Ricardo Muller Bottura

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https://orcid.org/0000-0003-1941-2040

PERSONAL STATEMENT

I am an accomplished researcher and educator in Physical Education and Sports Sciences, currently pursuing a PhD at the University of Verona with a focus on motor imagery and sports performance. My career includes significant contributions to genetic research in high-altitude acclimatization and extensive teaching experience in strength training, biomechanics, and genetics applied to exercise. I have presented at international conferences, authored educational books, and supervised scientific projects, demonstrating a commitment to advancing sports science through research and education.

EDUCATION

PhD in Kinesiology and Sports Sciences **present**
University of Verona, Italy
Project: "Motor Imagery and Running Economy: The Influence of Imagery on Running Economy Under Fatigue"
Advisor: Dr. Piero Ruggeri (University of Genoa)

MSc in Psychobiology **2019**
Federal University of São Paulo, Brazil
Dissertation Title: "Influence of the ACTN3 R577X Gene Polymorphism on the Acclimatization Process to High Altitude"
Advisor: Dra. Debora Cristina Hipolide (UNIFESP)

Postgraduate Specialization in Physical Activity, Physical Exercise and Psychobiology **2011**
Federal University of São Paulo, Brazil
Thesis Title: "Effect of Different Types of Acute Resistance Exercise Sessions on Mood and Cognition in Young Adults"

Postgraduate Specialization in Biomechanics of Physical Activity **2005**
University Gama Filho, Brazil
Thesis title: "Relationship Between Range of Motion and Muscle Hypertrophy"

Postgraduate Specialization in Exercise Physiology **2004**
University of São Paulo, Brazil
Thesis title: "Development of Muscle Strength Through Concurrent Strength and Endurance Training"

Graduate in Physical Education **2002**
UniFMU, Brazil
Thesis title: "Psychological and Physical Fitness Profile of Rafting Athletes"

Second Bachelor's Degree in Pedagogy **2020**
FAEP, Brazil
Thesis title: "Flipped Classroom, Distance Education, and the Physical Education Professional"

TEACHING ACTIVITIES

Teaching Support (MSc in Sport Sciences and Techniques) **2025**
University of Genoa, Genoa, Italy
- Functional Aspects of Sports Activity (Course Code: 106814)

University Professor **2020-2022**
UNIP, São Jose dos Campos, Brazil
- Strength Training Methodology
- Biomechanics
- Genetics Applied to Physical Exercise

Professor at the School of Physical Education **2016-2021**
FCNM, Mogi das Cruzes, Brazil
- Methodology of Sports Training
- Biomechanics

Invited Professor
16th Summer Course in Psychobiology, UNIFESP, São Paulo, Brazil **2016**
- Theoretical/Practical Course on Ergospirometry

Bachelor's Degree in Physical Education, UNIFESP, Santos, Brazil **2015**
- Metabolism of Carbohydrates and Exercise: Part 1 & Part 2

GUEST LECTURES & INVITED TALKS

Speaker at the 12th Physical Therapy Conference: Diversity of Practice and Job Market **2024**
Faculdade Santa Marcelina, São Paulo, Brazil
- Presented lecture titled: "Genetics and Muscle Injury in Sports: What Does Science Say Today?"
- Date: 12-11-2024
- Location: online

Speaker at the Endurance Summit **2023**
- Presented lecture titled: "Genetics Applied to Endurance"
- Date: 07-10-2023
- Location: São Paulo, Brazil

Speaker at the Online Congress on Soccer and Futsal by Ciência da Bola **2022**
- Presented lecture title: "Genetics Applied to Soccer Performance"
- Date: 27-06-2023
- Location: online

Speaker at the Brazilian Congress of Personal Trainers **2022**

- Presented lecture title: “Genetics & Physical Exercise: What a Personal Trainer Needs to Know?”
- Date: 09-10-2022
- Location: São Paulo, Brazil

Speaker at the “Nação da Educação Física” Congress **2022**

- Presented lecture title: “Genetics, Sports and Training”
- Date: 23-07-2022
- Location: online

Speaker at the 44th International Symposium on Sports Sciences **2021**

- Presented lecture title: “Physical Exercise and Genetic Polymorphisms”
- Date: 07-10-2021
- Location: online

Speaker at the IV Scientific Journey of Exercise Physiology **2021**

- Presented lecture title: “Physical conditioning and Genetics”
- Date: 20-04-2021
- Location: online

PUBLISHED PAPERS

1. **MULLER BOTTURA R**. (2025). Comment on: A Systematic Review and Meta-Analysis of the Association Between ACTN3 R577X Genotypes and Performance in Endurance Versus Power Athletes and Non-Athletes. Sports medicine - open, 11(1), 63. https://doi.org/10.1186/s40798-025-00874-1

2. **BOTTURA, RM** AND DENTILLO, DB (2025) Genomic information in the decision-making process for the training of a high-performance brazilian swimmer: a case report. Front. Genet. 16:1544178. https://doi.org/10.3389/fgene.2025.1544178

3. **BOTTURA, RM**, DENTILLO, DB. Genomics May Be the Key to Understanding Endurance Training Pillars. Genes. 2025; 16(3):338. https://doi.org/10.3390/genes16030338

4. **BOTTURA, RM** Sala De Aula Invertida, Ensino a distância E O Profissional De Educação Física: Uma análise didático-metodológica. Rev Ed Física / J Phys Ed 2025, 93, 271-277.
   Home page: https://doi.org/10.37310/ref.v93i4.3021.

