FORMATO EUROPEO PER IL CURRICULUM VITAE

PERSONAL INFORMATION

Name: **ALESSANDRA BOSUTTI**

Address: DEPARTMENT OF LIFE SCIENCES (DSV)
UNIVERSITY OF TRIESTE
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34127, TRIESTE
ITALY

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Nationality: Italian

Education/Training

1990: Graduated in Biological Sciences, University of Trieste, Italy. Thesis in Biochemistry: Proteine del tipo HMG in cellule neoplastiche umane (Prof. Vincenzo Giancotti, University of Trieste) (Laurea in Scienze Biologiche, vecchio ordinamento)

1992: Qualifying National Exam (Professional habilitation) in Biology

2008: PhD in Molecular Medicine, University of Trieste, Italy. Thesis: Muscle catabolic mechanisms from disuse atrophy to cachexia; University of Trieste, Italy (Supervision: Prof. G. Biolo, University of Trieste, Italy)

2020: National Scientific Abilitation (ASN) for Associate Professor in Physiology (Abilitazione Scientifica Nazionale, Prof. II fascia, settore concorsuale 05/D1 Fisiologia)

CURRENT EMPLOYMENT

- **Since Jan 2023**

Research Contract of collaboration |Contratto di collaborazione
Università di Trieste, Dipartimento di Scienze della Vita

Laboratory of Biophysics and Cellular Neurobiology

University of Trieste, Italy.
DEPARTMENT OF LIFE SCIENCES (DSV)
UNIVERSITY OF TRIESTE
VIA FLEMING, 22
34127, TRIESTE
ITALY

Research Programs: to study the changes induced by bed rest and the effects of human centrifugation on the neuromuscular system (MIAG–study) funded by the Italian Space Agency (ASI). In the frame of the NASA/ESA long-term bed-

rest study AGBRESA testing artificial gravity (2019)

PREVIOUS EMPLOYMENT/ PROFESSIONAL EXPERIENCE

- **Dec 2021-Dec 2022**

Research Fellow – (Physiology, BIO09)
(assegno di ricerca art. 22, l. n. 240/2010, BIO 09)

***Laboratory of Biophysics and Cellular Neurobiology*, DEPARTMENT OF LIFE SCIENCES (DSV),** University of Trieste, Italy.

Research Programs: to study the changes induced by bed rest and the effects of human centrifugation on the neuromuscular system (MIAG–study) funded by the Italian Space Agency (ASI). In the frame of the NASA/ESA long-term bed-rest study AGBRESA testing artificial gravity (2019)

- March 2021-Dec 2021

VISITING COLLABORATOR (VOLUNTEER) IN THE FRAME OF THE **"NEMUCO"** PROJECT (Microgravity induced expression in a nerve muscle co-culture model)
Laboratory of Biophysics and Cellular Neurobiology
DEPARTMENT OF LIFE SCIENCES (DSV), University of Trieste, Italy.

- Mar. 2018-Mar. 2021

Research Fellow (Physiology, BIO09)
(Assegno di ricerca: art. 22, l. n. 240/2010, BIO 09)
University of Trieste, Italy.

2019:2021

Research Programs:
Microgravity induced expression in a nerve muscle co-culture model NEMUCO (Prof. P. Lorenzon, DSV, units)

2918-2019

"Memori-net"- Development of a protocol for motor rehabilitation in post-stroke patients (Program Interreg VA Italia-Slovenia 2014-2020)

- June 2019

Guest scientist: at the Charité Medical University and Center for Space Medicine (ZWMB) of Berlin, Germany, in the frame of the research program: Microgravity induced expression in a nerve muscle co-culture model NEMUCO

- Sep. 2017-Dec. 2017

Visiting (volunteer): Laboratory of neuro-muscular plasticity, Brain Center, Department of Life Sciences, University of Trieste, Italy.

- Apr. 2016-Oct. 2016

TUTOR in Molecular biology (employer University of Trieste): Department of Medical, Surgery and Health Sciences, University of Trieste, Italy.
Activities:
-Setting up teaching for lab practices in "Cell and molecular biology of human diseases".
- Co-supervisor activity for Bachelor Thesis: "Messa a punto di un saggio In-Cell Western per lo studio di eEF1A1 ed eEF1A2 come biomarcatori molecolari nel cancro della prostata umana", corso di laurea in Scienze e Tecnologie Biologiche (a.c. 2015-2016), Student: Roman Vuerich.

