




PERSONAL INFORMATION

Angela Ostuni

 Affiliation
University of Basilicata
Department: Sciences
Address: Via dell'Ateneo Lucano 10, 85100 Potenza (Italy)

 09712055453

 angela.ostuni@unibas.it

 <https://www.researchgate.net/profile/Angela-Ostuni>;
https://scholar.google.com/scholar?as_sdt=2007&q=angela+ostuni&hl=it
<https://www.scopus.com/results/authorNamesList.uri?st1=ostuni&st2=angela&origin=searchauthorlookup>
SCOPUS ID: **8530199000**

ORCID: **0000-0001-5970-5097**

WORK EXPERIENCE

From 2006 – to date

Permanent researcher in Clinical Biochemistry and Clinical Molecular Biology (SSD BIO12)

From 2022 – to date

National Scientific qualifications as Associate Professor for the General biochemistry (BIO10) and for the Molecular biology (BIO11)

From 2021 – to date

Member of the Board of the University Central Library

From 2020 – to date

Member of the Commission for the qualification to the profession of Biologist

From 2020 – to date

Member of the Board of Professors of the Research Doctorate in "Sciences"

From 2015 – to date

Head of the Degree Project Scientific (PLS) - Biotechnology, funded by MIUR (Ministry of Education, University and Research)

Member of the Board of Professors of the Research Doctorate in "Applied Biology and Environmental Safeguard"

Expertise and Skills

Cell biology, cancer, ABC transporters, oxidative stress, metabolism, target therapy, biochemistry, design and production of antigens for diagnostic assays

Proteins production by recombinant DNA technologies in E. coli; Cloning; Protein purification by chromatographic techniques; Circular Dichroism and spectrofluorimetric characterization of peptides and proteins; Immunochemical analysis by ELISA and western blotting; Mammalian cell cultures management; Gene expression analysis by Real Time PCR; Flow cytometry; Biochemistry and molecular biology assays.

Main research interests

- ✓ Biological function and structure of the membrane ABC transporters in cancer, drug resistance and genetic diseases; Biomarkers in diagnostics of cancer, neurodegeneration and viral infections.
- ✓ Immunochemistry: structural design and characterization of antigens;
- ✓ Analysis of follicular fluids of patients who approach techniques of medically assisted procreation
- ✓ Biological activities of edible plant extracts

From 2006 – to date

Teaching activity: Medical-Diagnostic Biotechnologies and Advanced Medical-Diagnostic Biotechnologies

▪ Supervisor of PhD, Master and bachelor thesis

EDUCATION AND TRAINING

- From 2006 – to date Assistant professor in Clinical Biochemistry and Clinical Molecular Biology, Department of Sciences, University of Basilicata
- From 1993 – to 2006 Research activity at the Department of Chemistry, University of Basilicata
- From 1989 – to 1993 PhD in Biochemistry and Molecular Biology, University of Bari (Italy)
- From 1990 – to 1990 Visiting PhD student at ST GEORGE'S Hospital Medical School, Department of Cellular and Molecular Sciences, University of London (from April to June)
- From 1984 – to 1987 Degree in Biological Sciences, University of Bari

WORK ACTIVITIES

Editorial activity

Review Editor for *Frontiers in Oncology*, *PLOS ONE*, *Metabolomics*, *Scientific Reports*, *Biomolecules*

Guest Editor https://www.mdpi.com/journal/ijms/special_issues/cancer_neurodegenerative;
https://www.mdpi.com/journal/cells/special_issues/Transport_Proteins;
https://www.mdpi.com/journal/metabolites/special_issues/HRHM

Invited speaker

Relevant

2019- "Patent-Method for the diagnosis of the risk of preneoplastic and neoplastic pathologies in subjects suffering from hepatitis" InnovAgorà Workshop (Milano).

2019- The ABC transporters: gender biomarkers? Conference "Let's talk about gender: new Knowledge of Medicine, Pharmacology and Psychology (Potenza)

2019- Cardiotoxicity: role of ABC transporters. II Day of Cardiooncology at the Oncology Reference Centre of Basilicata: Oncology and the heart of women. (Rionero in Vulture).

2017- "Structural and functional studies on multidrug resistance protein 6 (mrp6): new insights". First International GIBB Meeting - Italian Group of Bioenergetics and Biomembranes. (Catania)

2012- Tumor Necrosis Factor- α Neutralizing Antibodies Induced by a Glycolaldehyde-Modified C-terminal Polypeptide. 56th National Meeting of the Italian Society of Biochemistry and Molecular Biology. Report: (Chieti).

