

Alessio Menga, Curriculum vitae:

Born: Cisternino 20/11/1983

Master Degree in Pharmacy 12/11/2009

Ph.D. in Biochemical and Pharmacological Sciences 25/03/2013

Personal statement

I have twelve years of experience in mitochondrial metabolism from tumour to multi-organs disease. I graduated and got my PhD in the lab of **Prof. Ferdinando Palmieri** (Faculty of Pharmacy, University of Bari, Italy), working on the transcriptional and epigenetic regulation of human mitochondrial carriers. During this experience, **I patented a mitochondrial citrate carrier inhibitor** in the treatment of inflammation and published several papers in biochemistry field (including first authorship in *Int. J. Biochem. Cell Biol.*). In 2016 I moved to IRCCS Oncological Hospital Giovanni Paolo II (Bari) working as Junior Researcher in the project: “Liquid Biopsy: circulating nucleic acids and cancer cells, exosomes and metabolism in NSCLC and metastatic melanoma”. Working in close collaboration with clinicians (Dr. Attilio Guarini and Dr. Gennaro Cormio) and a metabolomic expert (**Prof. Alessandra Castegna**), I got acquainted in tumor biopsies from metastatic patients and I strengthened my background on amino acids metabolism in immune and cancer cells. This research experience led me to two first authorships in **FEBS J** and **Antioxid Redox Signal**, in which I identified S-adenosylmethionine carrier (SLC25A26) as a modulator of mitochondrial epigenetic in cancer cells and Glutamine Synthetase (GS) as a player of inflammatory response respectively. Upon receiving **both a FEBS and an EMBO Fellowship Award** I moved to the laboratory of tumor inflammation and angiogenesis headed by **Prof. Massimiliano Mazzone** (ViB, University of Leuven, Belgium), where I learned to characterize the phenotype and function of tumor associated macrophages (TAMs) and apply the bioenergetics knowledge for dissecting the metabolic pathways of immune cells. This research experience led me to three first authorships in **Cell Reports**, **EMBO Mol Med** and **EMBO Reports** in which I demonstrated the role of N-acetylaspartate and GS activity in driving the pro-angiogenic, immunosuppressive and pro-metastatic macrophages, and highlighted the possibility of targeting GS in the treatment of cancer metastasis. Furthermore, **I patented a glutamine synthetase inhibitor** for its use in cancer. In 2019 I joined the Lab of Cancer Metabolism and Cachexia, headed by **Prof. Paolo Porporato** (MBC, University of Turin, Italy). Here, taking advantage of metabolic background acquired over the years, I’m investigating the symbiosis between cancer, immune and muscle cells in a clinically relevant *mouse model* of *EML4-ALK-driven lung adenocarcinoma* that develops cachexia. Finally, in 2022 I published as co-last author in **EMBO Reports** on the role of iron metabolism in cachectic muscle shrinkage and I got My First AIRC Grant to pursue my scientific independence.

Fundings

- **2022: 45.750,00 euros** for “NF-Kb positively regulates Fatty Acid Oxidation in cancer cells, which hinders CD8+ T lymphocytes and promotes tumor progression” Finalizzata GR-2021-12374957 Project Type: Young Researcher (under 40 years), (PI: Giovanna Carrà, External Partner: Alessio Menga).
- **2022: 99.935,00 euros/year x 5 years** for “Dissecting mitochondrial lysine and tryptophan metabolism to target metabolic symbiosis in lung adenocarcinoma”, from **AIRC** (MFAG, Rif. 25908), PI: Alessio Menga,
- **2020-2021: 63.500,00 euros** from **AFM-Telethon** for application #23117 “GLUD1 as a potential target in Muscular Dystrophy” (PI: Prof. Mazzone, CoPI: Alessio Menga).
- **2019: 115.644,54 euros** from Pharma-company **OCTIMET®** to carry-out a project on the effects of MET inhibitors on angiogenic processes in murine breast cancer models (PI: Prof. Mazzone, CoPI: Alessio Menga).

Fundings under advanced evaluation

- **2023: 100.000,00 euros** from SANOFI, PI: Alessio Menga.

Awards and recognitions

FEBS Fellowship Short-Term (2 Months) at Laboratory of Tumor Inflammation and Angiogenesis, VIB Center for Cancer Biology, Department of Oncology, University of Leuven, Leuven, Belgium. PI: Prof. Massimiliano Mazzone, PhD

EMBO Fellowship Short-Term (3 Months) at Laboratory of Tumor Inflammation and Angiogenesis, VIB Center for Cancer Biology, Department of Oncology, University of Leuven, Leuven, Belgium. PI: Prof. Massimiliano Mazzone, PhD

TRANSMIT best poster award: “Pharmacological Targeting of Glutamine Synthetase Skews Macrophages Toward An Inflammatory Phenotype and Inhibits Metastasis”: Alessio M, Erika Mariana P, Massimiliano M & Alessandra C. Course in *Cancer Metabolism* in Bertinoro on November 29-30, 2018.

