

## PERSONAL INFORMATION

Alessio Ardizzone

## STUDIES APPLIED FOR

PhD Doctor in Applied Biology and Experimental Medicine

## WORK EXPERIENCE(S)

From October 2019 to  
September 2022

PhD Student in "Applied Biology and Experimental Medicine". Pharmacology Laboratory

University of Messina, Department of Chemical, Biological, Pharmacological and Environmental Sciences, Messina, Italy

Supervisor Prof. Emanuela Esposito. Full Professor of Pharmacology. Unit of Pharmacology.

Department of Chemical, Biological, Pharmacological and Environmental Sciences. University of Messina. Italy

Business or sector Scientific research activity: disciplinary scientific sector (BIO/14)

From October 2018 to  
September 2019

Trainee Graduate Student. Pharmacology Laboratory

University of Messina, Department of Chemical, Biological, Pharmacological and Environmental Sciences, Messina, Italy

Improvement of molecular biology techniques, morphological imaging and histological skills related to in vitro and in vivo experimental studies. Enhancement of data processing, elaboration, and presentation

Supervisor(s)

-Prof. Salvatore Cuzzocrea. Full Professor of Pharmacology, Unit of Pharmacology. Department of Chemical, Biological, Pharmacological and Environmental Sciences. University of Messina. Italy

-Prof. Emanuela Esposito. Full Professor of Pharmacology. Unit of Pharmacology.

Department of Chemical, Biological, Pharmacological and Environmental Sciences. University of Messina. Italy

EDUCATION AND TRAINING

From October 2019 to September 2022

**PhD in "Applied Biology and Experimental Medicine"**  
 University of Messina, Department of Chemical, Biological, Pharmacological and Environmental Sciences, Messina, Italy  
 PhD Doctor in "Applied Biology and Experimental Medicine"  
 Title of thesis: "Efficacy of a Novel Therapeutic, Based on Natural Ingredients and Probiotics, in a Murine Model of Multiple Food Intolerance and Maldigestion" (BIO/14).  
 Final grade: Graduated with honours

November 2022  
 Title of qualification awarded

**PhD Doctor XXXV cycle in Applied Biology and Experimental Medicine**

Fulfillment of research and training projects based on the finding of pharmacological targets against inflammatory and neuroinflammatory disorders through *in vitro* studies, by using different cell lines and *in vivo* models of inflammation and neuroinflammation. Committing relevant time and effort to the projects. Ensuring all done and written work is of a high standard of elucidation. Presenting seminars in the academic, national, or international scenario

Supervisor Prof. Emanuela Esposito. Full Professor of Pharmacology. Unit of Pharmacology. Department of Chemical, Biological, Pharmacological and Environmental Sciences. University of Messina. Italy  
 Business or sector Scientific research activity: disciplinary scientific sector (BIO/14)

From 2021 to 2022

**Visiting Scientist at the University of Glasgow**  
 University of Glasgow. Institute of Infection, Immunity, and Inflammation. Glasgow, (UK).

**Project:** "Defining the individual and integrated roles of inflammatory chemokine receptors (iCCRs) in atherosclerosis"  
 Supervisor: Prof. Pasquale Maffia.

January 2020

**Pharmacist Professional Qualification**  
 University of Messina.  
 Messina, Italy.

July 2019

**Master's degree in Chemistry and Biological professional qualification**  
 Department of Chemical, Biological, Pharmacological and Environmental Sciences. University of Messina. Italy.

Supervisor

Title of thesis: "Neuroprotective effects of 2-pentadecyl-2-oxazoline (PEA-OXA) in a model of cerebral ischemia in diabetic rats".  
 -Prof. Salvatore Cuzzocrea. Full Professor of Pharmacology, Unit of Pharmacology. Department of Chemical, Biological, Pharmacological and Environmental Sciences. University of Messina. Italy

PERSONAL SKILLS

Mother tongue(s) Italian

Other language(s)

UNDERSTANDING	SPEAKING	WRITING
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	Listening	Reading	Spoken interaction	Spoken production	
English	Independent user	Independent user	Independent user	Independent user	Independent user

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user  
Common European Framework of Reference for Languages

**Communication skills**

- Excellent communication skills gained through my experience resulting from the years at the University of Messina. Strong oral communications skills through poster presentations, and teaching, learning to feel comfortable in front of large and various audiences. Well-developed ability for preparing an adequate presentation style compared to the level and context of the event.