- Feb 2014- Feb 2016

Research Fellow (Molecular Biology, MED/08 and BIO11)
(Assegno di ricerca: art. 22, l. n. 240/2010, MED/08 and BIO11)

Department of Clinical, Morphological and Technological Sciences, University of Trieste, Italy
Research program: Use of selective DNA-aptamers to specific cell-molecular targeting in human prostate cancer (PI: Dr. Scaggiante DSV, Units)

- Oct. 2014-Oct.2017

Honorary Visiting research fellow (Guest scientist, no payed position): School of Healthcare Science, Manchester Metropolitan University, UK

- May 2008-Nov. 2013

Senior research associate (Employer: Manchester Metropolitan University, UK)
Institute for Biomedical Research into Human Movement and Health School of Healthcare Science, Manchester Metropolitan University, UK

Research Programs:

2008-2012

Molecular applications to improve tissue recovery after human brain stroke. Role of the cyclin kinase Cdk5 in brain microvascular angiogenesis (PI: Prof. M. Slevin)

- Feb 1999- March 2005

Research Fellow (Medical Sciences, Internal Medicine)
(Assegno di ricerca: art. 51, comma 6, della legge 27.12.1997 n° 449 e DM 11.2.1998, F07A)
Dep. of Clinical, Morphological and Technological Sciences (DSM), University of Trieste, Italy
Research Programs:
-STBR (short term bed rest) ESA (European Space Agency) study: Energy restriction during experimental bed rest in volunteers (PI: Prof. G. Biolo)
- Inflammatory response in bed rest, aging and chronic /acute diseases. (PI: Prof. G. Biolo, DSM, Units)
-Hormonal and nutritional modulation of muscle mitochondria-metabolism
(Prof. G. Biolo, DSM, Units)

- Sep 1996-Sep 1998

Research fellowship: "European Society for Clinical Nutrition and Metabolism (E.S.P.E.N)"
Research Program:
Molecular regulation of protein catabolism in trauma patients (Prof. G. Biolo, DSM, Units)

- 1994-1995

Visiting scientist: International Centre for Genetic Engineering and Biotechnology (I.C.G.E.B). Area Sciences Park, Trieste, Italy. (Prof. F. Baralle, Molecular Pathology Lab)
Research program:
Gene expression of muscle proteolytic pathways in chronic and acute patients (Prof. G. Toigo e G. Biolo, DSM, Units)

- 1992-1994

Fellowship (Azienda Sanitaria Integrata ASL): Department of Clinical, Morphological and Technological Sciences, University of Trieste, Italy.
Research program:
Gene expression of muscle proteolytic pathways in chronic and acute patients (Prof. G. Toigo e G. Biolo, DSM, Units)

SCIENTIFIC INTERESTS

My research is focused on the identification of new strategies to improve skeletal muscle regeneration and counteract neuromuscular deconditioning due to disuse, spaceflight and aging, and ranges from basic cell-molecular biology to muscle physiology, epigenetics (microRNAs) and pathophysiology of inflammation and oxidative stress, apoptosis and tissue regeneration.

That includes:

SPACE PHYSIOLOGY
MOLECULAR DETERMINANTS OF MUSCLE ATROPHY
ROLE OF MUSCLE DISUSE IN MUSCLE ATROPHY AND GROWTH
INVOLVEMENT OF INFLAMMATION AND OXIDATIVE STRESS IN THE PROCESS OF MUSCLE ATROPHY
MICRORNAS AND EPIGENETICS MODULATORS OF MUSCLE ATROPHY AND REGENERATION
MYOKINES
ENDOTHELIAL MICROVASCULAR ANGIOGENESIS IN THE RECOVERY OF BRAIN AFTER STROKE
APPLICATION OF NEUROMUSCULAR SYSTEMS TO STIMULATE SKELETAL MUSCLE CELLS