EACR best poster award: “Overexpression of the mitochondrial S-adenosylmethionine carrier in cervical cancer cells leads to rewiring of the methyl metabolism and sensitivity to cisplatin”. Alessio M, Erika Mariana P, Antonia C, Vito I, Alessandra C. Bertinoro 19-21 October 2017 ISCaM2017 - 4th Annual Meeting - Cancer Metabolism

OECI Meeting Bursary award: OECI Meeting Bursary to attend the 8th Edition of the “Molecular Pathology Approach to Cancer” training course, Amsterdam 4-6 June 2018.

MBC photo contest award: “PEOPLE IN SCIENCE” Turin on November 28, 2020.

Patents

- “Mitochondrial citrate carrier inhibitors in the treatment of inflammation”, Iacobazzi V., Infantino V., Convertini P., **Menga A.**, Palmieri F. – Universities of Bari and Basilicata. Number: RM2013A000167. Date: 19th March 2013.
- 06 September 2017, GB1711709.4 Applicants: Castegna A, Mazzone M, **Menga A.**, Palmieri EM
Title: Glutamine synthetase inhibitors in cancer

Conferences and seminars

- Selected speaker, “The 21st International Conference on Progress in Vaccination Against Cancer” (PIVAC-22) 26th–28th September 2022, Molecular Biotechnology Center, “Guido Tarone”, University of Turin, Italy.
- **Invited speaker**, Department of Agro-Food, Environmental and Animal Sciences’ seminar, University of Udine, January 26th 2022
- Selected poster, 29th IGB_Workshop entitled "Targeting the (un)usual suspects in cancer" (2-3 December 2021) <http://www.igb.cnr.it/workshop/>
- Selected poster, 33rd AICC ANNUAL CONFERENCE: INTERNATIONAL MEETING ON CANCER METABOLISM, November 22th-24th 2021, Turin
- Speaker, Molecular Biotechnology Center (MBC) seminar, University of Turin, Italy, November 15th, 2021
- Selected speaker, Cancer Research in 2021: SIC Young Researchers take center stage. Virtual meeting 27-28 October 2021
- **Invited speaker**, 3rd International Meeting “*Metabolism meets function*” MMF2021, virtual event, June 14th 2021.
- Speaker, Molecular Biotechnology Center (MBC) seminar, University of Turin, Italy, June 1st 2020
- **Invited speaker**, Cancer Metabolism Club, Candiolo IRCCS, Italy, December, 10th 2019
- **Invited speaker**, International Workshop “Pharmacological insights of altered lipid metabolism in oncological, neurological, cardiovascular, and hepatic diseases” Department of Pharmaceutical Sciences, University of Padova, Italy, December 5th, 2018
- Selected poster for the Course in *Cancer Metabolism*. Bertinoro, November 29-30, 2018.
- Selected speaker, XV Congress of the *Italian Federation of Life Sciences (FISV)*, Sapienza University of Rome, Italy, September 18th-21st 2018
- **Invited speaker**, 1st International Meeting “*Metabolism meets function*”, Department of Biosciences, University of Bari, Italy, July 20th 2018
- Selected poster, 4th Annual Meeting on Cancer Metabolism “International Society of Cancer Metabolism ISCaM2017” -, Bertinoro, Italy, October 19th-21st 2017
- Selected speaker, XVI National Meeting of Italian AIBG, Donnaregina Nuova Church, Napoli, ITALY, September 26th-27th, 2014
- Selected speaker, 1st National Meeting *DOTTORANDI E DOTTORI DI RICERCA PUGLIESE “Dottorandi a lavoro” Efficacia sul territorio dello studio dei giovani ricercatori pugliesi*, University of Bari, Italy, November 28th-29th, 2012
- Selected poster, *Joint National Ph.D. Meeting 2012*, Rimini, Italy, October 11th-13th, 2012
- Selected speaker, 2nd National Meeting “Il farmaco per diagnosi precoci e malattie rare” II GIORNATA PUGLIESE SU FARMACO E PRODOTTI PER LA SALUTE. Faculty of Pharmacy, Campus– Bari, Italy, February 25th, 2011

Organization of international conferences

Member of the Scientific Committee, 1st International Meeting “Metabolism meets function”, Department of Biosciences, University of Bari, July 20th, 2018

Member of the Scientific Committee, 2nd International Meeting “Metabolism meets function”, Department of Molecular Biotechnology and Health Sciences- University of Turin, July 19th, 2019

