

PROF. MARCO MALAGUTI

CURRICULUM VITAE

SCIENTIFIC AND TEACHING ACTIVITIES

ACADEMIC POSITION

Since May 2021, Associate Professor of Biochemistry (SSD BIO/10) at the University of Bologna.

EDUCATION

**2005-2008** PhD (XX Cycle) in “Discipline of Motor Activities and Sports - Biological, Biomedical, Biotechnological Sciences” at Alma Mater Studiorum - University of Bologna. Obtained the title of PhD presenting the thesis: “Antioxidant action of sulforaphane: analysis in cultured cardiac cells and in an animal model of physical exercise” SSD BIO/10. Supervisor: Prof. Pierluigi Biagi.

**2004** Licensed Pharmacist, professional internship carried out at the Hospital Pharmacy of Sant’Orsola-Malpighi Hospital in Bologna.

**2004** Degree in Pharmaceutical Chemistry and Technology obtained on March 29, 2004, with a grade of 110/110 cum laude at the Faculty of Pharmacy, University of Bologna. Title of the experimental thesis: “Structural parameters of erythrocyte membranes and plasma antioxidant activity of athletes subjected to different dietary regimes”. Supervisor: Prof. Silvana Hrelia.

**1998** Scientific High School Diploma at the State Scientific High School “A.B. Sabin” in Bologna, final grade 57/60.

ACADEMIC CAREER AND SCIENTIFIC ACTIVITY

**2022** Coordinator for the International Master's Degree Course LM-68 "Wellness Sport and Health" University of Bologna, Rimini Campus.

**2021** Associate Professor for the Scientific Disciplinary Sector: BIO/10 - Biochemistry, at the Department of Sciences for the Quality of Life - University of Bologna, Corso d'Augusto 237 - Rimini.

**2018-2021** Fixed-term researcher (RTD) of type b) for the Scientific Disciplinary Sector: BIO/10 - Biochemistry, at the Department of Sciences for the Quality of Life - University of Bologna, Corso d'Augusto 237 - Rimini. REP 1639 PROT 48042 22/03/2018.

**2017** Obtains the National Scientific Qualification to hold the roles of associate professor in the competitive sectors 05/E1 - General Biochemistry and 06/N2 - Physical Exercise and Sport Sciences (ASN 2016 first four-month period). Qualifications expire 31/03/2023.

**2012-2017** Fixed-term researcher (RTD) of type a) for the Scientific Disciplinary Sector: BIO/10 - Biochemistry, at the Department of Sciences for the Quality of Life - University of Bologna, Corso d'Augusto 237 - Rimini, within RIF 472, PROT 10265 of 29.02.2012. Contract data rep 2273 prot. 32858.

**2008-2012** Research Grant for 1 year, renewed until 2012, at the Department of Biochemistry “G. Moruzzi” of the Alma Mater Studiorum University of Bologna. Project title: “Identification and development of principles of plant and animal origin for human well-being”. Tutor: Prof. Silvana Hrelia

**2006** “Marco Polo” Scholarship for the training abroad of young researchers, for a period of five months for carrying out research activities at the Department of Pathology, Drexel University - Philadelphia, PA – USA, under the supervision of Prof. Christian Sell.

**2005-2008** PhD (XX Cycle) in “Disciplines of Motor and Sports Activities - Biological, Biomedical, Biotechnological Sciences” at the Alma Mater Studiorum - University of Bologna (SSD BIO/10).

As of 01/07/2024, the results of the research conducted have led to the publication of **61** papers in scientific journals (indexed on Web of Science and/or Scopus), **2** edited works, **8** book chapters and **over 60** communications at national and international conferences. As of the same date, the bibliometric indicators indicate **2663 citations** (Scopus) and an **h-index value of 29** (Scopus).

#### COORDINATION OF RESEARCH PROJECTS

**2012-2023** RFO fund holder.

**2022** Research project “SUSTAINABLE RECOVERY OF BIOACTIVE MOLECULES WITH ANTI-NEUROINFLAMMATORY ACTION FROM WASTES AND BY-PRODUCTS OF THE AGRI-FOOD CHAIN”. Funded by University funds (Unibo) “AlmaDea 2022” (Coordinator and Scientific Director).