**Organisational / managerial skills**

- Excellent organizational ability personally gained through the experience abroad in the United Kingdom, at the University of Glasgow). Excellent planning group work skills, time management, and an aptitude for avoiding risks gained during the whole working period.

**Job-related skills**

- Excellent control of performing murine models of inflammation and neuroinflammation such as a model of Carrageenan (CAR)-induced rat paw, a model of colitis DNBS-induced, spinal cord injury (SCI), traumatic brain injury, Parkinson’s disease (PD), and Alzheimer’s diseases (AD) etc. from designing experimental project to the obtained data elaboration.
- Excellent execution control of molecular biology techniques (nucleic acids and proteins extraction (soluble, insoluble, nuclear, and cytosolic fractions) from cells and tissues, PCR, Agarose and polyacrylamide gel electrophoresis, Western Blot, Comet assay, Flow cytometry, and ELISA kit, gel extraction kit, PCR purification kit execution).
- Excellent execution of the following analysis: histological, immunohistochemical, immunofluorescence microscopy, immunocytochemical.
- Excellent ability of using conventional and fluorescence microscope.
- Demonstrated and validated ability of samples and solutions preparations.
- Excellent ability in the field of biostatistic, useful for the combination of clinical data in the systematic review and meta-analysis.

**Digital skills**

SELF-ASSESSMENT				
Information processing	Communication	Content creation	Safety	Problem solving
Independent user	Independent user	Independent user	Basic user	Basic user

**Other skills**

- Good command of data analysing, elaborating, and writing programs as Microsoft Office™, GraphPad, Image J, Review Manager and Endnote
- Good command of Mac and Windows operating systems
- Good use of software for scientific illustration
- Excellent understanding and using of scientific site as PubMed and other scientific databases

**Driving licence** ▫ B

ADDITIONAL INFORMATION

The activity research of Dr. Alessio Ardizzone is documented by 32 publications in international journals classified according to ISI Web of Knowledge.

## List of scientific publications

IF Total: 191.98; Average IF: 5.99; h-index: 9 (Scopus); Citations: 220 (Scopus).