Member of the Organizing Committee, ISCaM 2022, Department of Molecular Biotechnology and Health Sciences- University of Turin, June 29th - July 2nd, 2022

Public engagement

- **Scientific speaking course**: “**BENCH TO PUBLIC: FROM ZERO TO HERO**”. <https://openbadges.bestr.it/public/assertions/d8dOyJu1Ts-L1LnO2moNHQ>
- **UNIGHT** (Notte Europea delle Ricercatrici e dei Ricercatori 2022) at **Molecular Biotechnology Center (MBC)**. “**A spasso nel mondo delle biotecnologie 2.0**” Turin on September 30-October 1st, 2022. <https://www.facebook.com/people/Eventi-MBC-Torino/100071767107218/>
- **Principal coordinator of SHARPERNIGHT TORINO** (Notte Europea delle Ricercatrici e dei Ricercatori 2021) at **Molecular Biotechnology Center (MBC)**. “**A spasso nel mondo delle biotecnologie e dell’imaging biomedico**” Turin on September 24th-25th, 2021.
- **Speaker**, “La Scienza attraverso il mio obiettivo”, Castiglione Torinese on September 11th, 2021
- **Speaker**, “La Scienza attraverso il mio obiettivo”, Settimo Torinese on September 4th, 2021
- **Speaker**, “C’è scienza per te” (<http://www.7web.tv>; <https://www.youtube.com/watch?v=cGGTciQe7Q0&t=36s;>) on May 4th, 2021.
- **MBC photo contest** (winner): “PEOPLE IN SCIENCE” Turin on November 28th, 2020.
- **Speaker**, LA MARATONA DELLA RICERCA, SHARPERNIGHT TORINO, Notte Europea delle Ricercatrici e dei Ricercatori 2020. Turin on November 27th, 2020

Participation on Research Projects

- 2022-to date: “NF-Kb positively regulates Fatty Acid Oxidation in cancer cells, which hinders CD8+ T lymphocytes and promotes tumor progression” Finalizzata GR-2021-12374957, *External Partner*;
- 2022-to date: “Dissecting mitochondrial lysine and tryptophan metabolism to target metabolic symbiosis in lung adenocarcinoma” _MFAG, Rif. 25908. *Principal Investigator*
- 2019-to date: “Metabolic CrossTalk in Cancer Cachexia” _MFAG AIRC IG 21564, *Internal co-worker*;
OCTIMET Oncology NV (OMO-1), Internal co-worker;
AFM-Teleton (23117), Internal co-worker;
INFRA-P2 COVID (Acronym KOvid), Internal co-worker;
- 2016-2019: *EPIGEN (Progetto EPIGENOMICA Sotto Progetto 2, CUP B92F12000480001). Internal co-worker*
- 2016-2018: “Liquid Biopsy: circulating nucleic acids and cancer cells, exosomes and metabolism in NSCLC and metastatic melanoma”. NCI- Tumor Institute GPII-Bari PI: Castegna Alessandra. *Internal co-worker*
- 2012-2015: PRIN (Italian National grant) n. 20109Z2XRJ PI: Infantino Vittoria “Design and stereoselective synthesis of active compounds against protein targets involved in viral diseases and cancer”. *External co-worker*
- 2011-2014: AIRC (Italian Association for Cancer Research) n. MFAG-12028, PI: Dr Pierri CL *New molecular targets for neuroendocrine cancer treatment - External co-worker*
- 2011-2013: “Role of monoamine oxidase and mitochondrial oxidative stress in the pathogenesis of muscular dystrophies and cardiac damage” PRIN (20098FYYZW_003). *External co-worker*

Publications on international peer-review journals 2013-to date

Total number of publications: 30

H-index: 16 (Scopus); 17 (Scholar).

Number of first/last/corresponding author publications: 5 first author, 2 co-first author, 3 co/last author, 2 co-corresponding author

Total IF sum of all publications 200,66

Average IF 6,69

Citations 1010 Citations (Scopus) 1263 (Scholar)

i10-index: 23 (Scholar).

