundusi, R.; Gasbarra, E.; Tancredi, V.; Tarantino, U. Role of Physical Activity in Bone–Muscle Crosstalk: Biological Aspects and Clinical Implications. *J. Funct. Morphol. Kinesiol.* **2021**, *6*.
6. Cariati, I.; Scimeca, M.; **Bonanni, R.**; Triolo, R.; Naldi, V.; Tancredi, V.; Gasbarra, E.; Tarantino, U. Role of Myostatin in Muscle Degeneration by Stimulated Microgravity: an *In Vitro* Study for the Treatment of Sarcopenia. *Front. Physiol.* **2022 Feb 3**.
7. Cariati, I.; **Bonanni, R.**; Pallone, G.; Scimeca, M.; Frank, C.; Tancredi, V.; D'Arcangelo, G. Hippocampal Adaptations to Continuous Aerobic Training: A Functional and Ultrastructural Evaluation in a Young Murine Model. *J Funct Morphol Kinesiol.* **2021 Dec 8**.
8. **Bonanni, R.**; Cariati, I.; Tancredi, V.; Iundusi, R.; Gasbarra, E.; Tarantino, U. Chronic Pain in Musculoskeletal Diseases: Do You Know Your Enemy? *J Clin Med.* **2022 May 6**.
9. Cariati, I.; **Bonanni, R.**; Scimeca, M.; Rinaldi, A.M.; Marini, M.; Tarantino, U.; Tancredi, V. Exposure to Random Positioning Machine Alters the Mineralization Process and PTX3 Expression in the SAOS-2 Cell Line. *Life.* **2022 May**.
10. **Bonanni, R.**; Cariati, I.; Tarantino, U.; D'Arcangelo, G.; Tancredi, V. Physical Exercise and Health: A Focus on Its Protective Role in Neurodegenerative Diseases. *J Funct Morphol Kinesiol.* **2022 Jun**.
11. Cariati I, **Bonanni R**, Pallone G, Romagnoli C, Rinaldi AM, Annino G, D'Arcangelo G, Tancredi V. Whole Body Vibration Improves Brain and Musculoskeletal Health by Modulating the Expression of Tissue-

Specific Markers: FNDC5 as a Key Regulator of Vibration Adaptations. *Int J Mol Sci.* **2022 Sep 8**

12. Tarantino U, Visconti VV, **Bonanni R**, Gatti A, Marcozzi M, Calabrò D, Cariati I. Osteosarcopenia and Long-COVID: a dangerous combination. *Ther Adv Musculoskelet Dis.* **2022 Oct 26**
13. **Bonanni R**, Cariati I, Romagnoli C, D'Arcangelo G, Annino G, Tancredi V. Whole Body Vibration: A Valid Alternative Strategy to Exercise? *J Funct Morphol Kinesiol.* **2022 Nov 3**
14. Tarantino U, Gregg C, Visconti VV, Cariati I, **Bonanni R**, Gasperini B, Iundusi R, Gasbarra E, Tranquilli Leali P, Brandi ML. Fracture liaison service model: project design and accreditation. *Osteoporos Int.* **2022 Nov 24**
15. Tarantino U, Gregg C, Visconti VV, Cariati I, **Bonanni R**, Gasperini B, Nardone I, Gasbarra E, Iundusi R. Sarcopenia and bone health: new acquisitions for a firm liaison. *Therapeutic Advances in Musculoskeletal Disease.* **2022 Nov**
16. Cariati, I.; **Bonanni, R.**; Rinaldi, A.M.; Marini, M.; Iundusi, R.; Gasbarra, E.; Tancredi, V.; Tarantino, U. Recombinant Irisin Prevents Cell Death and Mineralization Defects Induced by Random Positioning Machine Exposure in Primary Cultures of Human Osteoblasts: A Promising Strategy for the Osteoporosis Treatment, *Front. Physiol.* **2023**, 14.
17. **Bonanni R**, Gino Grillo S, Cariati I, Tranquillo L, Iundusi R, Gasbarra E, Tancredi V, Tarantino U. Osteosarcopenia and Pain: Do We Have a Way Out? *Biomedicines.* **2023 Apr 26**
18. **Bonanni R.**; Cariati I.; Marini M.; Tarantino U.; Tancredi V. Microgravity and Musculoskeletal Health: What Strategies Should Be Used for a Great Challenge? *Life* **2023**, 13, 1423
19. **Bonanni R**, Abbondante L, Cariati I, Gasbarra E, Tarantino U. Metallosis after Hip Arthroplasty Damages Skeletal Muscle: A Case Report. *Geriatrics (Basel).* **2023 Sep 15**

**BIBLIOMETRIC INDICATORS
(SCOPUS)**

- **TOTAL CITATION** 138
- **AVERAGE CITATIONS
PER PUBLICATION** 7,7
- **H-INDEX** 8

The undersigned with regard to the processing of personal data expresses consent to the processing of such data in accordance with the purposes and methods set out in Legislative Decree no. 196 of 30/06/2003 and Article 13 GDPR (EU Regulation 2016/679).

Date and place
Roma 28/09/2023

Sign