5. **BOTTURA, RM**; LIMA, GISCARD HUMBERTO OLIVEIRA; HIPOLIDE, D. C.; PESQUERO, JOÃO BOSCO. ACTN3 R577X Polymorphism Impacts Glucose Consumption at Simulated High Altitude. International Journal of Genetics and Genomics. v.8, p.138 - 142, 2020.
   Home page:
   https://doi.org/10.11648/j.ijgg.20200804.14

6. **BOTTURA, RM**; LIMA, GISCARD HUMBERTO OLIVEIRA; HIPOLIDE, DEBORA CRISTINA; PESQUERO, JOÃO BOSCO. Association between ACTN3 and acute mountain sickness. Genes and

Environment. v.41, p.18, 2019.
Home page: https://doi.org/10.1186/s41021-019-0133-8

7. CARIS, AV; YSIS, W; LEMOS, VA; **BOTTURA, R**; SANTOS, RVT. Nutrition and exercise can attenuate inflammatory and psychobiological changes in hypoxia?. ASIAN PACIFIC JOURNAL OF TROPICAL BIOMEDICINE. Impact Factor (2022 JCR): 1.7000, v.7, p.86 - 90, 2017.
Home page: https://doi.org/10.1016/j.apjtb.2016.11.005

PUBLISHED BOOKS

1. **BOTTURA, R.** Sports Training Methodology: From Principles to Periodization, 1st ed.
São Paulo: Academy - Health, Science and Performance, 2024.
Volume: 1, pages: 51.
Knowledge Areas: Physical Education, Sports Training Methodology.
Additional References: Brazil/Inglese.
ISBN: 9798338098875

2. **BOTTURA, R.** Strength Training: Anatomy, Kinesiology, and Prescription, 1st ed.
São Paulo: Academy - Health, Science and Performance, 2020.
Volume: 1, pages: 100.
Knowledge Areas: Physical Education, Sports Training Methodology.
Additional References: Brazil/Portuguese.
ISBN: 9786599154706

3. **BOTTURA, R.** One Step at a Time: Climbing Mount Kilimanjaro, 1st ed.
São José dos Campos, 2020.
Volume: 1, pages: 75.
Keywords: Mount Kilimanjaro, Travel, Tanzania, Mountaineering.
Additional References: Brazil/Portuguese.
ISBN: 9786500052275

4. MARCON, G.; **BOTTURA, R. M.;** NOVELLI, C. Contemporary Methods for Developing High Performance Sports Training Programs, 1st ed.
São Paulo: CREF4, 2019.
Pages: 87.
Additional References: Brazil/Portuguese.
ISBN: 9788594418395
Home page: http://www.crefsp.gov.br/712-Livros-da-Cole%C3%A7%C3%A3o-Liter%C3%A1ria-20-Anos

CONFERENCE POSTER & ORAL PRESENTATIONS

Title: Impact of Movement Duration on Tennis Forehand Precision: A Kinematic Perspective
Authors: **Bottura, R. M.**; Ferrando, V.; Placidilli, F.; Ruggeri, P.; Faelli, E.; Bisio, A.
Year: 2025
Event Type: Symposium - Presentation of Work
Knowledge Areas: Upper Limb Biomechanics

Additional References: Italy/English
Presentation Type: Poster
Location: Rimini, ITA
Event: ECSS 2025 Congress
Organizer/Funder: ECSS

Title: Preliminary Results of the Impact of 1% Inclination on Biomechanical Parameters During Treadmill Running
Authors: **Bottura, R. M.**; Ruggeri, P.; Faelli, E.; Bisio, A.
Year: 2025
Event Type: Symposium - Presentation of Work
Knowledge Areas: Running Biomechanics
Additional References: USA/English
Presentation Type: Poster
Location: Atlanta, USA
Event: ACSM 2025 Annual Meeting
Organizer/Funder: ACSM

Title: Motor imagery training to improve forehand tennis performance: a pilot study
Authors: **Bottura, R. M.**, Ferrando, V.; Placidilli, F.; Ruggeri, P.; Faelli, E.; Bisio, A.
Year: 2024
Event Type: Symposium - Presentation of Work
Knowledge Areas: Sports Training Methodology
Additional References: Italy/Italian
Presentation Type: Oral Presentation
Location: Chieti, Italy
Event: XV Congresso Nazionale della SISMeS
Organizer/Funder: SISMeS