GENERAL TECHNICAL EXPERTISE

Circulating biomarkers of muscle wasting, myogenesis, myokines.
Analysis of inflammatory and oxidative stress biomarkers.
Circulating human microRNAs, and molecular biology techniques. RNA extraction and gene expression analysis from muscle, blood cells and adipose tissue, Real Time PCR, circulating oxidative stress biomarkers, muscle protein analysis, cloning, western blotting, cell transfection (siRNAs, DNA aptamers), mitochondria metabolism.
Muscle tissue morphometric analysis.
Muscle capillarisation analysis.
Analysis of muscle water content and muscle volume on MRI images. ELISA, EIA assays.
Isolation and cell culture of fresh isolated adult muscle fibres and isolated primary mouse skeletal muscle satellite cells. Isolation and cell culture of isolated primary mouse brain endothelial cells.
Cells confocal immunofluorescence and image analysis.
Cells confocal immunofluorescence and image analysis of neuromuscular junction and protein networks.
In vitro cell angiogenesis processes of human brain microvascular endothelial cells (cell adhesion, spreading, migration, spheroids formation, neo capillary structure).
In vitro myogenesis processes.
Brain tissue and brain capillary bed HIC immunostaining.
Muscle oxidative capacity analysis.
HIC.
In Vivo cell imaging (Cell IQ).

Use of dedicated software:

-Image analysis: Fiji/ImageJ; FibreFit; Anatis
-Statistical analysis: Prism-GraphPad e Origin
(please refer to my publication list for more details on general technical expertise)

FIRST LANGUAGE	ITALIAN
OTHER LANGUAGES	ENGLISH
READING	FLUENT
WRITING	FLUENT
SPEAKING	FLUENT

ADDITIONAL INFORMATION

Ad Hoc Reviewer activities for the following Scientific Journals:

Frontiers in Physiology
Journal of Physiology
Molecular and Cellular Biochemistry
Vascular Cell
Journal Applied Physiology
Acta Histochemica
Journal of Musculoskeletal Disorders and Treatment

INTERNATIONAL COLLABORATORS

Prof. Hans Degens, Department of Life Sciences, Research Centre for Musculoskeletal Science & Sports Medicine, Manchester Metropolitan University, Manchester, United Kingdom

Prof. Bergita Ganse: Innovative Implant Development, Saarland University, Clinics and Institutes of Surgery, Homburg, Germany

Prof. Gustav Strijkers, Amsterdam UMC, University of Amsterdam, The Netherlands

Dr. Rob Wüst, Department of Human Movement Sciences, VU University, The Netherlands

Dr. Nicola Maffiuletti, Human Performance Lab, Schulthess Clinic, Zurich, Switzerland

TEACHING ACTIVITIES

12/2022	Seminari ad integrazione delle lezioni nell'ambito del Corso di Fisiologia per Scienze e Tecnologie Biologiche, Dipartimento di Scienze della Vita, Università di Trieste - Seminar title: " Spazio e ricerca biomedica: Cosa stiamo imparando dalle missioni spaziali umane" Proponent: Prof. M. Sciancalepore, Department of Life Sciences, University of Trieste, Italy
11/2021	Seminari ad integrazione delle lezioni nell'ambito del Corso di Fisiologia per Scienze e Tecnologie Biologiche, Dipartimento di Scienze della Vita, Università di Trieste - Seminar title: "DALLA SALUTE UMANA NELLO SPAZIO PER LA SALUTE UMANA SULLA TERRA", COSA STIAMO IMPARANDO DALLA RICERCA SPAZIALE" Proponent: Prof. M. Sciancalepore, Department of Life Sciences, University of Trieste, Italy. -Seminar title: COVID-19 E SISTEMA NEUROMUSCOLARE: IMPLICAZIONI FISIOLOGICHE E FISIOPATOLOGICHE. Proponent: Prof. M. Sciancalepore, Department of Life Sciences, University of Trieste, Italy.
2020/2021	Co-supervisor activity for Master Thesis, International Master's Degree in Neuroscience, University of Trieste (Supervisor: Prof. P.Lorenzon)
3/2021	Invited Lecturer for the "Universitary College "Luciano Fonda"", University of Trieste. (Incarico per didattica non formale a favore degli student del Collegio Universitario "Luciano Fonda") Title of the lecturer: SIAMO PRONTI PER MARTE? "THE ASTRONAUT-ATHLETE", COME PREPARARE L'UOMO D'OGGI, PER I VIAGGI FUTURI VERSO MARTE, E NON SOLO, DI DOMANI
11/2020	Seminari ad integrazione delle lezioni nell'ambito del Corso di Fisiologia per Scienze e Tecnologie Biologiche, Dipartimento di Scienze della Vita, Università di Trieste Seminar title: "DALLA DIETA ALL'ESERCIZIO: COME L'UOMO SI PREPARA PER AFFRONTARE I FUTURI VIAGGI SPAZIALI DI LUNGA DURATA " Proponent: Prof. M. Sciancalepore, Department of Life Sciences, University of Trieste, Italy.
10/2020	Support to the practical activity "Molecular Neurophysiology" for the students of International Master's Degree in Neuroscience, University of Trieste.
01/2020	Support to the practical activity "Molecular Neurophysiology" for the students of International Master's Degree in Neuroscience, University of Trieste. Supervisor (correlatore): Programme in Biological Sciences and Technologies (Class L-13,2), University of Trieste (Accademic year: 2018-2019). Bachelor Thesis: MICROGRAVITÀ: CONSEGUENZE SUL TESSUTO MUSCOLARE SCHELETRICO E POTENZIALI CONTROMISURE.
03/2019 and 12/2019	Opponent of Master Thesis, International Master's Degree in Neuroscience, University of Trieste.
10/2019	Seminari ad integrazione delle lezioni nell'ambito del Corso di Fisiologia per Scienze e Tecnologie Biologiche, Dipartimento di Scienze della Vita, Università di Trieste

