PERSONAL INFO

Elena Barbieri

Department of Biomolecular Science (DISB)
University of Urbino Carlo Bo
Via I. Maggetti 26, Urbino 61029 (PU)

+ 39 0722 303417

elena.barbieri@uniurb.it

Cod: BRBLNE67T69A794U

Born Bergamo, 29/12/1967 | Nationality Italian

POSITION

Associated Professor BIO-13 (F1/05) Applied Biology

Orcid ID orcid.org/0000-0002-3480-7983
H index 21 (Scopus)
Citations 1507 (Scopus)

INSTITUTIONAL ROLES AND RESPONSABILITIES

2018 Associated Professor BIO-13 (F1/05) Applied Biology
Department of Biomolecular Science (DISB), Division of Health and Physical Exercise, University of Urbino Carlo Bo.

2017 *National Scientific Qualification* for Academic Staff in Applied Biology (05/F1 SSD BIO/13)

2002 Researcher in Applied Biology (BIO/13 - F1/05) at the Faculty of Health and Physical Exercise of the University of Urbino Carlo Bo.

2002 Assignment for course of Human Biology (BIO/13) at the Sport, Health and Physical Exercise degree course (L-22) Faculty of Health and Physical Exercise of the University of Urbino Carlo Bo.

Since 2003 Prof. Barbieri is part of the Doctoral College Committee since the 2003, Cycle XXII with the doctorate Course in "MOLECULAR AND MORPHO-FUNCTIONAL METHODOLOGIES APPLIED TO EXERCISE"
From the 2013, cycle XXIX to date she has taken part at the Doctorate in 'LIFE SCIENCES, HEALTH AND BIOTECHNOLOGY' actually named 'BIOTECHNOLOGY and HEALTH SCIENCE'

2013-2019 Elected member of the Scientific Committee INTERUNIVERSITY INSTITUTE OF MYOLOGY (IIM) Director Prof. Davide Gabellini, Division of Regenerative Medicine San Raffaele Scientific Institute Milan.

2020 Italian delegate of *European College* of *Sport Science* – ECSS for the 2024 congress with the Italian Exhibition Group in Rimini.

2020 Member of the *Italian* Society of Sport and Exercise Science (SISMES) and Italian Group on Exercise Oncology (IGEO).

2020	Member of the Didactic Commission of the Doctorate in "BIOMOLECULAR AND HEALTH SCIENCES". DISB, Università degli Studi di Urbino Carlo Bo.
Since 2016	Member of the Erasmus Commission for the School of Motor Sciences, University of Urbino Carlo Bo.
2015	ERASMUS MOBILITY PROGRAM for PROFESSOR, Université Paris Descartes Paris in Physical education in Sport Science (1–7 July 2015).
2017	ERASMUS MOBILITY PROGRAM for PROFESSOR, Universitad Europea de Madrid in SPORTS SCIENCES (10–17 September 2017).
2018	ERASMUS MOBILITY PROGRAM for PROFESSOR, Dept. of University College Dublin IRL DUBLIN02 School of Public Health, Physiotherapy and Sports Sciences at the Health Science Centre, Belfield, Dublin 4, Ireland (3-7 July 2018).
2015 - 2016	Member of the Selection Committee for the test of knowledge of the Italian language provided for foreign students residing abroad for the Faculty of Health and Physical Exercise of the University of Urbino Carlo Bo.
Since 2013	Member of the Commission for the verification of the initial preparation (VPI) relating to the basic knowledge of the scientific disciplines for the three-year degree course in the Sport, Health and Physical Exercise degree course(L-22) of the University of Urbino Carlo Bo.
Since 2015	Member of the Joint Teachers-Students Commission for the three-year degree course in Sport, Health and Physical Exercise (L-22) School of Sport Sciences, University of Urbino Carlo Bo.
2015 - 2019	Member of the Quality Assurance Group for the three-year degree course in Sport, Health and Physical Exercise (L-22) School of Sport Sciences, University of Urbino Carlo Bo.
2016 - 2022	Member of the Central Electoral Commission (CEC), 11 July 2016-10 July 2018 of the University of Urbino Carlo Bo University. Renewal of DR n. 236/2020 of 26 June 2020 (from 11 July 2020 to 10 July 2022).