1. Campolo M, Casili G, Paterniti I, Filippone A, Lanza M, **Ardizzone A**, Scuderi SA, Cuzzocrea S, Esposito E. Effect of a Product Containing Xyloglucan and Pea Protein on a Murine Model of Atopic Dermatitis. *Int J Mol Sci.* 2020 May 19;21(10):3596. doi: 10.3390/ijms21103596. PMID: 32438777; PMCID: PMC7279434.
2. Filippone A, Consoli GML, Granata G, Casili G, Lanza M, **Ardizzone A**, Cuzzocrea S, Esposito E, Paterniti I. Topical Delivery of Curcumin by Choline-Calix[4]arene-Based Nanohydrogel Improves Its Therapeutic Effect on a Psoriasis Mouse Model. *Int J Mol Sci.* 2020 Jul 17;21(14):5053. doi: 10.3390/ijms21145053. PMID: 32708987; PMCID: PMC7404063.
3. Scuderi SA<sup>#</sup>, **Ardizzone A<sup>#</sup>**, Paterniti I, Esposito E, Campolo M. Antioxidant and Anti-inflammatory Effect of Nrf2 Inducer Dimethyl Fumarate in Neurodegenerative Diseases. *Antioxidants (Basel).* 2020 Jul 17;9(7):630. doi: 10.3390/antiox9070630. PMID: 32708926; PMCID: PMC7402174. **#co-author**
4. Casili G, Campolo M, Lanza M, Filippone A, Scuderi S, Messina S, **Ardizzone A**, Esposito E, Paterniti I. Role of ABT888, a Novel Poly(ADP-Ribose) Polymerase (PARP) Inhibitor in Countering Autophagy and Apoptotic Processes Associated to Spinal Cord Injury. *Mol Neurobiol.* 2020 Nov;57(11): 4394-4407. doi: 10.1007/s12035-020-02033-x. Epub 2020 Jul 29. PMID: 32729104.
5. Campolo M, Lanza M, Filippone A, Paterniti I, Casili G, Scuderi SA, **Ardizzone A**, Cuzzocrea S, Esposito E. Evaluation of a Product Containing Xyloglucan and Pea Protein on Skin Barrier Permeability. *Skin Pharmacol Physiol.* 2020;33(4):231-236. doi: 10.1159/000509372. Epub 2020 Aug 26. PMID:32846412.
6. Lanza M, Casili G, Torre GL, Giuffrida D, Rotondo A, Esposito E, **Ardizzone A**, Rando R, Bartolomeo G, Albergamo A, Vadalà R, Salvo A. Properties of a New Food Supplement Containing Actinia equina Extract. *Antioxidants (Basel).* 2020 Oct 1;9(10):945. doi: 10.3390/antiox9100945. PMID: 33019631; PMCID: PMC7600189.
7. Casili G, Lanza M, Campolo M, Siracusa R, Paterniti I, **Ardizzone A**, Scuderi SA, Cuzzocrea S, Esposito E. Synergic Therapeutic Potential of PEA-Um Treatment and NAAA Enzyme Silencing In the Management of Neuroinflammation. *Int J Mol Sci.* 2020 Oct 11;21(20):7486. doi: 10.3390/ijms21207486. PMID: 33050589; PMCID: PMC7589809.
8. Casili G, **Ardizzone A**, Lanza M, Gugliandolo E, Portelli M, Miliù A, Cuzzocrea S, Esposito E, Paterniti I. Treatment with Luteolin Improves Lipopolysaccharide-Induced Periodontal Diseases in Rats. *Biomedicines.* 2020 Oct 21;8(10):442. doi: 10.3390/biomedicines8100442. PMID: 33096800; PMCID: PMC7590181.