1. Ionica Masgras, Giuseppe Cannino, Francesco Ciscato, Carlos Sanchez-Martin, Fereshteh Babaei Darvishi, Francesca Scantamburlo, Marco Pizzi, **Alessio Menga**, Dolores Fregona, Alessandra Castegna & Andrea Rasola. Tumor growth of neurofibromin-deficient cells is driven by decreased respiration and hampered by NAD⁺ and SIRT3 **bioRxiv** 2021.05.29.446262; doi: <https://doi.org/10.1101/2021.05.29.446262>; **Cell Death Differ** (2022). <https://doi.org/10.1038/s41418-022-00991-4> **IF= 15.828**
2. Elisabeth Wyart, Myriam Y Hsu, Roberta Sartori, Erica Mina, Valentina Rausch, Elisa S Pierobon, Mariarosza Mezzanotte, Camilla Pezzini, Laure B Bindels, Andrea Lauria, Fabio Penna, Emilio Hirsch, Miriam Martini, Massimiliano Mazzone, Antonella Roetto, Simonetta Geninatti Crich, Hans Prenen, Marco Sandri, **Alessio Menga** and Paolo E Porporato. Iron supplementation is sufficient to rescue skeletal muscle mass and function in cancer cachexia. **EMBO Reports** (2022)23:e53746 <https://doi.org/10.15252/embr.202153746> **IF= 8.807 -CoLast author**
3. Spera I, Sánchez-Rodríguez R, Favia M, **Menga A**, Venegas FC, Angioni R, Munari F, Lanza M, Campanella A, Pierri CL, Canton M, Castegna A. The J2-Immortalized Murine Macrophage Cell Line Displays Phenotypical and Metabolic Features of Primary BMDMs in Their M1 and M2 Polarization State. **Cancers** (Basel). 2021 Oct 31;13(21):5478. doi: 10.3390/cancers13215478. PMID: 34771641; **IF= 6.639**
4. **Menga A**, Favia M, Spera I, Vegliante MC, Gissi R, De Grassi A, Laera L, Campanella A, Gerbino A, Carrà G, Canton M, Loizzi V, Pierri CL, Cormio G, Mazzone M, Castegna A. N-acetylaspartate release by glutaminolytic ovarian cancer cells sustains protumoral macrophages. **EMBO Rep**. 2021 Jul 14:e51981. doi: 10.15252/embr.202051981. Epub ahead of print. PMID: 34260142. **IF= 8.807 -First author**
5. Carrà G, Ermondi G, Riganti C, Righi L, Caron G, **Menga A**, Capelletto E, Maffeo B, Lingua MF, Fusella F, Volante M, Taulli R, Guerrasio A, Novello S, Brancaccio M, Piazza R, Morotti A. IκBα targeting promotes oxidative stress-dependent cell death. **J Exp Clin Cancer Res**. 2021 Apr 16;40(1):136. doi: 10.1186/s13046-021-01921-x. PMID: 33863364; PMCID: PMC8050912. **IF= 11.161**
6. Wyart E, Bindels LB, Mina E, **Menga A**, Stanga S, Porporato PE (2020). Cachexia, a Systemic Disease beyond Muscle Atrophy. **International Journal Of Molecular Sciences**, vol. 21, p. 1-18, ISSN: 1422-0067, doi: 10.3390/ijms21228592 **IF= 5.923**
7. Castegna A, McVicar DW, Campanella A, Palmieri EM, **Menga A**, Porporato PE (2020). Editorial: Metabolism Meets Function: Untangling the Cross-Talk Between Signaling and Metabolism. **FRONTIERS IN ONCOLOGY**, ISSN: 2234-943X doi: 10.3389/fonc.2020.607511 **IF= 6.244**
8. **Menga A**, Serra M, Todisco S, et al. Glufosinate constrains synchronous and metachronous metastasis by promoting anti-tumor macrophages [published online ahead of print, 2020 Sep 4]. **EMBO Mol Med**. 2020; e11210. doi:10.15252/emmm.201911210 **IF= 12.137 -First author**
9. Serra M, Columbano A, Ammarah U, Mazzone M, **Menga A**. Understanding Metal Dynamics Between Cancer Cells and Macrophages: Competition or Synergism? **Front Oncol**. 2020 Apr 30;10:646. doi: 10.3389/fonc.2020.00646. **IF= 6.244**