FORMATION

1992	Degree in Biological Sciences at the Urbino University (110 cum laude)
1996/1997	Courses: *Microbial Diversity* course supervisor Abigail Seyer and Ed Leadbetter at the Marine Biological laboratory (MBL) Woods Hole, MA, USA.
1996/1997	Courses: *Molecular Evolution* course supervisor Dr. Micthell L. Sogin at theMarine Biological laboratory (MBL) Woods Hole, MA, USA.
1997	Bernard Davis Summer Fellow Marine Biological Laboratory, (MBL) Woods Hole, MA, USA.
2000	PhD in Biochemistry "Biochemical and Pharmacological Methodologies" University of Urbino Carlo Bo.
2002	Post Doc in Biochemistry (SSD BIO-10) Centro di Biochimica delle Proteine University of Urbino Carlo Bo.

Professional competences

The activity of research of Prof. Elena Barbieri is particularly focused on biomolecular and morpho-functional changes induced by muscle contraction and exercise. She is interest on signal transduction mechanisms in skeletal muscle cell proliferation, differentiation and hypertrophy, role of growth factors in the modulation of cellular functions and the rule of mitochondrial oxidative metabolism and energy transduction pathways for skeletal muscle function. She recently focused her research about IGF-1 system and isoforms, its regulation under physiological or oncological conditions.

In addition, she is also interested on the pleiotropic aspects of creatine and hyaluronic acid in muscle differentiation and joint disorders.

Research Projects 2004-2006

Pathophysiological role of erythropoietin in the central nervous system "funded by the Commission for the supervision of sports activities (CVD), of the Ministry of Health as part of a collaboration between Prof. Vilberto Stocchi and Prof. Fabrizio Eusebi of the Department of Human Physiology and Pharmacology, Biophysics Laboratory, Faculty of Medicine and Surgery, La Sapienza University of Rome.

2007-2009

Special Projects of Regional Competence - Marche Region: "Role of Physical Exercise in the Prevention of Diseases and in Improving the Quality of Life", Principal Investigator - Scientific Director Prof. Vilberto Stocchi. Research project Marche Region - Resolution no. 70 of 20/11/2007.

2009-2013

Ricerca Finalizzato 2009 (Ex Artt 12 E 12bis DLGS 502/92) Ministry of Health DGRST 0005626-P-05/08/2011 "IGF-I isoforms and Breast Cancer", (RF-2009-1532789).
PI: Prof. Franco Berrino della Fondazione IRCCS Istituto Nazionale dei Tumori, Milano.

2014-2015

Project Marche Region "Study of metabolic and functional changes induced by physical exercise in healthy subjects and subjects suffering from chronic pathologies and primary and secondary cardiovascular prevention."
PI: Prof. Vilberto Stocchi.

2016-2018

Research activity: "VALUTAZIONE DEI BIOMARKER DI DEGRADAZIONE CARTILAGINEA E INFIAMMATORI NEL TRATTAMENTO DI PATOLOGIE ARTICOLARI CON PRODOTTI A BASE DI ACIDO IALURONICO" in convenzione con l'azienda Regenyal Laboratories Srl San Benedetto del Tronto (AP) P.I. 01942840446 (Estratto del Verbale del Consiglio di Dipartimento DISB del 14/09/2016 Delibera 159.2016, 20.000 Euro).
PI: Dr Elena Barbieri

2017

Research Project "EFFECTS OF A SINGLE BOUT OF EXERCISE ON GLUCOSE HOMEOSTASIS IN TYPE 1 DIABETIC'S" in collaboration with l'University College Dublin, Dublin.
PI: Prof. Giuseppe De Vito.

2017-2018

Progetto di Valorizzazione DISB: "EFFECTS OF EXERCISE ON TRIPLE-NEGATIVE BREAST CANCER CELL PROLIFERATION IN VITRO AND SYSTEMIC TRAINING ADAPTATIONS IN VIVO (Verbale del Consiglio di Dipartimento DISB del 10/5/2017 Delibera n. 87.2017 e del 21/02/2018 delibera n. 28/2018, 12.000 Euro).
PI: Dr. Elena Barbieri

2018-2019

Research activity: "VALUTAZIONE DI PARAMETRI FISIOPATOLOGICI NEL TRATTAMENTO DI PROBLEMATICHE TENDINEE CON PRODOTTI BIOINDUTTIVI MULTIFRAZIONATI A BASE DI ACIDO IALURONICO" in convenzione con l'azienda Regenyal Laboratories Srl San Benedetto del