	Seminar title: GLI EFFETTI DELLA MICROGRAVITÀ SUL MUSCOLO SCHELETRICO. NUOVE CONTROMISURE PER PREVENIRE L'ATROFIA MUSCOLARE. Proponent: Prof. M. Sciancalepore, Department of Life Sciences, University of Trieste, Italy.
	Co-Supervisor of a Master student, International Master's Degree in Neuroscience, University of Trieste.
11/2018	Seminar/lecture for the course of studies in Biological Sciences and Technologies, University of Trieste: "BIOMARKERS AND NEW REHABILITATION PROGRAMS FOR BRAIN STROKE PATIENTS". Proponent: Prof. M. Sciancalepore, Department of Life Sciences, University of Trieste, Italy.
11/2018	Seminar/lecture for the course of studies in Biological Sciences and Technologies, University of Trieste: "GLI EFFETTI DELLA MICROGRAVITÀ SUL MUSCOLO SCHELETRICO. NUOVE CONTROMISURE PER PREVENIRE L'ATROFIA MUSCOLARE". Proponent: Prof. M. Sciancalepore, Department of Life Sciences, University of Trieste, Italy.
12/2017	Seminar/lecture for the course of studies in Biological Sciences and Technologies, University of Trieste: "ATROFIA MUSCOLARE NEL DISUSO E MICROGRAVITÀ: COME LO SPAZIO MODIFICA IL MUSCOLO A LIVELLO CELLULARE". Proponent: Prof. M. Sciancalepore, Department of Life Sciences, University of Trieste, Italy.
	Co-supervisor (correlatore) Bachelor Degree thesis, course of studies in Biological Sciences and Technologies (Class L-13,2), Department of Life Sciences, University of Thesis: Biomarkers as indicators of muscle damage in the post-stroke patient.
2016	Tutorial: REAL-TIME RT PCR TOOLS AND DATA ANALYSIS (Department of Medical, Surgery and Health Sciences, University of Trieste, Italy).
2015	Invited Seminar: THE EUKARYOTIC ELONGATION FACTORS EEF1A1 AND EEF1A2 AS NEW POTENTIAL MOLECULAR TARGETS AND BIOMARKERS IN PROSTATE CANCER. Proponent: Prof. B. Scaggiante, Department of Life Sciences and Prof. F. Zanconati, Department of Medicine Surgery and Health Sciences, University of Trieste, Italy.
2016	Co-supervisor activity for Bachelor Thesis: "Messa a punto di un saggio In-Cell Western per lo studio di eEF1A1 ed eEF1A2 come biomarcatori molecolari nel cancro della prostata umana", corso di laurea in Scienze e Tecnologie Biologiche (a.c. 2015-2016), Student: Roman Vuerich
2015-2016	Co-supervisor and assistant supervisor undergraduate students: Project: Set up of an in-cell western assay for the evaluation of eEF1A1 and eEF1A2 isomers as molecular biomarkers in human prostate cancer (DSM and DSV, University of Trieste, Italy).
2012 and 2013	Tutorials and lectures: BRAIN STROKE AND SKELETAL MUSCLE ATROPHY IN CARDIOVASCULAR DISEASES (Manchester Metropolitan University, Uk).
2013	Assistant supervisor (Master student-Thesis) – project: The Role of Systemic Inflammation on Skeletal Muscle Changes during Bed rest for 21days; Manchester Metropolitan University, UK.
2010	Tutoring (Master Student -Thesis) – project: Role of citicoline in angiogenesis associated with stroke recovery; Manchester Metropolitan University, UK.
	Tutoring (Master Student-Thesis) – project: Role of apoptosis and the expression of transcriptional factors on muscle adaptations in rats with chronic hypoxia; Manchester Metropolitan University.