9. Casili G, Lanza M, Campolo M, Messina S, Scuderi S, **Ardizzone A**, Filippone A, Paterniti I, Cuzzocrea S, Esposito E. Therapeutic potential of flavonoids in the treatment of chronic venous insufficiency. *Vascul Pharmacol.* 2021 Apr;137:106825. doi: 10.1016/j.vph.2020.106825. Epub 2020 Dec 2. PMID: 33278582. **IF: 5.738**
10. **Ardizzone A**, Scuderi SA, Giuffrida D, Colarossi C, Puglisi C, Campolo M, Cuzzocrea S, Esposito E, Paterniti I. Role of Fibroblast Growth Factors Receptors (FGFRs) in Brain Tumors, Focus on Astrocytoma and Glioblastoma. *Cancers (Basel).* 2020 Dec 18;12(12):3825. doi: 10.3390/cancers12123825. PMID: 33352931; PMCID: PMC7766440.
11. **Ardizzone A**, Fusco R, Casili G, Lanza M, Impellizzeri D, Esposito E, Cuzzocrea S. Effect of Ultra-Micronized-Palmitoylethanolamide and Acetyl-L-Carnitine on Experimental Model of Inflammatory Pain. *Int J Mol Sci.* 2021 Feb 17;22(4):1967. doi: 10.3390/ijms22041967. PMID: 33671213; PMCID: PMC7922157.
12. Calabrese G<sup>#</sup>, **Ardizzone A<sup>#</sup>**, Campolo M, Conoci S, Esposito E, Paterniti I. Beneficial Effect of Tempol, a Membrane-Permeable Radical Scavenger, on Inflammation and Osteoarthritis in In Vitro Models. *Biomolecules.* 2021 Feb 25; 11 (3): 352. doi: 10.3390/biom11030352. PMID: 33669093; PMCID: PMC7996488. **#co-author**
13. Campolo M, Lanza M, Paterniti I, Filippone A, **Ardizzone A**, Casili G, Scuderi SA, Puglisi C, Mare M, Memeo L, Cuzzocrea S, Esposito E. PEA-OXA Mitigates Oxalipatin-Induced Painful Neuropathy through NF-κB/Nrf-2 Axis. *Int J Mol Sci.* 2021 Apr 10; 22 (8): 3927. doi: 10.3390/ijms22083927. PMID: 33920318; PMCID: PMC8069952.
14. **Ardizzone A**, Calabrese G, Campolo M, Filippone A, Giuffrida D, Esposito F, Colarossi C, Cuzzocrea S, Esposito E, Paterniti I. Role of miRNA-19a in Cancer Diagnosis and Poor Prognosis. *Int J Mol Sci.* 2021 Apr 29; 22 (9): 4697. doi: 10.3390/ijms22094697. PMID: 33946718; PMCID: PMC8125123.
15. Scuderi SA, Casili G, **Ardizzone A**, Forte S, Colarossi L, Sava S, Paterniti I, Esposito E, Cuzzocrea S, Campolo M. KYP-2047, an Inhibitor of Prolyl-Oligopeptidase, Reduces Glioblastoma Proliferation through Angiogenesis and Apoptosis Modulation. *Cancers (Basel).* 2021 Jul 9; 13 (14): 3444. doi: 10.3390/cancers13143444. PMID: 34298658; PMCID: PMC8306782
16. Campolo M, Casili G, Lanza M, Filippone A, Cordaro M, **Ardizzone A**, Scuderi SA, Cuzzocrea S, Esposito E, Paterniti I. The inhibition of mammalian target of rapamycin (mTOR) in improving inflammatory response after traumatic brain injury. *J Cell Mol Med.* 2021 Aug; 25 (16): 7855-7866. doi: 10.1111/jcmm.16702. Epub 2021 Jul 10. PMID: 34245104; PMCID: PMC8358860.