**2019-20** “Nutraceutical valorization of chestnut by-products: potential anti-neuroinflammatory action”, co-financed by the Department of Sciences for the Quality of Life of the University of Bologna (Protocol 521 Rep. 163 Fasc 2019-III/13.1.1 of 06/09/2019) for the activation of a research grant lasting 12 months.

**2013-2020** Research and teaching project “School, Health, Wellbeing” in collaboration with the Municipality of Rimini and UNIRIMINI spa. (Coordinator and Scientific Director).

**2013** Project “Lifelong Learning Programme” Erasmus IP 2013-1-IT2-ERA10-52930 – SocialSport. (Coordinator and Scientific Director).

**2012** Research project funded by the Montana Award for Food Research 2012 (sixth edition), project title: “Functional bread for the prevention of chronic degenerative diseases: from the characterization of bioactive compounds to the evaluation of in vivo efficacy”. (Coordinator and Scientific Director).

#### PARTICIPATIONS IN RESEARCH PROJECTS

**2022** MIUR Research Project funded with PRIN 2022 research funds “BIO-WASTE PRODUCTS AS A SOURCE OF NUTRACEUTICALS TO TARGET THE COMMON TRAIT OF INFLAMMATION IN CANCER AND NEURODEGENERATION”. (Participant).

**2022** MIUR Research Project funded with PRIN PNRR 2022 research funds “A precision medicine ecosystem for Alkaptonuria through clinical and experimental knowledge management and sharing system for an integrated approach”. (Participant).

**2020** TRISTAN Project “An integrated pharmacological/antioxidant approach for Duchenne Muscular Dystrophy: acid sphingomyelinase as new therapeutic target”. Funded with Telethon France 2020 funds (Participant).

**2020** ENNEADI Project “European Network in Nutritional Education for Acquired Disabilities” funded with European funds within the Projects KA2 - Cooperation for innovation and the exchange of good practices KA202 - Strategic Partnerships for vocational education and training ID: KA202-BED24E13 (Participant).

**2017** MIUR Research Project funded with PRIN 2015 research funds: "Focusing on risk factors to search for novel protective strategies in neurodegenerative diseases: targeting the cellular redox system". Protocol: 20152HKF3Z\_002. (Participant).

**2015** Horizon 2020 Project: “Embedding crop diversity and networking for local high quality food systems - DIVERSIFOOD” – Grant Agreement nr. 633571. (Participant).

**2015** Horizon 2020 Project: TWINN-2015 Innovative Food Product Development Cycle: Frame for Stepping Up Research Excellence of FINS (FOODstars). (Participant).

**2012** BACCHUS Project: Beneficial effects of dietary bioactive peptides and polyphenols on cardiovascular health in humans. 7th Framework Programme of the European Union: Proposal N°312090 FP7-KBBE-2012-6 (Participant).

**2007-09** Research project funded by the Fondazione del Monte di Bologna e Ravenna, "Identification and development of plant-based principles for human well-being and health: mechanisms of nutraceutical action, preventive role in chronic-degenerative diseases and wellness optimization". (Participant).

**2007** MIUR Research Project funded by PRIN 2007 research funds "Protective role of sulforaphane against neurodegenerative damage from oxidative stress". (Participant).

**2005** MIUR Research Project funded by PRIN research funds "Molecular targets of sulforaphane in cardiac cells: new nutritional strategies for cardioprotection". (Participant).

## RESEARCH COLLABORATIONS

He has implemented fruitful collaborations with researchers belonging to the following research institutes:

- Collaboration with the research group of Prof. Alejandro Santos Lozano (Universidad Europea Miguel de Cervantes).
- Collaboration with the research group of Prof. Raul Dominguez-Herrera (Universidad de Sevilla).
- Collaboration with the research group of Prof. Christian Sell (Department of Pathology, Drexel University - Philadelphia, PA – USA).
- Collaboration with the research group of Prof. Nuria Garatachea (Departamento de Ciencias Biomédicas - Universidad de León – Spain).
- Collaboration with the research group of Prof. Patrizia Hrelia (Department of Pharmacology - University of Bologna)

- Collaboration with the research group of Prof. Giovanni Dinelli (Department of Agro-Food Sciences and Technologies - University of Bologna).