Tronto (AP) P.I. 01942840446 (Estratto del Verbale del Consiglio di Dipartimento DISB del 28/03/2018 40.000 Euro).
PI: Prof. Elena Barbieri e Prof. Piero Sestili

2019-2022 Research activity: "VALUTAZIONE DI PARAMETRI FISIOPATOLOGICI NEL TRATTAMENTO DI PROBLEMATICHE TENDINEE CON PRODOTTI BIOINDUTTIVI MULTIFRAZIONATI A BASE DI ACIDO IALURONICO" in convenzione con l'azienda Regenyal Laboratories Srl San Benedetto del Tronto (AP) P.I. 01942840446 (Estratto del Verbale del Consiglio di Dipartimento DISB del 28/03/2018 120.000 Euro).
PI: Prof. Elena Barbieri e Prof. Piero Sestili

2019-2022 Project "FOLLOW UP E STILI DI VITAMOVIMENTO E SALUTE OLTRE LA CURA, MOVIS: PERCORSO DI EDUCAZIONE ALL'ATTIVITÀ FISICA E NUTRIZIONALE NEL FOLLOW UP DEI PAZIENTI CON PREGRESSO CARCINOMA MAMMARIO" in collaborazione con l'ASUR AV1 e la dott.ssa Rita Emili dell'U.O.C. di Oncologia dell'Ospedale di Urbino (Approvazione CESU UNIURB n. 21 del 10/07/2019).
PI: Prof. Elena Barbieri

The activity of research of Dr. Barbieri is documented by more than 60 papers published on international and national scientific journals. She has taken part at hundred national and international scientific conferences.

Moreover Prof. Barbieri is referee for scientific international reviews such as: Environmental Pollution - Elsevier; Marine Biology – Sprinter; Environmental Microbiology – Sprinter; Journal of Endocrinology Investigation - Kurtis Ed. - PlosONE – Science; Cells MDPI; Nutrients MDPI.

Editorial Board of Nutrients (ISSN 2072-6643) is a peer-reviewed open access journal of human nutrition published monthly online by MDPI.

Prof. Barbieri collaborates since the 2002 with the National Science Foundation of USA to evaluate NSF Grants (NSF' s merit review process).

List of the recent publications (about 20 articles from 2010 to 2020)

1. NATALUCCI V, CARNEVALE PELLINO V, **BARBIERI E**, VANDONI M. Is It Important to Perform Physical Activity During Coronavirus Pandemic (COVID-19)? Driving Action for a Correct Exercise Plan. FRONT PUBLIC HEALTH. 2020 Nov 2;8:602020. doi: 10.3389/fpubh.2020.602020.
2. MINNOCK D, ANNIBALINI G, LE ROUX CW, CONTARELLI S, KRAUSE M, SALTARELLI R, VALL GI, STOCCHI V, **BARBIERI E** AND DE VITO G. Effects of acute aerobic, resistance and combined exercises on 24-hr glucose variability and skeletal muscle signalling responses in Type 1 Diabetics. EUROPEAN JOURNAL OF APPLIED PHYSIOLOGY. 2020 September 09. doi.org/10.1007/s00421-020-04491-6
3. BALDELLI G, DE SANTI M, GERVASI M, ANNIBALINI G, SISTI D, HØJMAN P, SESTILI P, STOCCHI V, **BARBIERI E**, BRANDI G. The effects of human sera conditioned by high-intensity exercise sessions and training on the tumorigenic potential of cancer cells. CLINICAL AND TRANSLATIONAL ONCOLOGY. 2020 May 23. doi: 10.1007/s12094-020-02388-6.
4. GERVASI M, SISTI D, AMATORI S, DONATI ZEPPA S, ANNIBALINI G, PICCOLI G, VALLORANI L, BENELLI P, ROCCHI MBL, **BARBIERI E**, CALAVALLE AR, AGOSTINI D, FIMOGNARI C, STOCCHI V, SESTILI P. Effects of a commercially available branched-chain amino acid-alanine-carbohydrate-based sports supplement on perceived exertion and performance in high

intensity endurance cycling tests. JOURNAL OF THE INTERNATIONAL SOCIETY OF SPORTS NUTRITION 2020 17(1),6. doi: 10.1186/s12970-020-0337-0.