2003-2005 Lectures in "GENETIC OF DIABETES"
(Department of Medical, Surgery and Health Sciences, University of Trieste, Italy, Proponents: Prof. L. Cattin and Prof. G. Biolo, University of Trieste, Italy.

PROFESSIONAL HIGHLIGHTS:

Activities in microgravity/space studies:

2021 NASA- National Aeronautics and Space Administration CITI Program course for Biomedical Research

2021 Co-investigator in the ESA Antarctic research project at Concordia Station "Muscle and cartilage in Antarctic over-winterers (MACIA); ESA/IPEV/PNRA Announcement of Opportunity soliciting for Human Research on Concordia, Antarctica (AO-2021-Concordia)
B. Ganse (DE); A. Bosutti (IT); H. Degens (UK); C. Hoog Antink (DE); H. Madry (DE)

2019 Principal investigator and coordinator in the ESA (European Space Agency) selected proposal related to the announcement of opportunity for life science research AO-2019-ISS-SDM.
Space flight (ISS) Experiment name: "Muscle Stimulation"
Bosutti A (IT), Degens H (UK), Ganse B (DE), Maffiuletti N (SW), Strijkers G (NL), Wüst RCI (NL).

2019 Guest scientist at the Charité Medical University and Center for Space Medicine (ZWMB) of Berlin, Germany, in the frame of the research program: Microgravity induced expression in a nerve muscle co-culture model NEMUCO

2017 ESA/NASA international work group meeting (IWG) at the German Aerospace Centre (DLR), Cologne, Germany. Oral communication: project presentation related to the announcement of opportunity for life science research using the spaceflight analogue "BED REST" and artificial gravity (2016) AGBRESA study

2016 Co-investigator in ESA (European Space Agency)/NASA selected proposal for the announcement of opportunity for life science research using the space flight analogue "BED REST" and artificial gravity. Degens H, Bosutti A, Ganse B, Drey M, Maffiuletti N, Wüst RCI.

2013 European Space Research and Technology Centre (ESTEC)/European Space Agency (ESA), work group meeting, Noordwijk, The Netherland. Oral communication: results from bed rest MEP-Study (2011-2012) (Project led by: Prof. H. Degens, MMU, UK).

2012 German Aerospace Centre/ESA work group meeting, Cologne, Germany. Oral communication: preliminary data from bed rest MEP-Study (2011-2012) (Project led by: Prof. H. Degens, MMU, UK).

2007 Research activity within the ESA Bed Rest study: Protein nutrition in aging. Effects of inactivity on antioxidant systems and cardiovascular risk, Valdoltra, Slovenia. (Project led by: Prof. G. Biolo, Department of Medical, Surgery and Health Sciences, University of Trieste, Italy

2002-2003 Research activity within the STBRESA bed rest study: Energy restriction during experimental bed rest in volunteers; ESA-European Space Agency-DLR Cologne Germany.
(Project led by: Prof. G. Biolo, Department of Medical, Surgery and Health Sciences, University of Trieste, Italy)