#### RESPONSIBILITY FOR SCIENTIFIC STUDIES AND RESEARCH ENTRUSTED BY PRIVATE COMPANIES.

**2023** SUGEIA S.R.L. Drafting of a scientific rationale on nutraceutical compounds with hypoglycemic action.

**2019** Fit Center srl Design and formulation of an innovative pre-workout food supplement for combat sports.

**2019** 4health integratori srl. Design and formulation of an innovative food supplement for swimming sports.

**2017** Dr. Giorgini Srl. Production of nutritional sheets relating to the company's products.

**2016** La Presseria srl. Production of nutritional sheets relating to the company's products.

**2015** Gold Eight srl. Design and planning of food supplements.

**2014** 4health integratori srl. Design and planning of food supplements for health.

**2013** Sangria Design. Production of texts on the topic of Integration and Nutrition for the web portal [www.alimentalavita.it](http://www.alimentalavita.it)

**2010** SSL Healthcare Italia S.p.A. Consultancy on the use of products based on hop extracts by women of climacteric age, of products based on green tea and guarana extracts as thermogenic agents.

**2008** Medical Education Italia S.r.l. Drafting of a distance learning Continuing Medical Education (ECM) course entitled "Polyphenols and microcirculation diseases.

**2008** Consulfarm S.r.l. Drafting of a scientific rationale on the use of compounds of natural origin as components of nutraceutical products.

**2007** Famiglia Chiari S.r.l. Design, production and analysis of foods enriched with Omega-3 fatty acids.

**2007** COOP ITALIA Società Cooperativa. Drafting of a scientific rationale on the optimal composition of energy supplements for sports practice.

**2004** Inneov Italia S.p.A. Drafting of a scientific rationale for the use of natural compounds as components of nutraceutical products.

#### TECHNOLOGY TRANSFER ACTIVITIES

Member of the research group, coordinated by Dr. Monia Lenzi, participating in the VitroTox business proposal project. The VitroTox project was ranked among the finalists of the Start Cup Emilia Romagna 2020 competition and received co-financing from the University of Bologna as part of the "Call for Spin-off Projects 2021".

#### PARTICIPATION IN EVALUATION COMMISSIONS

- Member of the committee for the recruitment procedure of a researcher (RTT) at the Department of Biotechnology, Chemistry and Pharmacy of the University of Siena (procedure announced with rectoral decree prot 508/2024 of 14/03/2024 (2024).
- Member of the judging committee for PhD theses at the University of Bologna, PhD in Health, Safety and Green Systems (2024).
- Evaluator for FAR2023 projects for the University of Modena and Reggio Emilia (UNIMORE) (2023).
- Member of the judging committee for PhD theses at the University of Bologna, PhD in Health, Safety and Green Systems (2023).
- Member of the judging committee for PhD theses at the Departamento de Ciencias de la Salud- Universidad Europea Miguel de Cervantes, Valladolid, Spain (2023).
- Evaluator for the University Call for the financing of competitive projects for a Fixed-Term Researcher (RTD) at the University of Florence - Year 2021-2022 issued with Decree no. 490/2020 Prot no. 58176 of 17/04/2020.
- Member of the Expert Evaluator Panel for the projects submitted in the context of the European Institute of Innovation and Technology (EIT) cross KIK programme Food4Health calls (2019 and 2020).
- Member of the judging committee for Doctoral theses (Doctorato Ciencias Biomedicas) at the Departamento de Ciencias Biomedicas - Universidad de LEON, Spain (2015).
- Member of the Doctoral Thesis Judging Committee (Doctorato Ciencias Biomedicas) at Departamento de Ciencias Biomedicas - Universidad de LEON, Spain (2013).
- Member of Commissions for the evaluation of candidates participating in calls for the assignment of Research Grants and Scholarships announced by the QUVI and CHIM departments of the University of Bologna (2018-2024).