-Cocorresponding author/Lead contact

10. Castegna A, Gissi R, **Menga A**, Montopoli M, Favia M, Viola A, Canton M. Pharmacological targets of metabolism in disease: Opportunities from macrophages. *Pharmacol Ther.* 2020 Jun;210:107521. doi: 10.1016/j.pharmthera.2020.107521. Epub 2020 Mar 6. **IF= 12.310**
11. Flerin NC, Pinioti S, **Menga A**, Castegna A, Mazzone M#. (2019) Impact of immunometabolism on cancer metastasis: a focus on T cells and macrophages. *Cold Spring Harb Perspect Med.* 2019 Oct 15:a037044. doi: 10.1101/cshperspect.a037044. **IF= 6.915**
12. De Nola R, **Menga A**, Castegna A, Loizzi V, Ranieri G, Cicinelli E, Cormio G. (2019) The Crowded Crosstalk between Cancer Cells and Stromal Microenvironment in Gynecological Malignancies: Biological Pathways and Therapeutic Implication. *Int J Mol Sci.* 15, 20(10). **IF=5.923**
13. Cianciulli A, **Menga A**, Palmieri F & Iacobazzi V (2018) FOXD3 acts as a repressor of the mitochondrial S-adenosylmethionine carrier (SLC25A26) gene expression in cancer cells. *Biochimie* 154, 25–34. **IF= 4.079**
14. Costiniti V, Spera I, Menabò R, Palmieri EM, **Menga A**, Scarcia P, Porcelli V, Gissi R, Castegna A & Canton M (2018) Monoamine oxidase-dependent histamine catabolism accounts for postischemic cardiac redox imbalance and injury. *Biochim. Biophys. Acta - Mol. Basis Dis.* 1864, 3050–3059. **IF= 5.187**
15. Castegna A & **Menga A** (2018) Glutamine Synthetase: Localization Dictates Outcome. *Genes (Basel).* 9, 108. **IF=4.096**

-Last author

16. Punzi G, Porcelli V, Ruggiu M, Hossain MF, **Menga A**, Scarcia P, Castegna A, Gorgoglione R, Pierri CL, Laera L, Lasorsa FM, Paradies E, Pisano I, Marobbio CMT, Lamantea E, Ghezzi D, Tiranti V, Giannattasio S, Donati MA, Guerrini R, Palmieri L, Palmieri F & De Grassi A (2018) SLC25A10 biallelic mutations in intractable epileptic encephalopathy with complex I deficiency. *Hum. Mol. Genet.* 27, 499–504. **IF=6.150**
17. Mazzone M, **Menga A** & Castegna A (2018) Metabolism and TAM functions-it takes two to tango. *FEBS J.* 285, 700–716. **IF=5.542**

-Cocorresponding author

18. Palmieri EM, **Menga A**, Martín-Pérez R, Quinto A, Riera-Domingo C, De Tullio G, Hooper DC, Lamers WH, Ghesquière B, McVicar DW, Guarini A, Mazzone M & Castegna A (2017) Pharmacologic or Genetic Targeting of Glutamine Synthetase Skews Macrophages toward an M1-like Phenotype and Inhibits Tumor Metastasis. *Cell Rep.* 20, 1654–1666. **IF= 9.423 -Cofirst author**
19. **Menga A**, Palmieri EM, Cianciulli A, Infantino V, Mazzone M, Scilimati A, Palmieri F, Castegna A & Iacobazzi V (2017) SLC25A26 overexpression impairs cell function via mtDNA hypermethylation and rewiring of methyl metabolism. *FEBS J.* 284, 967–984. **IF=5.542 -First author**
20. Palmieri EM, **Menga A**, Lebrun A, Hooper DC, Butterfield DA, Mazzone M & Castegna A (2017) Blockade of Glutamine Synthetase Enhances Inflammatory Response in Microglial Cells. *Antioxid. Redox Signal.* 26, 351–363. **IF=8.401 -Cofirst author**
21. Iacobazzi V, Infantino V, Castegna A, **Menga A**, Palmieri EM, Convertini P & Palmieri F (2017) Mitochondrial carriers in inflammation induced by bacterial endotoxin and cytokines. *Biol. Chem.* 398, 303–317. **IF=3.915**
22. Convertini P, **Menga A**, Andria G, Scala I, Santarsiero A, Castiglione Morelli MA, Iacobazzi V & Infantino V (2016) The contribution of the citrate pathway to oxidative stress in Down syndrome. *Immunology* 149, 423–431. **IF=7.397**
23. Palmieri EM, Spera I, **Menga A**, Infantino V, Porcelli V, Iacobazzi V, Pierri CL, Hooper DC, Palmieri F & Castegna A (2015) Acetylation of human mitochondrial citrate carrier modulates mitochondrial citrate/malate exchange activity to sustain NADPH production during macrophage activation. *Biochim. Biophys. Acta - Bioenerg.* 1847, 729–738. **IF=3.991**
24. Abate C, Niso M, Infantino V, **Menga A** & Berardi F (2015) Elements in support of the “nonidentity” of the PGRMC1 protein with the sigma2 receptor. *Eur J Pharmacol* 758, 16–23. **IF=4.432**
25. **Menga A**, Iacobazzi V, Infantino V, Avantaggiati ML & Palmieri F (2015) The mitochondrial aspartate/glutamate carrier isoform 1 gene expression is regulated by CREB in neuronal cells. *Int. J. Biochem. Cell Biol.* 60, 157–66. **IF=5.085 -First author**
26. Palmieri EM, Spera I, **Menga A**, Infantino V, Iacobazzi V & Castegna A (2014) Glutamine synthetase desensitizes differentiated adipocytes to proinflammatory stimuli by raising intracellular glutamine levels. *FEBS Lett.* 588, 4807–14. **IF=4.124**
27. Infantino V, Iacobazzi V, **Menga A**, Avantaggiati ML & Palmieri F (2014) A key role of the mitochondrial citrate carrier (SLC25A1) in TNF α - and IFN γ -triggered inflammation. *Biochim. Biophys. Acta* 1839, 1217–25. **IF= 4.490**
28. Infantino V, Iacobazzi V, Palmieri F & **Menga A** (2013) ATP-citrate lyase is essential for macrophage inflammatory response. *Biochem. Biophys. Res. Commun.* 440, 105–11. **IF=3.575 -Last author**
29. Infantino V, Convertini P, **Menga A**, Iacobazzi V (2013) MEF2C exon β : role in gene activation and differentiation. *Gene* 531, 355–62. **IF= 3.688**
30. **Menga A**, Infantino V, Iacobazzi F, Convertini P, Palmieri F & Iacobazzi V (2013) Insight into mechanism of in vitro insulin secretion increase induced by antipsychotic clozapine: Role of FOXA1 and mitochondrial citrate carrier. *Eur. Neuropsychopharmacol.* 23, 978–987. **IF= 4.600 -First author**