Conference Organizer

Relevant:

2018-Member of the organizing and scientific committee of the conference "Towards a Personalized Medicine: Health Aspects and Gender Medicine-Taking Care of differences "held (Potenza)

2014- Member of the organizing committee of the annual Congress "2014 GIBB meeting "of the Italian Group of Biomembranes and Bioenergetics (Matera)

National and international collaborations

From 2020 to today

Study on peptides modifying folding and aggregation of alpha-synuclein in collaboration with Prof. Jany Dandurand (CIRIMAT, Physique des Polymères, Université Paul Sabatier, Toulouse, France

From 2019 to today

Design and production of immunochemical systems for the diagnosis of viral infections in the veterinary field in collaboration with the Diagnostic Laboratory, School of Veterinary Medicine, Faculty of Health Sciences, Aristotle University of Thessaloniki.

From 2019 to today

Realization and optimization of an indirect ELISA kit for the detection of antibodies against URG7 in patient sera with hepatic fibrosis, in collaboration with The Italian Liver Foundation, Area Science Park, Basovizza Trieste

From 2015 to today

Metabolomics of follicular fluids of patients who approach Medically Assisted Procreation in collaboration with the Department of Women and Children U.O.C. of Obstetrics and Gynecology of the San Carlo Hospital in Potenza.

From 2015 to 2017

Expression analysis of ABC proteins in hematological cancers in collaboration with the Department of Hematology of the San Carlo Hospital in Potenza

From 2014 to 2016

Validation of a immunochemical test for the preneoplastic marker URG7 in collaboration with Clinical Research Laboratory and Advanced Diagnostics of Rionero and the Hospital of Venosa (Potenza)

From 2013 to 2016

Structural and functional studies of the URG7 protein (Up Regulation Gene7) and Multidrug-Resistance Protein 6 in collaboration with Prof. I. Nilsson (Center for Biomembrane Research, Department of Biochemistry and Biophysics, Stockholm University) at the Karolinska Institutet

From 2006 to 2015

Design and synthesis of modified antigens for the development of synthetic vaccines in collaboration with prof. A. Tramontano, Medical School, University of California, Davis

Grants

2018-to today: National Project of Industrial research and experimental development "Innovative products with a high biotechnological content for the BIOMEDICAL sector

2019-2022 National Project "FULLNESS" "Smart Factory, Agrifood and Life Sciences" 2014/2020, public-private partnership

2013-2014 Private project "Expression of inducible genes in the blood of cattle exposed to environmental risk" funded by Basilicata Innovazione-AREA Science Park, Trieste.

2011-2012 Private projects funded by Basilicata Innovazione-AREA Science Park, Trieste (Italy):

-High-throughput development and production of recombinant protein antigens for immunodiagnostic applications;

-Prognostic markers and development of drug resistance in hematological tumors.

Patents

2019- European Patent N. EP3161488A1 "Method for diagnosing the risk of preneoplastic and neoplastic liver disease in subjects affected by hepatitis", co-inventor.

2018- Academic Spin-off BioActiPlant, (research and experimental development in the field of natural sciences and engineering), co-founder

Co-author of **150** publications including articles and contributions to conferences