#### ACADEMIC TASKS AND PARTICIPATIONS IN UNIVERSITY BODIES

- Since May 2024 he has been Vice-Coordinator of the Doctoral Course in Sport, Health and Wellbeing at the University of Bologna
- Since April 2022 he has been Coordinator of the International Master's Degree Course "Wellness, Sport and Health" (Class LM-68) Rimini Campus - University of Bologna.
- From December 2019 to February 2022 he is a member of the Joint Commission of the Department of Sciences for the Quality of Life, University of Bologna.
- From 2015 to 2021 he is a delegate for orientation for the following Bachelor's, Master's and Single-Cycle Master's Degree courses at the University of Bologna:
  - o Sciences of motor and sports activities (Rimini campus)
  - o Sciences of preventive and adapted motor activity (Rimini campus)
  - o Wellness culture: sport, health and tourism (Rimini campus) (since 2017)
  - o Pharmacy (Rimini campus)
- In 2020 he was a member of the University of Bologna commission for verifying knowledge of the Italian language for non-EU foreign students.

- In 2019 he was a member of the University of Bologna commission for verifying knowledge of the Italian language for non-EU foreign students.
- In the academic year 2018-19 he participated in the commission for the TOLC (F) admission tests of the Rimini Campus.

#### PARTICIPATION IN EDITORIAL COMMITTEES AND REFEREE ACTIVITIES

Participates in the editorial board of the following scientific journals:

- Nutrients (MDPI).

He was “Guest Editor” for the following special issue:

- “Sport Nutrition for Athletes” for the scientific journal Nutrients (MDPI).

He is the editor of the two-volume work “Alimentazione per il Benessere” published by Casa Editrice Ambrosiana (cea) 2024.

He has served as a reviewer for the following scientific journals:

- Nutrients (MDPI)
- Molecules (MDPI)
- Oxidative Medicine and Cellular Longevity (Hindawi)
- Journal of Aging Research (Hindawi)
- Journal of Functional Foods (Elsevier)
- Biomedicine & Pharmacotherapy (Elsevier)
- Neuroscience (Elsevier)
- Journal of Medicinal Plants Research (Academic Journals)
- International Journal of Sport Nutrition and Exercise Metabolism (Human Kinetics)
- Exercise Immunology Review (Human Kinetics)
- Plos One
- International Journal of Food Sciences and Nutrition

#### AFFILIATION TO SCIENTIFIC SOCIETIES

He is an ordinary member of the following scientific societies:

- Italian Society of Biochemistry (SIB).

#### AWARDS AND RECOGNITIONS

- Winner of a Contribution granted by the Italian Society of Biochemistry and Molecular Biology (SIB) in the context of the 53rd SIB National Congress, Riccione (RN) 23 September 2008.
- Winner of a contribution for the participation of young members of SIB (Italian Society of Biochemistry and Molecular Biology) in the 36th FEBS Congress (Turin 25-30 June 2011).
- Montana Award for Food Research 2012 (sixth edition) for the research project entitled: "Functional bread for the prevention of chronic degenerative diseases: from the characterization of bioactive compounds to the evaluation of in vivo efficacy" 18 September 2012 (Coordinator and scientific director).