17. Campolo M, Crupi R, Cordaro M, Cardali SM, **Ardizzone A**, Casili G, Scuderi SA, Siracusa R, Esposito E, Conti A, Cuzzocrea S. Co-Ultra PEALut Enhances Endogenous Repair Response Following Moderate Traumatic Brain Injury. *Int J Mol Sci*. 2021 Aug 13; 22 (16): 8717. doi: 10.3390/ijms22168717. PMID: 34445417; PMCID: PMC8395716.
18. Filippone A<sup>#</sup>, Casili G<sup>#</sup>, **Ardizzone A**, Lanza M, Mannino D, Paterniti I, Esposito E, Campolo M. Inhibition of Prolyl Oligopeptidase Prevents Consequences of Reperfusion following Intestinal Ischemia. *Biomedicines*. 2021 Sep 29; 9 (10): 1354. doi: 10.3390/biomedicines9101354. PMID: 34680471; PMCID: PMC8533609. **#co-author**
19. Lanza M<sup>#</sup>, Filippone A<sup>#</sup>, **Ardizzone A**, Casili G, Paterniti I, Esposito E, Campolo M. SCFA Treatment Alleviates Pathological Signs of Migraine and Related Intestinal Alterations in a Mouse Model of NTG-Induced Migraine. *Cells*. 2021 Oct 14; 10 (10): 2756. doi: 10.3390/cells10102756. PMID: 34685736; PMCID: PMC8535085. **#co-author**
20. Casili G, **Ardizzone A**, Basilotta R, Lanza M, Filippone A, Paterniti I, Esposito E, Campolo M. The Protective Role of Prolyl Oligopeptidase (POP) Inhibition in Kidney Injury Induced by Renal Ischemia-Reperfusion. *Int J Mol Sci*. 2021 Nov 2;22(21):11886. doi: 10.3390/ijms222111886. PMID: 34769337; PMCID: PMC8584363.
21. Scuderi SA, Casili G, Lanza M, **Ardizzone A**, Pantaleo L, Campolo M, Paterniti I, Cucinotta L, Cuzzocrea S, Esposito E. Efficacy of a Product Containing Xyloglucan and Pea Protein on Intestinal Barrier Function in a Partial Restraint Stress Animal Model. *Int J Mol Sci*. 2022 Feb 18;23(4):2269. doi: 10.3390/ijms23042269. PMID: 35216383; PMCID: PMC8875977.
22. Campolo M., Gallo G., Roviello F., **Ardizzone A**, La T. M., Filippone A., Lanza M., Cuzzocrea S., Siroli L., and Esposito E. 2022. "Evaluation of a Gel Containing a *Propionibacterium* Extract in an In Vivo Model of Wound Healing" *International Journal of Molecular Sciences* 23, no. 9: 4708. doi: 10.3390/ijms23094708. PMID: 35563099; PMCID: PMC9101165.
23. **Ardizzone A**, Capra AP, Campolo M, Filippone A, Esposito E, Briuglia S. Neurofibromatosis: New Clinical Challenges in the Era of COVID-19. *Biomedicines*. 2022 Apr 19;10(5):940. doi: 10.3390/biomedicines10050940. PMID: 35625677; PMCID: PMC9138859.
24. **Ardizzone A**, Bova V, Casili G, Filippone A, Campolo M, Lanza M, Esposito E, Paterniti I. SUN11602, a bFGF mimetic, modulated neuroinflammation, apoptosis and calcium-binding proteins in an in vivo model of MPTP-induced nigrostriatal degeneration. *J Neuroinflammation*. 2022 May 7;19(1):107. doi: 10.1186/s12974-022-02457-3. PMID: 35526035; PMCID: PMC9080217.
25. **Ardizzone A**, Lanza M, Casili G, Campolo M, Paterniti I, Cuzzocrea S, Esposito E. Efficacy of a Novel Therapeutic, Based on Natural Ingredients and Probiotics, in a Murine Model of Multiple Food Intolerance and Maldigestion. *Nutrients*. 2022 May 27;14(11):2251. doi: 10.3390/nu14112251. PMID: 35684051; PMCID: PMC9182885.
26. **Ardizzone A**, Capra AP, Mondello S, Briuglia S, La Rosa MA, Campolo M, Esposito E. H1299R Variant in Factor V and Recurrent Pregnancy Loss: A Systematic Review and Meta-Analysis Protocol. *Genes (Basel)*. 2022 Jun 6;13(6):1019. doi: 10.3390/genes13061019. PMID: 35741781; PMCID: PMC9222435.
27. **Ardizzone A**, Filippone A, Mannino D, Scuderi SA, Casili G, Lanza M, Cucinotta L, Campolo M, Esposito E. *Ulva pertusa*, a Marine Green Alga, Attenuates DNBS-Induced Colitis Damage via NF-κB/Nrf2/SIRT1 Signaling Pathways. *J Clin Med*. 2022 Jul 25;11(15):4301. doi: 10.3390/jcm11154301. PMID: 35893393; PMCID: PMC9331369.
28. Capra AP<sup>#</sup>, **Ardizzone A**<sup>#</sup>, Briuglia S, La Rosa MA, Mondello S, Campolo M, Esposito E. A Systematic Review and Meta-Analysis of the Association between the FV H1299R Variant and the Risk of Recurrent Pregnancy Loss. *Biology (Basel)*. 2022 Nov 3;11(11):1608. doi: 10.3390/biology11111608. PMID: 36358309. **#co-author**
29. Paterniti I, Casili G, Filippone A, Lanza M, **Ardizzone A**, Capra AP, Campolo M, Esposito E. A New Approach for the Treatment of Recurrent Vulvovaginal Candidiasis with a Combination of Pea Protein, Grape Seed Extract, and Lactic Acid Assessed In Vivo. *Journal of Fungi*. 2022; 8(12):1251. <https://doi.org/10.3390/jof8121251>
30. Filippone A, **Ardizzone A**, Bova V, Lanza M, Casili G, Cuzzocrea S, Esposito E, Campolo M, Paterniti I. A Combination of Xyloglucan, Pea Protein and Chia Seed Ameliorates Intestinal Barrier Integrity and Mucosa Functionality in a Rat Model of Constipation-Predominant Irritable Bowel Syndrome. *J Clin Med*. 2022 Nov 29;11(23):7073. doi: 10.3390/jcm11237073. PMID: 36498647; PMCID: PMC9739531.