GRANTS

2022 ASI (Italian Space Agency) grant funding to support research activity for the ESA Antarctic

	research project at Concordia Station "Muscle and cartilage in Antarctic over-winterers (MACIA); ESA/IPEV/PNRA Announcement of Opportunity soliciting for Human Research on Concordia, Antarctica (AO-2021-Concordia)
2021	ASI (Italian Space Agency) grant: Prot. N. 2352 dd.17/03/2021
2021	ASI (Italian Space Agency) grant: Prot. N. 2344 dd.17/03/2021
2021	Co-investigator in the ESA Antarctic research project at Concordia Station "Muscle and cartilage in Antarctic over-winterers (MACIA); ESA/IPEV/PNRA Announcement of Opportunity soliciting for Human Research on Concordia, Antarctica (AO-2021-Concordia)
2019	Principal investigator and coordinator in the ESA (European Space Agency) selected proposal related to the announcement of opportunity for life science research AO-2019-ISS-SDM
2016	Co-investigator in ESA (European Space Agency)/NASA selected proposal for the announcement of opportunity for life science research using the space flight analogue "BED REST" and artificial gravity.

Research awards

2020	Research award: Premio di ricerca per gli assegnisti del Dipartimento di Scienze della Vita Università di Trieste per l'anno 2020, ambito Biomedico
2003-2002	Best paper published in: Clinical Nutrition; European Society for Clinical Nutrition and Metabolism (E.S.P.E.N)
1996	European Society for Clinical Nutrition and Metabolism (E.S.P.E.N): "Molecular regulation of protein catabolism in trauma patients"

LIST OF PUBLICATIONS

1. Hendrickse PW, Wüst RCI, Ganse B, Giakoumaki I, Rittweger J, **Bosutti A**, Degens H. Capillary rarefaction during bed rest is proportionally less than fibre atrophy and loss of oxidative capacity. J Cachexia Sarcopenia Muscle. 2022 Dec;13(6):2712-2723. doi: 10.1002/jcsm.13072.

2. Volpe P, **Bosutti A**, Nori A, Filadi R, Gherardi G, Trautmann G, Furlan S, Massaria G, Sciancalepore M, Megighian A, Caccin P, Bernareggi A, Salanova M, Sacchetto R, Sandonà D, Pizzo P, Lorenzon P. Nerve-dependent distribution of subsynaptic type 1 inositol 1,4,5-trisphosphate receptor at the neuromuscular junction. J Gen Physiol. 2022 Nov 7;154(11):e202213128. doi: 10.1085/jgp.202213128.

3. **Bosutti A,** Dapas B, Grassi G, Bussani R, Zanconati F, Giudici F, Bottin C, Pavan N, Trombetta C, Scaggiante B. High eEF1A1 Protein Levels Mark Aggressive Prostate Cancers and the In Vitro Targeting of eEF1A1 Reveals the eEF1A1-actin Complex as a New Potential Target for Therapy. Int J Mol Sci. 2022 Apr 8;23(8):4143. doi: 10.3390/ijms23084143.

4. **Bosutti A**, Giniatullin A, Odnoshivkina Y, Giudice L, Malm T, Sciancalepore M, Giniatullin R, D'Andrea P, Lorenzon P, Bernareggi A. "Time window" effect of Yoda1-evoked Piezo1 channel activity during mouse skeletal muscle differentiation. Acta Physiol (Oxf). 2021 Jun 7:e13702. doi: 10.1111/apha.13702.

5. Lorenzon P, Furlan S, Ravara B, **Bosutti A**, Massaria G, Bernareggi A, Sciancalepore M, Trautmann G, Block K, Blottner D, Worley PF, Zampieri S, Salanova M, Volpe P. Preliminary Observations on Skeletal Muscle Adaptation and Plasticity in Homer $2^{-/-}$ Mice. Metabolites. 2021 Sep 19;11(9):642. doi: 10.3390/metabo11090642.

6. Ganse B, **Bosutti A**, Drey M, Degens H. Sixty days of head-down tilt bed rest with or without artificial gravity do not affect the neuromuscular secretome. Exp Cell Res, 399, 112463, 2021

7. Attias J, Grassi A, **Bosutti A**, Ganse B, Degens H, Drey M. Head-down tilt bed rest with or without artificial gravity is not associated with motor unit remodeling. Eur J Appl Physiol, 120, 2407-2415, 2020

8. **Bosutti A**, Mulder E, Zange J, Bühlmeier J, Ganse B, Degens H. Effects of 21 days of bed rest and whey protein supplementation on plantar flexor muscle fatigue resistance during repeated shortening contractions. Eur J Appl Physiol, 2020 Mar 4 doi: 10.1007/s00421-020-04333-5