Peer-reviewed conference proceedings

Erika M Palmieri, **Alessio Menga**, Vito Porcelli, Ciro L Pierri, Douglas C Hooper, Alessandra Castegna. “Acetylation of Human Mitochondrial Citrate Carrier Modulates Mitochondrial Citrate/Malate Exchange to Sustain NADPH Production During Macrophage Activation” April 2015 The FASEB Journal vol. 29 no. 1 Supplement 888.6

Illustration courtesy

Cover picture for *Cold Spring Harb Perspect Med*, September 2020; 10 (9);
[<http://perspectivesinmedicine.cshlp.org/content/10/9.cover-expansion>]

Press Releases

17 August 2017. Scientists unravel role of glutamine synthetase in the spread of cancer

<https://vib.be/news/scientists-unravel-role-of-glutamine-synthetase-spread-cancer>.

9 November 2020. Central role for glutamine in muscle regeneration and inhibition of tumor metastases

https://www.unito.it/comunicati_stampa/ruolo-centrale-la-glutammina-nella-rigenerazione-del-muscolo-e-nellinibizione

17 November 2020. Glutamine, central role in muscle regeneration and inhibition of tumor metastases

<https://www.orthoacademy.it/glutammina-rigenerazione-muscolo-inibizione-metastasi-tumoral/>.

24 February 2022. When muscles inexorably shrink: Exploring iron supplementation to address muscle mass and function loss from cancer

<https://www.embo.org/press-releases/when-muscles-inexorably-shrink/>

Other publications

“PROTOCOL ON POLYACRYLAMIDE GEL USING 1X TBE” Research Group: Prof. Vito Iacobazzi ± Dr. Paolo Convertini ± **Dr. Alessio Menga** ± Dr. Vittoria Infantino FS-GEL01 Green Gel Plus Nucleic Acid Stain High concentration FISHER MOLECULAR BIOLOGY TREVISO, PA 19048 – USA

Scientific service

- Member of **AICC (Italia Association of Cell Culture)**
- Member of **Società Italiana Cancerologia (SIC)**
- Member of the **EACR - European Association for Cancer Research**
- Member of the **ISCaM - International Society of Cancer Metabolism**
- Member of the **Italian Society of Biochemistry (SIB)**
- Reviewer “*ad hoc*” for **OMICS Group - Biomedical Journals**, for **ELSEVIER Journals** (International Immunopharmacology; European Journal of Pharmacology), for **Nature journals** (Scientific Reports).
- Front Editor on the Editorial Board of Molecular and Cellular Oncology (specialty section of **Frontiers in Oncology and Frontiers in Cell and Developmental Biology**)
- Review Editor in Protein Biochemistry for Basic and Applied Sciences (**Frontiers in Molecular Biosciences**)
- Topic Editor on the Editorial Board of **Biomolecules**
- Reviewer Board Member of **International Journal of Molecular Sciences IF 5.923**
- Guest Editor for **International Journal of Molecular Sciences IF 5.923** Special Issue “Role of Metabolism in Tumor Mutational Burden and Immune Evasion”
- Topic Editor for **Frontiers in Immunology**, Molecular Innate Immunity, Research Topic: “Understanding How Myeloid Cell Development and Function Meet Tissue Distinct Metabolic Requirements”.