31. Filippone A, Casili G, Lanza M, Scuderi S.A, **Ardizzone A**, Capra A.P, Paterniti I, Campolo M, Cuzzocrea S, Esposito E. Evaluation of the Efficacy of Xyloglucan, Pea Protein and *Opuntia ficus-indica* Extract in a Preclinical Model of Psoriasis. *Int. J. Mol. Sci.* **2023**, *24*, 3122. <https://doi.org/10.3390/ijms24043122>
32. Capra A.P<sup>#</sup>, **Ardizzone A**<sup>#</sup>, Pantò G, Paterniti I, Campolo M, Crupi L, Squeri R, Esposito E. The Prognostic Value of Pentraxin-3 in COVID-19 Patients: A Systematic Review and Meta-Analysis of Mortality Incidence. *Int. J. Mol. Sci.* **2023**, *24*, 3537. <https://doi.org/10.3390/ijms24043537> **#co-author**

#### National and International Congress Participation(s)

1. 2nd Congress on Nutraceuticals, Nutrition and Health at the University of Messina, Messina (Italy). Focus: Treatment of pain with nutraceutical products. Scientific Responsible: Prof. Giocchino Calapai (04/10/2019–05/10/2019).
2. 39<sup>th</sup> National Congress of the Italian Society of Pharmacology, "RICERCA, INNOVAZIONE, SOSTENIBILITÀ, APPROPRIATEZZA, FORMAZIONE" (Firenze, 20-23/11/2019).
3. SINS PhD Meeting Webinar: Oral Presentation "TLR7/8 deletion reduce the pathogenesis of Parkinson's Disease" (29-30 September 2020).
4. 40<sup>th</sup> SIF National Congress "Treatment with Luteolin improves Lipopolysaccharide-Induced Periodontitis in Rats" by Alessio Ardizzone, Enrico Gugliandolo, Marco Portelli, Angela Militi, Salvatore Cuzzocrea, Emanuela Esposito and Irene Paterniti (9-13 March 2021).
5. 1<sup>o</sup> Meeting del GdL Immunofarmacologia della SIF, "Recenti Sviluppi in Immunofarmacologia": Beneficial effects of *Ulva pertusa* in an experimental model of inflammatory bowel diseases by Alessio Ardizzone, Sarah A. Scuderi, Laura Cucinotta, Michela Campolo, Valentina Bova, Salvatore Cuzzocrea and Emanuela Esposito (Perugia 24-26 Novembre 2021).
6. 15<sup>th</sup> World Congress on Inflammation WCI 2022: "*Ulva Pertusa* extract modulates inflammation and improves antioxidant response in experimental murine colitis" by Ardizzone A., Mannino D., Filippone A., Campolo M., Cuzzocrea S. and Esposito E. (Roma, 5-8/06/2022).
7. Giornata di Divulgazione Scientifica (13 Giugno 2022) del PhD Course in "Applied Biology and Experimental Medicine", Department of Chemical, Biological, Pharmaceutical and Environmental Sciences, University of Messina; Oral Presentation: "Revisioni sistematiche e meta-analisi: teoria ed applicazioni cliniche".
8. XXV Congresso Nazionale SIGU: "H1299R variant in Factor V and Recurrent Pregnancy Loss: A Systematic Review and Meta-Analysis" by Alessio Ardizzone, Anna Paola Capra, Stefania Mondello, Silvana Briuglia, Maria Angela La Rosa, Michela Campolo and Emanuela Esposito (Trieste, 7-9 Settembre 2022).
9. XXIV SIF Seminar on Pharmacology for PhD Students, Fellows, Post Doc and Specialist Trainees e 41<sup>th</sup> SIF National Congress, Oral Presentation: "*Ulva Pertusa*, a marine green alga, attenuates DNBS-induced colitis damage via NF- $\kappa$ B/Nrf2/SIRT1 signaling pathways" by Alessio Ardizzone, Alessia Filippone, Deborah Mannino, Sarah Adriana Scuderi, Giovanna Casili, Marika Lanza, Laura Cucinotta, Michela Campolo and Emanuela Esposito (15-19 November 2022).
10. More than Neurons III Edition – Changing the paradigm for novel therapeutic avenues: "SUN11602, a bFGF mimetic, improves neurons survival and attenuates neuroinflammation in an in vivo model of traumatic brain injury" by Ardizzone Alessio, Filippone Alessia, Bova Valentina, Lanza Marika, Casili Giovanna, Campolo Michela, Paterniti Irene, Cuzzocrea Salvatore and Esposito Emanuela.