5. ROSETI C., CIFELLI P., RUFFOLO G., **BARBIERI E.**, GUESCINI M., ESPOSITO V., DI GENNARO G., LIMATOLA C., GIOVANNELLI A., ARONICA E., PALMA E. Erythropoietin Increases GABA A Currents in Human Cortex from TLE Patients. NEUROSCIENCE. 2019.04.013 439 (2020) 153–162.doi.org/10.1016/j.
6. DONATI ZEPPA S, AGOSTINI D, GERVASI M, ANNIBALINI G, AMATORI S, FERRINI F, SISTI D, PICCOLI G, **BARBIERI E**, SESTILI P, STOCCHI V. Mutual Interactions among Exercise, Sport Supplements and Microbiota. NUTRIENTS. 2019 Dec 20;12(1):17. doi: 10.3390/nu12010017.
7. DE SANTI M, BALDELLI G, LUCERTINI F, NATALUCCI V, BRANDI G, **BARBIERI E**. A dataset on the effect of exercise-conditioned human sera in three-dimensional breast cancer cell culture. DATA BRIEF. 2019 Oct 21; 27:104704. doi: 10.1016/j.dib.2019.104704.
8. **BARBIERI, E**. CAPPARUCCI, I., MANNELLO, F., ANNIBALINI, G., CONTARELLI, S., VALLORANI, L., GIOACCHINI, A.M., LIGI, D., MANISCALCO, R., GERVASI, M., TRAN DANG XUAN, T., BARTOLUCCI, C., STOCCHI, V., SESTILI, P. Efficacy of a Treatment for Gonarthrosis Based on the Sequential Intra-Articular Injection of Linear and Cross-Linked Hyaluronic Acids. MUSCLES, LIGAMENTS & TENDONS JOURNAL (MLTJ) 9 (Volume 9, Issue 4, October-December 2019, Pages 606-614. 10.32098/mltj.04.2019.17.
9. ANNIBALINI G, CONTARELLI S, LUCERTINI F, GUESCINI M, MAGGIO S, CECCAROLI P, GERVASI M, FERRI MARINI C, FARDETTI F, GRASSI E, STOCCHI V, **BARBIERI E**, BENELLI P. Muscle and Systemic Molecular Responses to a Single Flywheel Based Iso-Inertial Training Session in Resistance-Trained Men. FRONT PHYSIOL. 2019 May 9;10:554. doi: 10.3389/fphys.2019.00554.
10. ANNIBALINI G, CONTARELLI S, DE SANTI M, SALTARELLI R, DI PATRIA L, GUESCINI M, VILLARINI A, BRANDI G, STOCCHI V, **BARBIERI E**. The intrinsically disordered E-domains regulate the IGF-1 prohormones stability, subcellular localisation and secretion. SCIENTIFIC REPORT. 2018 Jun 11;8(1):8919. doi: 10.1038/s41598-018-27233-3.
11. AGOSTINI D, DONATI ZEPPA S, LUCERTINI F, ANNIBALINI G, FERRI MARINI C, GERVASI M, PICCOLI G, STOCCHI V, **BARBIERI E** AND SESTILI P. Muscle and bone health in postmenopausal women: a lifestyle management employing exercise combined with protein and vitamin D supplementation. Special Issue "Dietary Protein and Muscle in Aging People" NUTRIENTS (2018) 10 pii: E1103. DOI: 10.3390/nu10081103
12. AGOSTINI D, NATALUCCI V, BALDELLI G, DE SANTI M, ZEPPA S, VALLORANI L, ANNIBALINI G, LUCERTINI F, FEDERICI A, IZZO R, STOCCHI V AND **BARBIERI E**. New Insights on the Role of Exercise in Inhibiting mTOR Signaling in Triple Negative Breast Cancer. Special issue "mTOR Signaling in Cardiometabolic Disease, Cancer, and Aging 2018" OXIDATIVE MEDICINE AND CELLULAR LONGEVITY (2018): 5896786. doi.org/10.1155/2018/5896786
13. **BARBIERI E**, FALCIERI E, DE SANTI M, NATALUCCI V, VALLORANI L, AGOSTINI D, ANNIBALINI G, STEFANI L, SZYCHLINSKA MA AND MUSUMECI G. The "Journal of Functional Morphology and Kinesiology" Journal Club Series: Highlights on Recent Papers in Physical Activity and Sedentary Behavior. J FUNCT MORPHOL KINESIOL (2018) 3:23. doi.org/10.3390/jfmk3020023
14. ANNIBALINI G, LUCERTINI F, AGOSTINI D, VALLORANI L, GIOACCHINI A, **BARBIERI E**, GUESCINI M, CASADEI L, PASSALIA A, DEL SAL M, PICCOLI G, ANDREANI M, FEDERICI A, STOCCHI V. Concurrent Aerobic and Resistance Training Has Anti-Inflammatory Effects and Increases Both Plasma and Leukocyte Levels of IGF-1 in Late Middle-Aged Type 2 Diabetic Patients. OXIDATIVE MEDICINE AND CELLULAR LONGEVITY 2017: 3937842. doi: 10.1155/2017/3937842.
15. **BARBIERI E**, GUESCINI M, CALCABRINI C, VALLORANI L, DIAZ A R, FIMOGNARI C, CANONICO B, LUCHETTI F, PAPA S, BATTISTELLI M, FALCIERI E, ROMANELLO V, SANDRI M, STOCCHI V, CIACCI C, AND SESTILI P (2016) Creatine prevents the structural and functional damage to mitochondria in myogenic, oxidatively-stressed C2C12 cells and restores their differentiation capacity. OXIDATIVE MEDICINE AND CELLULAR LONGEVITY ID 5152029 doi.org /10.1155/ 2016/ 5152029.
16. SESTILI P, **BARBIERI E**, STOCCHI V (2016). Effects of creatine in skeletal muscle cells and in myoblasts differentiating under normal or oxidatively stressing conditions. MINI-REVIEWS IN