#### ORGANIZATION OR PARTICIPATION AS A SPEAKER IN SCIENTIFIC CONFERENCES IN ITALY OR ABROAD

1. Speaker: "Protective action of sulforaphane on exhaustive exercise induced muscle damage in rats". - XXX FIMS WORLD CONGRESS OF SPORT MEDICINE" – Barcelona (ES) 18-23 November 2008.
2. Speaker: "Critical Evaluation of the Most Popular Diets". - Theoretical Refresher Course - Practical Dietology between Past and Future – Italian Association of Dietetics and Clinical Nutrition – Emilia Romagna Section Bologna (BO) 18 April 2009.
3. Speaker: "Food Supplements: an aid for performance"? - ASAS National Conference: "Intelligent Communication for Health Protection" Rimini (RN) 15-16 May 2009.
4. Speaker: "Sulforaphane treatment induces phase II detoxifying enzymes and prevents acute exhaustive exercise induced muscle damage in rats". – Joint SIB-SITOX study meeting "Nutraceutical components of the diet: biochemical and toxicological aspects" Rimini 12 June 2009.
5. Moderator and member of the scientific committee of the ASAS national conference: "Communicating Health: from proposals for the community to interventions on the individual", Bologna 6 November 2010
6. Speaker: "Nutraceuticals in physical activity: what are the prospects"? - Nutraceuticals, Functional Foods and cardiometabolic health: scientific evidence and clinical reality. Rimini (RN) 20 November 2010.
7. Speaker and member of the scientific committee of the ASAS national conference: "Nutrition and Physical Activity - the cornerstones for the health of an unaware society", report "The multiple effects of physical activity" Rimini 20 October 2012.
8. Speaker: "Let's talk about vascular disorders - Pharmacological and biochemical rationale for integration". - Rimini InForma 2013 conference: "Modern Medicine and Food Integration". Rimini 07 June 2013.
9. Moderator and member of the Scientific Committee of the ASAS conference: "Nutrition and Physical Activity to promote health: well-being is in our hands". Piacenza 25-26 October 2013.
10. Speaker: "University of Bologna Edusport Intensive Programme: a ten years history". - "9th International Conference - Sport and Quality of Life 2013". Brno (CZ) 07-08 November 2013.

11. Speaker: "Anthocyanins" - Conference of the Foundation Institute of Health Sciences (FISS): "Nutraceuticals of the Mediterranean diet and not only soon in pharmacy with particular attention to diabetes, the cardiovascular system, cognitive brain function and in urology". Bologna 15 April 2016.
12. Speaker: "Portrait of modern man, between nutrition, movement and lifestyle". - Conference of the Stelling Foundation: "NutriMI 2016, 10th forum of practical nutrition". Milan 21-22 April 2016.
13. Speaker: "Sports supplements: instructions for use" - Conference organized by the University of Bologna - Rimini Campus: "Nutrition and physical activity: the right path to well-being | Wellness Week 2016". Rimini 24-05-2016.
14. Speaker: "Broccoli extracts counteract the formation of cholesterol oxidation products in the liver of rats subjected to exhaustive physical exercise". - VI National Congress of the Italian Society of Nutraceuticals (SINut): "Focus on the clinical use of nutraceuticals in preventive medicine". Bologna 28-05-2016.
15. Moderator of the "Communications" session of the VII National Congress SINut. Bologna 19-20 May 2017.
16. Speaker at the conference organized by the National Academy of Agriculture: The odyssey of food, from field to table: the value of our foods: "Asparagus: nutritional and nutraceutical value" Bologna, May 2018.
17. Speaker at the "Wellness Marathon", report: "Nutraceuticals and quality of life". Rimini, 15 May 2018.
18. Speaker at the V Conference "Mediterranean diet and microbiota" report: "Nutrition and sport: what role for supplements"? Florence, 9 June 2018.
19. Member of the organizing committee of the 8th ENOR Symposium: "Oxysterols and sterols: from lipidomics to food science". Bologna, September 20-21, 2018.
20. Speaker at the "Festival of Medical Science", report: "Lifestyles for Well-Being: the Benefits of Physical Activity" Bologna, May 11, 2019.
21. Moderator and Member of the Organizing Committee of the 1st International Conference on Neuroprotection by Drugs, Nutraceuticals and Physical Activity. Rimini 6-7 June 2019
22. Speaker at the conference organized by the National Academy of Agriculture: The odyssey of food, from the field to the table: the value of our foods: "Grapes and wine: nutritional and nutraceutical value" Bologna, 16 September 2019.
23. Speaker at the conference organized by the National Academy of Agriculture: The odyssey of food, from the field to the table: the value of our foods: "Chestnuts: nutritional and nutraceutical value" Bologna, 17 November 2021.
24. Speaker at the conference organized by the National Academy of Agriculture: The odyssey of food, from the field to the table: the value of our foods: "Cherry: nutritional and nutraceutical value" Bologna, 19 May 2022.
25. Speaker at the conference organized by the National Academy of Agriculture: Rural landscapes, vocation of the lands, excellence of agricultural production: "Chestnuts and chestnut: nutritional aspects and nutraceutical value" Imola (BO), 21-23 June 2022.
26. Moderator at the XII National SiNut Congress, Bologna 15-17 September 2022.