#### Meeting(s) participation

1. Conference "Equivalent-Biosimilar Drugs" Quality, efficacy and sustainability - Motori Sanità, Messina, Italy (14/10/2017) presso l'Università degli Studi di Messina.
2. CME training course "Nutrition and Sport: an essential combination" held by InPha - Nutraceuticals with a high scientific rationale, Messina, Italy (28/04/2018) presso l'Università degli Studi di Messina.
3. Cycle of Webinar "Medicines: Regulatory tools" (30 September, 12 October, 9 November 2020) promosso dalla Società Italiana di Farmacologia (SIF).
4. "Quality management system - Operational aspects" M. Biscaro. (6/11/2020) presso l'Università degli Studi di Messina.
5. "Quality management system - Recording of experiments and management of measurement instruments and related recordings" M. Biscaro, On the job training mode. (9/04/2021) presso l'Università degli Studi di Messina.
6. "Pharmacognosy yesterday, today and tomorrow" SIPHAR Web Conference (18/06/2021) promosso dalla Società Italiana di Farmacologia (SIF).
7. UniME Scuola di Eccellenza 2021: "Immunità e infiammazione, da cancro a COVID-19" Relatore: prof. Alberto Mantovani (26/07/2021) presso l'Università degli Studi di Messina.
8. "Quality management system - Applicable requirements of the ISO 13485: 2016 and ISO 9001: 2015 standards and procedures and registration forms" M. Biscaro (10/09/2021) presso l'Università degli Studi di Messina.
9. Course on "Fire Safety Training" (25/10/2021) presso l'Università di Glasgow.
10. Course on "Health, Safety and Wellbeing" (25/10/2021) presso l'Università di Glasgow.
11. Webinar on Cardiovascular Research Discoveries (3/11/2021) presso l'Università di Glasgow.
12. Seminario di Divulgazione Scientifica "Glucocorticoids in Inflammation and immune response: role of GILZ" del Professore Carlo Riccardi, (30/06/2022) presso l'Università degli Studi di Messina.
13. Cenni sui metodi di soppressione (Messina, 12/07/2022) presso l'Università degli Studi di Messina.
14. Gravità delle procedure, punti finali umanitari (Messina, 12/07/2022) presso l'Università degli Studi di Messina.
15. Le tre R nella scienza dell'utilizzo degli animali (Messina, 12/07/2022) presso l'Università degli Studi di Messina.
16. Approcci alternativi e metodologia della ricerca (Messina, 12/07/2022) presso l'Università degli Studi di Messina.
17. Education e training sull'utilizzo dello strumento HPLC Agilent 1260 Infinity II. (Messina, 29/09/2022) presso l'Università degli Studi di Messina.
18. Formazione specifica del personale di laboratorio sulla gestione di strumenti, attrezzature e materiali di laboratorio (Messina, 13/10/2022) presso l'Università degli Studi di Messina.

#### Award(s)

- Italian Society of Pharmacology (SIF) young fellowship per un periodo di ricerca all'estero presso l'Università di Glasgow.

Membership

Italian Society of Pharmacology (SIF)  
British Pharmacological Society (BPS)

*Messina, 20<sup>th</sup> February 2023*

*Alessio Ardizzone*