9. Blottner D, Hasterman M, Weber R, Lenz R, Gambara G, Limper U, Rittweger, **Bosutti A,** Degens H, Salanova M. Reactive jumps preserve skeletal muscle structure, phenotype and myofiber oxidative capacity in bed rest. Frontiers in Physiology, 10, Article 1527, 2020

10. **Bosutti A**, Kalaja O, Zanconati F, Dapas B, Grassi G, Passamonti S, Scaggiante B. A rapid and specific method to simultaneously quantify eukaryotic elongation factor 1A1 and A2 protein levels in cancer cells. J Pharm Biomed Anal. 2019 Nov 30;176:112814.

11. **Bosutti A**, Bernareggi A, Massaria G, D'Andrea P, Taccola G, Lorenzon P, Sciancalepore M. A "noisy" electrical stimulation protocol favors muscle regeneration in vitro through release of endogenous ATP. Exp Cell Res. 2019.

12. Barnouin Y , McPhee JS, Butler-Brown G, **Bosutti A**, De Vito G, Jones DA , Narici M, Behin A, Hogrel JY, Degens H. Coupling between skeletal muscle fiber size and capillarization is a fundamental characteristic that is maintained during healthy aging. Journal of Cachexia, Sarcopenia and Muscle, 2017

13. **Bosutti A**, Salanova M, Blottner D, Buehlmeier J, Mulder E, Rittweger J, Yap MH, Ganse B, Degens H. Whey protein with potassium bicarbonate supplement attenuates the reduction in muscle oxidative capacity during 19 days bed rest. J Appl Physiol

(1985). 2016

14. **Bosutti A**, Zanconati F, Grassi G, Dapas B, Passamonti S and Scaggiante B. Epigenetic and miRNAs dysregulation in prostate cancer: the role of nutraceuticals: in Anti-Cancer Agents in Medicinal Chemistry. 2016

15. **Bosutti A**, Egginton S, Barnouin Y, Ganse B, Rittweger J, Degens H. Local capillary supply in muscle is not determined by local oxidative capacity. J Exp Biol. 2015

16. **Bosutti A**, Degens H. The impact of resveratrol and hydrogen peroxide on muscle cell plasticity shows a dose-dependent interaction. Scientific Reports. 2015

17. D. Blottner, **A. Bosutti**, H. Degens, G. Schiffl, M. Gutsmann, J. Buehlmeier, J. Rittweger, B. Ganse, M. Heer, M. Salanova. Whey protein plus bicarbonate supplement has little effects on structural atrophy and proteolysis marker immunepatterns in skeletal muscle disuse during 21 days of bed rest. J. Musculoskelet. Neuronal. Interact. 2014.

18. B. Scaggiante & **A. Bosutti**.EEF1A1 (eukaryotic translation elongation factor 1 alpha 1), in Atlas Genet. Cytogenet. Oncol. Haematol. (http://atlasgeneticsoncology.org/Genes/EEF1A1ID40407ch6q13.html). July 2014 (No in PubMed. IF 2014 not available).

19. **Bosutti A**, Qi J, Pennucci R, Bolton D, Matou S, Ali K, Tsai LH, Krupinski J, Petcu EB, Montaner J, Al Baradie R, Caccuri F, Caruso A, Alessandri G, Kumar S, Rodriguez C, Martinez-Gonzalez J, Slevin M. Targeting p35/Cdk5 signalling via CIP-peptide promotes angiogenesis in hypoxia. PLoS One. 2013

20. Navone SE, Marfia G, Invernici G, Cristini S, Nava S, Balbi S, SangiorgiS,Ciusani E, **Bosutti A**, Alessandri G, Slevin M, Parati EA. Isolation and expansion of human and mouse brain microvascular endothelial cells. Nature Protocol. 2013

21. Navone SE, Marfia G, Nava S, Invernici G, Cristini S, Balbi S, Sangiorgi S,Ciusani E, **Bosutti A**, Alessandri G, Slevin M, Parati EA. Human and mouse brain-derived endothelial cells require high levels of growth factors medium for their isolation, in vitro maintenance and survival. Vascular Cell. 2013

22. Zanetti M, Barazzoni R, Cappellari GG, Burekovic I, **Bosutti A**, Stocca A, Bianco F, Ianche M, Panzetta G, Guarnieri G. Hemodialysis Induces p66(shc) Gene Expression in Non diabetic Humans: Correlations with Oxidative Stress and Systemic Inflammation. J. Ren. Nutr. 2011.