Total number of publications in peer-review journals **52 (Scopus)**

total number of citations **738**

H index **16**

Some Latest Relevant Publications

1. Abruzzese, V., Sukowati, C. H., Tiribelli, C., Matera, I., **Ostuni, A.**, & Bisaccia, F. (2022). The Expression Level of ABCC6 Transporter in Colon Cancer Cells Correlates with the Activation of Different Intracellular Signaling Pathways. *Pathophysiology*, 29(2), 173-186.
2. Castiglione Morelli, M. A., Iuliano, A., Schettini, S., Ferri, A., Colucci, P., Viggiani, L., Matera, I., & **Ostuni, A.** (2022). Are the Follicular Fluid Characteristics of Recovered Coronavirus Disease 2019 Patients Different From Those of Vaccinated Women Approaching *in vitro* Fertilization?. *Frontiers in physiology*, 13, 840109.
3. **Ostuni, A.**, et al. Design and structural bioinformatic analysis of polypeptide antigens useful for the SRLV serodiagnosis. *J Virol Methods*. 2021;297:114266.
4. Abruzzese, V., Matera, I., Martinelli, F., Carmosino, M., Koshal, P., Milella, L., Bisaccia, F., & **Ostuni, A.** (2021). Effect of Quercetin on ABCC6 Transporter: Implication in HepG2 Migration. *International journal of molecular sciences*, 22(8), 3871.
5. Bisaccia, F., Koshal, P., Abruzzese, V., Castiglione Morelli, M. A., & **Ostuni, A.** (2021). Structural and Functional Characterization of the ABCC6 Transporter in Hepatic Cells: Role on PXE, Cancer Therapy and Drug Resistance. *International journal of molecular sciences*, 22(6), 2858.
6. Giglio, F., Castiglione Morelli, M. A., Matera, I., Sinisgalli, C., Rossano, R., & **Ostuni, A.** (2021). *Muscari comosum* L. Bulb Extracts Modulate Oxidative Stress and Redox Signaling in HepG2 Cells. *Molecules (Basel, Switzerland)*, 26(2), 416.
7. Jany Dandurand, **Angela Ostuni**, Maria Francesca Armentano, Maria Antonietta Crudele, Vincenza Dolce, Federica Marra, Valérie Samouillan, Faustino Bisaccia. Calorimetry and FTIR reveal the ability of URG7 protein to modify the aggregation state of both cell lysate and amylogenic α -synuclein. *AIMS Biophysics*, 2020, 7(3): 189-203.
8. Sinisgalli, C., Faraone, I., Vassallo, A., Caddeo, C., Bisaccia, F., Armentano, M. F., Milella, L., & **Ostuni, A.** (2020). Phytochemical Profile of *Capsicum annuum* L. cv Senise, Incorporation into Liposomes, and Evaluation of Cellular Antioxidant Activity. *Antioxidants (Basel, Switzerland)*, 9(5), 428.
9. Petillo, A., Abruzzese, V., Koshal, P., **Ostuni, A.**, & Bisaccia, F. (2020). Extracellular Citrate Is a Trojan Horse for Cancer Cells. *Frontiers in molecular biosciences*, 7, 593866.
10. **Ostuni, A.**, et al. (2020). Inhibition of ABCC6 Transporter Modifies Cytoskeleton and Reduces Motility of HepG2 Cells via Purinergic Pathway. *Cells*, 9(6), 1410.
11. **Ostuni, A.**, et al. (2019). Structural characterization of the L0 cytoplasmic loop of human multidrug resistance protein 6 (MRP6). *Biochimica et biophysica acta. Biomembranes*, 1861(2), 380–386. <https://doi.org/10.1016/j.bbmem.2018.11.002>
12. Castiglione Morelli, M. A., Iuliano, A., Schettini, S., Petrucci, D., Ferri, A., Colucci, P., Viggiani, L., Cuvillo, F., & **Ostuni, A.** (2019). NMR metabolic profiling of follicular fluid for investigating the different causes of female infertility: a pilot study. *Metabolomics: Official journal of the Metabolomic Society*, 15(2), 19. <https://doi.org/10.1007/s11306-019-1481-x>
13. Martinelli, F., Cuvillo, F., Pace, M. C., Armentano, M. F., Miglionico, R., **Ostuni, A.**, & Bisaccia, F. (2018). Extracellular ATP Regulates CD73 and ABCC6 Expression in HepG2 Cells. *Frontiers in molecular biosciences*, 5, 75.
14. Castiglione Morelli, M. A., Iuliano, A., Schettini, S., Petrucci, D., Ferri, A., Colucci, P., Viggiani, L., Cuvillo, F., & **Ostuni, A.** (2018). NMR metabolomics study of follicular fluid in women with cancer resorting to fertility preservation. *Journal of assisted reproduction and genetics*, 35(11), 2063–2070. <https://doi.org/10.1007/s10815-018-1281-7>
15. Salvia, A. M., Cuvillo, F., Coluzzi, S., Nuccorini, R., Attolico, I., Pascale, S. P., Bisaccia, F., Pizzuti, M., & **Ostuni, A.** (2017). Expression of some ATP-binding cassette transporters in acute myeloid leukemia. *Hematology reports*, 9(4), 7406.
16. Bavoso, A., **Ostuni, A.**, De Vendel, J., Bracalello, A., Shcheglova, T., Makker, S., & Tramontano, A. (2015). Aldehyde modification and alum coadjuvancy enhance anti-TNF- α autovaccination and mitigate arthritis in rat. *Journal of peptide science : an official publication of the European Peptide Society*, 21(5), 400–407.
17. Cuvillo, F., Tellgren-Roth, Å., Lara, P., Ruud Selin, F., Monné, M., Bisaccia, F., Nilsson, I., & **Ostuni, A.** (2015). Membrane insertion and topology of the amino-terminal domain TMDO of multidrug-resistance associated protein 6 (MRP6). *FEBS letters*, 589(24 Pt B), 3921–3928.
18. **Ostuni, A.**, Castiglione Morelli, M. A., Miglionico, R., Salvia, A. M., Cuvillo, F., & Bisaccia, F. (2014). Expression, purification and structural characterization of up-regulated gene 7 encoded protein. *Protein and peptide letters*, 21(5), 413–418.
19. **Ostuni, A.**, Bochicchio, B., Armentano, M. F., Bisaccia, F., & Tamburro, A. M. (2007). Molecular and supramolecular structural studies on human tropoelastin sequences. *Biophysical journal*, 93(10), 3640–3651.