Title: Velocity by coordination and flexibility training
Authors: Oliveira, R. A.; Santos, T. A.; Godoy, M. N. M. R.; **Bottura, R. M.**
Year: 2019
Event Type: Symposium - Presentation of Work
Knowledge Areas: Sports Training Methodology
Additional References: Brazil/Portuguese
Presentation Type: Poster
Location: São Paulo, Brazil
Event: 42nd International Symposium on Sports Sciences
Organizer/Funder: CELAFISCS

Title: Effects of training on agility and speed in wheelchair tennis athletes
Authors: Pena, L. G. S.; **Bottura, R. M**.
Year: 2018
Event Type: Congress - Presentation of Work
Keywords: agility, speed, training, wheelchair tennis
Knowledge Areas: Physical Education
Activity Sectors: Sports and recreational activities
Additional References: Brazil/Portuguese

Presentation Type: Poster
Location: Expo SP, São Paulo, Brazil
Event: International Paralympic Sports Congress
Organizer/Funder: CPB

Title: A session of resistance exercise influences cognition and mood profile
Authors: Santos, M. V. L.; **Bottura, R. M.**; Melo, C. M.; Tufik, S.; Mello, M. T.; Antunes, H. K. M.
Year: 2015
Event Type: Congress - Presentation of Work
Additional References: Brazil/Portuguese
Presentation Type: Poster
Location: Águas de Lindóia, Brazil
Event: L Congress of the Brazilian Society of Physiology
Organizer/Funder: SBFis

Title: Affective responses from two types of acute resistance exercise session
Authors: **Bottura, R. M.**; Mello, M. T.; Rzezak, P.; Antunes, H. K. M.
Year: 2011
Event Type: Symposium - Presentation of Work
Additional References: Brazil/Portuguese
Presentation Type: Poster
Location: São Paulo, Brazil
Event: XXXIV International Symposium on Sports Sciences
Organizer/Funder: CELAFISCS

Title: Physical and Psychological Fitness Profile of Rafting Athletes
Author: **Bottura, R. M.**
Year: 2003
Event Type: Symposium - Presentation of Work
Additional References: Brazil/Portuguese
Presentation Type: Poster
Location: São Paulo, Brazil
Event: XXV International Symposium on Sports Sciences
Organizer/Funder: CELAFISCS

SUPERVISION OF SCIENTIFIC INITIATION PROJECTS

Rodrigo Cesar dos Santos Santovito. **THE EFFECT OF BIKE FIT ON NON-TRAUMATIC KNEE INJURIES AND CYCLIST COMFORT IMPROVEMENT.** 2020.
Scientific Initiation (Physical Education) - FCNM
Additional References: Brazil/Portuguese

Renata Altendorf de Oliveira. **COMPARISON OF THE EFFECT OF RESISTANCE EXERCISE ON HEART RATE VARIABILITY BETWEEN GENDERS**. 2019.
Scientific Initiation (Physical Education) - FCNM
Additional References: Brazil/Portuguese

Laíz Fernanda de Camargo Oliveira. **PROPRIOCEPTIVE EXERCISES AS INTERVENTION IN PATELLAR**

CHONDROMALACIA. 2019.
Scientific Initiation (Physical Education) - FCNM
Additional References: Brazil/Portuguese

Marcela Takabatake Paiva. **DETERMINING FACTORS OF PERFORMANCE IN OPEN WATER SWIMMERS.** 2019.
Scientific Initiation (Physical Education) - FCNM
Additional References: Brazil/Portuguese

Rian Fernandes da Costa. **MOTOR LEARNING IN BASKETBALL: INFLUENCE OF KNEE FLEXION ON FREE THROW PERFORMANCE.** 2017.
Scientific Initiation (Physical Education) – FCNM
Additional References: Brazil/Portuguese

Vinicius Gabriel da Silva Felisberto. **DEVELOPMENT OF VERTICAL JUMP USING THE "AIR ALERT III" TRAINING PROGRAM AMONG BASKETBALL PLAYERS.** 2017.
Scientific Initiation (Physical Education) - FCNM
Additional References: Brazil/Portuguese

ACADEMIC ACHIEVEMENTS

Ranked 3rd Place in the 2005 Faculty Contest

- Institution: Municipal Institute of Higher Education of São Caetano do Sul (IMES)
- Area: Physical Education

REVIEWER ACTIVITIES

Springer Nature

- Review Date: 2024
- Type: Review
- Role: Reviewer
- Review Identifier(s): SOURCE-WORK-ID: 633a0339-4426-4b3b-a4ee-cafcf9cd5528
- Organizing Body: Springer Nature (New York, US)

Springer Nature

- Review Date: 2023
- Type: Review
- Role: Reviewer
- Review Identifier(s): SOURCE-WORK-ID: c01ce4f2-e15f-46a5-aa96-a041208da091
- Organizing Body: Springer Nature (New York, US)

HONORS AND AWARDS

- Honorable Mention for supervision of Scientific Initiation work, FCNM, 2019

- Honored as Faculty Representative for the Bachelor in Physical Education Graduation Ceremony, FCNM, 2019 - 2018 - 2017 - 2016