Academic activity

Supervisor experience: the applicant has trained 1 PhD student, 8 bachelor and master thesis students from Faculties of Pharmacy, Biological Sciences, Biotechnologies, University of Bari; 1 PhD student from Faculty of Biological Sciences, University of Cagliari; 1 PhD student at Molecular Biotechnology Center, University of Turin

- Preparatory and recovery teaching activities in physiology for undergraduated students at Faculty of Pharmacy, University of Bari, academic years: 2011/2012
- *Laboratory* and practical *classes* in “*applied biochemistry and recombinant dna technology*” for undergraduated students at Faculty of Biotechnological Sciences and Faculty of Pharmacy, University of Bari, 2011-2014. Professor in charge: Vito Iacobazzi, Associate Professor S.S.D. BIO / 13
- Member of examination committee (Prof. Vito Iacobazzi, Prof. Italo Stipani, Dr Alessio Menga): “*applied biochemistry and recombinant dna technology*” Faculty of Pharmacy, University of Bari “Aldo Moro” ITALY, academic years: 2010/2011; 2011/2012; 2012/2013.
- *Laboratory* and practical *classes* in: “In Vitro Assays for Studying Enzymatic Activities of recombinant proteins” for undergraduated and PhD students at Lab of Tumor Inflammation and Angiogenesis VIB Vesalius Research Center Department of Oncology, University of Leuven, Belgium, April 2016, 2017, 2019.
- *Laboratory* and practical *classes* in: “In Vitro Diagnostics: Metabolomic” (Relevance of metabolic studies in cell biology, Coupled-enzyme assay, Measuring glycolytic activity, Assessing mitochondrial function) for undergraduated students at Department of Molecular Biotechnology and Health Sciences (Master's Degree in Medicine and Surgery), University of Turin, academic year: 2021/2022. Professor in charge: Paolo Ettore Porporato, Associate Professor S.S.D. BIO / 13
- Biology - D.M. 270/04 - 2022/2023 (MED3033C); Corso di Laurea in Infermieristica - A.O.U. Città della Salute e della Scienza di Torino
- CELLULAR BIOLOGY FOR DIAGNOSTIC TECHNOLOGY (BIO0225); Corso di Laurea Specialistica in Biotechnological and Chemical Sciences in Diagnostics, MBC, University of Turin
- Structure and morphology of the human body - D.M. 270/04 - 2022/2023 (MED3033); Corso di Laurea in Infermieristica - A.O.U. Città della Salute e della Scienza di Torino

Training

- 30-11-2022. Elements for researchers 'approach to the use of animals for scientific purposes: "LEGISLAZIONE NAZIONALE ED ETICA LIVELLO 1, MODULI 1 E 2, DM 5 AGOSTO 2021"; "BIOLOGIA E GESTIONE DEGLI ANIMALI DA LABORATORIO, MODULI 3.1, 4, 5, 6.1, 7, DM 5 AGOSTO 2021. RODITORI E LAGOMORFI"; "ETICA E CONCEZIONE DEI PROGETTI - DM 5 AGOSTO 2021"
- 20-10-2022. IRIDI START path: training in didactic strategies to stimulate learning, elaboration of the teaching sheet, planning and implementation of an online lesson, the use of learning technologies, planning of learning evaluation, inclusion skills (gender equity, disability, cultural differences), system approach to the quality of university teaching. <https://openbadges.bestr.it/public/assertions/OBKTK-NIR3OZqjNckoZw9w>
- 25-3-2013. Ph.D. in Biochemical and Pharmacological Sciences XXV cycle, University of Bari, Italy
THESIS: Transcription factors and drugs: identification of new MEF2C splicing factors and interaction between antipsychotic drugs and transcription factor FOXA1
- 8-2-2010. Professional Qualification in Pharmacy, University of Bari, Italy
- 12-11-2009. Bachelor Cum Laude in Pharmacy, Faculty of Pharmacy. University of Bari, Italy.
THESIS: Epigenetic mechanisms and Sp1 regulation of mitochondrial citrate carrier gene

Academic Positions

- 2/2022 - to date. Researcher PON (RTDa-BIO/13)- junior lecturer at Molecular Biotechnology Center, University of Turin
- 6/2019- 1/2022. Postdoctoral Researcher at Molecular Biotechnology Center, University of Turin.
PI: Prof. Paolo E Porporato
- 1/2019-to 5/2019. FEBS and ViB Postdoctoral Fellow, at Laboratory of Tumor Inflammation and Angiogenesis, VIB Center for Cancer Biology, Department of Oncology, University of Leuven, Belgium. PI: Prof. Massimiliano Mazzone.
- 2016-2018. Junior Researcher at the I.R.C.C.S. Oncologic Hospital "Giovanni Paolo II" Bari, Italy
PI: Prof. Alessandra Castegna
- 2013-2015. Postdoctoral Fellow at the University of Bari, Dept of Biosciences, Biotechnologies and Biopharmaceutics, Italy.
PI: Prof. Vito Iacobazzi
- 2010-2012. PhD Student at the University of Bari, Dept of Biosciences, Biotechnologies and Biopharmaceutics, Italy.
PI: Prof. Vito Iacobazzi
- 2008-2009. Master Thesis's Researcher at the University of Bari, Dept of Biosciences, Biotechnologies and Biopharmaceutics, Italy.
PI: Prof. Vito Iacobazzi