23. Barazzoni R, Zanetti M, Semolic A, Pirulli A, Cattin MR, Biolo G, **Bosutti A**, Panzetta G, Bernardi A, Guarnieri G. High plasma RBP4 is associated with systemic inflammation independently of low rbp4 adipose expression and is normalized by transplantation in non-obese, non-diabetic patients with chronic kidney disease. Clin. Endocrinol. 2011

24. Degens H, **Bosutti A**, Gilliver SF, Slevin M, vanHeijst A, Wüst RC. Changes in contractile properties of skinned single rat soleus and diaphragm fibres after chronic hypoxia. Pflugers Arch. 2010

25. **Bosutti A**, Malaponte G, Zanetti M, Castellino P, Heer M, Guarnieri G, Biolo G. Calorie restriction modulates inactivity-induced changes in the inflammatory markers C-reactive protein and pentraxin-3. J Clin.Endocrinol.Metab. 2008.

26. **Bosutti A**, Scaggiante B, Grassi G, Guarnieri G, Biolo G. Overexpression of the elongation factor 1A1 relates to muscle proteolysis and pro apoptotic p66(ShcA) gene transcription in hypercatabolic trauma patients. Metabolism. 2007.

27. **Bosutti A**, Grassi G, Zanetti M, Aleksova A, Zecchin M, Sinagra G, Biolo G, Guarnieri G. Relation between the plasma levels of LDL-cholesterol and the expression of the early marker of inflammation long pentraxin PTX3 and the stress response gene

p66ShcA in pacemaker-implanted patients. Clin.Exp. Med.2007.

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Abstracts and conference proceedings

- **2023 Fünfte KNIMS meeting: Alessandra Bosutti,** Bergita Ganse, Ifigeneia Giakoumaki, Edwin, Mulder, Jörn Rittweger, Moritz Eggelbusch , Rob C.I. Wüst, and Hans Degens. Impact of 60-day bed rest and artificial gravity on serum oxidative stress biomarkers and skeletal muscle protein carbonylation: data from the 60-day AGBRESA bed-rest study

- **2021 NASA Human Research Program (HRP):** Ganse B. **Bosutti A**, Drey M, Degens H. Long-term bedrest and artificial gravity by human centrifugation have neither an effect on circulating levels of neurotrophic factors, nor on biomarkers of muscle wasting and neuromuscular junction integrity. Conference poster, NASA HRP IWS 2021, Galveston, Texas, USA.

- **2020 NASA Human Research Program (HRP):** Human Research Program IWS. Ganse B, Wüst RCI, Giakoumaki I, **Bosutti A**, Rittweger J, Drey M, Degens H. Changes in contractile properties of single muscle fibres – methodology and preliminary results of the AGBRESA study. Conference poster, HRP IWS 2020, Galveston, Texas, USA.

- **2020 NASA Human Research Program (HRP):** Human Research Program IWS. Giakoumaki I, Ganse B, **Bosutti A**, Rittweger J, Degens H, Wüst RCI. Mitochondrial respiration in human skeletal muscle after 60 days of bed rest. Conference poster, NASA HRP IWS 2020, Galveston, Texas, USA.

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- **Symposium and workshop "Skeletal muscle research"** Ljubljana 2019 - from cell to human, **invited speaker. A. Bosutti,** A. Bernareggi, G. Massaria, P. D'Andrea, G. Taccola, P. Lorenzon and M. Sciancalepore. Noisy electrical stimulation to counteract skeletal muscle atrophy. ", Ljubljana 26-28 May 2019

- **MEMORI. NET Summer Meeting** 20.7.18, DSV University of Trieste, Italy. Invited speaker: New protocols for neuromuscular electrical stimulation to counteract muscle atrophy and promote muscle regeneration.

- **EMC (European Muscle Conference)** 2014. **A. Bosutti,** D. Blottner, M. Salanova, J.

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Sincerely yours,

Trieste, 14.09.2023

Alessandra Bosutti

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