27. Speaker at the conference organized by the Institute for Research on Wine, Food and Health Drinking Mediterranean. "The health effects of moderate wine consumption". At the Senate of the Republic, Rome 16 February 2023

28. Speaker at the conference organized by the Italian Society of Neurological Rehabilitation: XXII National SIRN Congress "Nutraceuticals: biochemical and nutritional aspects." Riva del Garda (TN), 16-18 April 2023.

29. Speaker at the conference organized by the Italian Society of Neurological Rehabilitation: XXII National SIRN Congress "Nutrition and disability: the results of the European ENNEADI project." Riva del Garda (TN), 16-18 April 2023.

30. Speaker at the conference organized by the Colibrì Consortium: Objective well-being: lifestyles and neurorehabilitation for the health project "Nutrition and disability: the results of the ENNEADI project" Bologna, 21 October 2023.

31. Speaker at the conference organized by the Forum of non-self-sufficiency and possible autonomy "Nutrition and disability: the results of the ENNEADI project" Bologna, 29-30 November 2023.

32. Speaker at the conference organized by the Emilia-Romagna regional section of the Italian Society of Neurological Rehabilitation: Nutrition and its surroundings in the rehabilitation of the person with severe acquired brain injury "Nutraceuticals in neurorehabilitation" Bologna, 19 April 2024.

#### TEACHING ACTIVITIES

Since 2011 he has taught many Biochemistry and Biochemistry of Nutrition courses at the Faculty of Pharmacy and Faculty of Sport Science at the University of Bologna.

#### TEACHING ACTIVITIES AT FOREIGN INSTITUTIONS

a.a. 2013-14

- Teaching assignment awarded by Masaryk University - BRNO, CZ within the project: "Creation of a network of professional institutions participating in the fight against the occurrence of metabolic syndrome - CZ.1.07/2.4.00/17.0039.

Teaching title: "Exercise: the most effective pill in the prevention of chronic diseases" (teaching period 2 June – 31 August 2014).

#### POST-GRADUATE TEACHING ACTIVITIES

- Teacher for the Advanced Training Course "Nutrition and Nutraceuticals for Physical Activity and Sport" – University of Bologna. Editions from 2024
- Teacher for the University Master's Degree "Nutraceuticals, phytotherapeutics and food supplements" – Alma Mater Foundation – University of Bologna. Editions from 2016 to 2024
- Teacher for the Master's Degree University "Nutrition and Health Education" – Alma Mater Foundation – University of Bologna. Editions from 2011 to 2024
- Lecturer for the University Master "Food supplements and nutraceuticals: health, safety and marketing" – Alma Mater Foundation – University of Bologna. Editions 2013 and 2014

- Lecturer for the Advanced Training Course “Adapted sport for people with acquired disabilities” – University of Bologna. Editions from 2019 to 2020
- Lecturer for the Advanced Training Courses “Nutrition and Physical Activity” – University of Bologna. Editions 2008 and 2009.
- Lecturer for the Permanent Training Course “Nutraceutical Components and Food Supplements for Sport” University of Bologna. 2016.

#### TEACHING SUPPORT ACTIVITIES

- From 2012 to 2024, he performed at least 350 hours/year of supplementary teaching activities and student services as RTD (2012-21) and PA (2021-present).
- Since 2013, he has been Supervisor of 27 Master's Degree theses (LM or LMCU) and 44 Degree Theses (L) for the Degree Courses in Pharmacy, Motor Sciences or Sciences at the University of Bologna.
- Since 2005, he has been Co-Supervisor of 18 Single-Cycle Master's Degree theses and 13 Degree Theses for the Degree Courses in Pharmacy and Motor Sciences at the University of Bologna.