Collaborations

Daniel W. McVicar, Ph.D. Center for Cancer Research National Cancer Institute Building 560, Room 21-89B Frederick, MD 21702-1201 Ph: 301-846-5163 mcvicard@mail.nih.gov. Project: "Role of NAT8L and ASPA in ascite-associated macrophages".

Massimiliano Mazzone, PhD Head of the Lab of Tumor Inflammation and Angiogenesis VIB Vesalius Research Center Department of Oncology, University of Leuven Campus Gasthuisberg Herestraat 49, box 912 B-3000 Leuven Belgium

D. Craig Hooper, Ph.D. Professor, Departments of Cancer Biology and Neurological Surgery Chief, Translational Research, Division of Neuro-Oncology, Department of Neurological Surgery Vice Chairman, Institutional Review Board (W) Thomas Jefferson University 1020 Locust Street, JAH 452 Philadelphia, PA 19107. Project: "Role of GS in EAE mice models"

Andrea Rasola, Ph.D. Professor, Department of Biomedical sciences, University of Padua, G. Colombo 3 I-35131 Padova, Italia tel: +39 049 8276062; fax: +39 049 8276361; mail: andrea.rasola@unipd.it; rasola@bio.unipd.it. Project: "Role of TRAP1 in macrophages from neurofibromatosis type I (NF1) patients".

Graziano Pesole, Ph.D. Professor, Dept of Biosciences, Biotechnologies and Biopharmaceutics, University of Bari, Italy, mail: graziano.pesole@uniba.it, Tel: +390805443588. Project: "EPIGEN".

Marcella Canton, Ph.D. Professor, Department of Biomedical sciences, University of Padua, G. Colombo 3 I-35131 Padova, Italia tel: 049 9640155; marcella.canton@unipd.it. Project: "Role of NAA in macrophages from Duchenne muscular dystrophy mice models".

Prof. Dr. Bart Ghesquière, Expert Technologist, Head of Metabolomics Core Facility, VIB Center for Cancer Biology, KULEuven Department of Oncology, Gasthuisberg O&N4, Herestraat 49 bus 912, B-3000 Leuven, Belgium. +3216322733. email: Bart.Ghesquiere@kuleuven.vib.be. Project: Dissecting mitochondrial lysine and tryptophan metabolism to target metabolic symbiosis in lung adenocarcinoma.

David Santamaria, Laboratory of Novel Mediators in Lung Oncogenesis, ACTION U1218 Unit, INSERM. d.santamaria@iecb.u-bordeaux.fr. Project: Dissecting mitochondrial lysine and tryptophan metabolism to target metabolic symbiosis in lung adenocarcinoma.

Chiara Ambrogio, Ph.D. Assistant Professor of Molecular Biology, Molecular Biotechnology Center, University of Torino, via Nizza 52, 10126 Torino, Italy. chiara.ambrogio@unito.it. Project: Dissecting mitochondrial lysine and tryptophan metabolism to target metabolic symbiosis in lung adenocarcinoma.

Prof. Salvatore Oliviero, Full Professor, Department of Life Sciences and Systems Biology, Via A. Albertina 13- 10123 Torino (Italy) salvatore.oliviero@unito.it. Project: Dissecting mitochondrial lysine and tryptophan metabolism to target metabolic symbiosis in lung adenocarcinoma.

Dr. Dario Longo, Head Research Unit of Torino, Institute of Biostructures and Bioimaging (IBB), National Research Council of Italy (CNR), Via Nizza, 52 10126 – Torino – Italy. Tel. +39-011-6706473 e-mail: dariolivio.longo@cnr.it. Project: Dissecting mitochondrial lysine and tryptophan metabolism to target metabolic symbiosis in lung adenocarcinoma.

Montis Biosciences, Biotechnology – Therapeutics www.montisbio.com. Email: info@montisbio.com. +32 479 22 04 55 Gaston Geenslaan 1, 3001 Leuven. BE

Nutrinsect, <https://www.nutrinsect.it/> villa E.Mattei, 65, 62010, Montecassiano (MC), P.Iva 02706660426, Tel: (+39) 0719728143, info@nutrinsect.it

TORINO, 15/02/2023

Alessio Menga, PhD