MEDICINAL CHEMISTRY, vol. 16, p. 4-11, ISSN: 1875-5607, doi: 10.2174/1389557515666150722102342.

17. DE SANTI M, ANNIBALINI G, **BARBIERI E**, VILLARINI A, VALLORANI L, CONTARELLI S, BERRINO F, STOCCHI V, BRANDI G (2016). Human IGF1 pro-forms induce breast cancer cell proliferation via the IGF1 receptor. CELLULAR ONCOLOGY (Dordrecht), vol. 39, p. 149-159, ISSN: 2211-3428, doi: 10.1007/s13402-015-0263-3.
18. ANNIBALINI G, BIELLI P, DE SANTI M, AGOSTINI D, GUESCINI M, SISTI D, CONTARELLI S, BRANDI G, VILLARINI A, STOCCHI V, SETTE C, **BARBIERI E** (2016). MIR retroposon exonization promotes evolutionary variability and generates species-specific expression of IGF-1 splice variants. BIOCHIMICA ET BIOPHYSICA ACTA. GENE REGULATORY MECHANISMS, p. 757-768, ISSN: 1874-9399, doi: 10.1016/j.bbagrm.2016.03.014.
19. SESTILI P, AMBROGINI P, **BARBIERI E**, SARTINI S, FIMOGNARI C, CALCABRINI C, DIAZ A R, GUESCINI M, POLIDORI E, LUCHETTI F, CANONICO B, LATTANZI D, CUPPINI R, PAPA S, STOCCHI V (2016). New insights into the trophic and cytoprotective effects of creatine in in vitro and in vivo models of cell maturation. AMINO ACIDS, p. 1-15, ISSN: 0939-4451, doi: 10.1007/s00726-015-2161-4.
20. GUESCINI M, CANONICO B, LUCERTINI F, MAGGIO S, ANNIBALINI G, **BARBIERI E**, LUCHETTI F, PAPA S, STOCCHI V (2015). Muscle releases alpha-sarcoglycan positive extracellular vesicles carrying miRNAs in the bloodstream. PLOS ONE, vol. 10, p. 1-19, ISSN: 1932-6203, doi:10.1371/journal.pone.0125094.

Urbino, 15th January 2021

.....

Contact information
Department of Biomolecular Sciences
School of Sport, Health and Physical Exercise
University of the Urbino Carlo Bo
Via I. Maggetti, 26, Urbino (PU) 61029 Italy
Tel + 39 0722 303417; Fax + 39 0722 303401
Email: elena.barbieri@uniurb.it