

Giuseppe Floresta











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DoB: 15/Feb/1991

Education

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|---------------------|---|---|
| 2014 |  | Degree in Pharmacy-University of Catania
110/110 cum laude;
Thesis in Organic Chemistry entitled: "Synthesis of 2-(chloromethyl)-4-alchyl-5-oxopiperazine-1-sulfonamide via palladium catalysis" |
| 2015 |  | Research fellow-University of Catania
Research project entitled: "Design and stereoselective synthesis of active compounds to protein targets involved in viral diseases and cancer" |
| 2016 |  | Award Order of Pharmacists
Award Order of Pharmacists Province of Catania Academic Year 2012/2013 |
| 11/2015-
10/2018 |  | PhD Student in Chemical Sciences- University of Catania
Thesis entitled: "Design and synthesis of novel compounds as fatty acids binding protein inhibitors and as gallium-68 chelators for positron emission tomography" |
| 01/2017-
07/2017 |  | Visiting PhD Student-King's College London
Prof. Robert Hider, Institute of Pharmaceutical Science |
| 02/2018-
05/2018 |  | Visiting PhD Student-King's College London
Prof. Vincenzo Abbate, School of Population Health & Environmental Sciences |
| 11/2018-
08/2019 |  | Research fellow-University of Catania |
| 09/2019-
12/2019 |  | Postdoctoral Researcher-King's College London
Study of peptides-based PET tracers |

Communications

- 2015** Synthesis of 4-[[[(3R,3aR)-1,1-dioxido-6-oxohexahydro-2H-[1,2,5]thiadiazolo [2,3-a]pyrazin-3-yl]methoxy]-butanhydroxamic acids as potential histone deacetylase inhibitors, C. Zagni, G. Floresta, M. A. Chiacchio, S.V. Giofrè, R. Romeo, G. Brogginì. XVI National conference on Pericyclic Reactions and Synthesis of Heterocycles and carbocycles Matera, Italy, 26–27 June 2015.
- 2015** Synthesis of N-Hydroxy-5-substituted-6-oxohexahydro-2H-[1,2,5]-thiadiazolo-[2,3-a]pyrazine-3-carboxamide-1,1-dioxides and 2-(4-substituted-5-oxo-1-sulfamoylpiperazin-2-yl)acethydroxamic Acids as Potential Histone Deacetylase Inhibitors, G. Floresta, C. Zagni, M. A. Chiacchio, S.V. Giofrè, R. Romeo, G. Brogginì. Challenges in Organic Synthesis: Efficient Processes for novel Applications XV Giornata Scientifica C.I.N.M.P.I.S. Napoli, December 11–12, 2015.
- 2016** Intramolecular oxidative palladium-catalyzed diamination reaction of alkenyl Sulfamates: synthesis of new histone deacetylase inhibitors, M. A. Chiacchio, G. Floresta, C. Zagni, G. Monciino, S.V. Giofrè, R. Romeo, G. Brogginì. 15th RSC-SCI Joint Meeting on Heterocyclic Chemistry 12–15 May 2016, Taormina, Italy.
- 2016** Gamma-Cyclodextrin as an efficient catalyst for the synthesis of 2-methyl-3,5-diarylisoxazolidines in water, Giuseppe Floresta, Carmen Talotta, Carmine Gaeta, Margherita De Rosa, Ugo Chiacchio, Placido Neri, Antonio Rescifina. 15th RSC-SCI Joint Meeting on Heterocyclic Chemistry 12–15 May 2016, Taormina, Italy.
- 2017** Supramolecularly organocatalyzed C-C bond formation under "on-water" conditions or inside nanocavities. M. De Rosa, P. La Manna, C. Talotta, C. Gaeta, A. Soriente, A. Rescifina, G. Floresta, P. Neri. 9th International Symposium on Nano & Supramolecular Chemistry 4–7 Sep 2017, Napoli, Italy.
- 2018** Potholing of the hydrophobic heme oxygenase-1 western region for the search of potent and selective imidazole-based inhibitors L. Salerno, E. Amata, G. Romeo, A. Marrazzo, G. Floresta, M.N. Modica, K.F. Greish, V. Sorrenti, A. Rescifina, V. Pittalà. Italian-Spanish-Portuguese Joint Meeting in Medicinal Chemistry MedChemSicily2018 July 17–20, 2018, Palermo, Italy.
- 2018** Cucurbit[7]uril as a supramolecular macrocycle for microwave assisted synthesis of 2-methyl-3,5-diarylisoxazolidines in water. D. Gentile, G. Floresta, V. Patamia, A. Rescifina. XXXVIII Convegno Nazionale della Divisione di Chimica Organica della Società Chimica Italiana. 9–13 Sep 2018, Milano, Italy.
- 2019** La modellistica molecolare applicata ai recettori Sigma-1 e Sigma-2: un excursus. G. Floresta, D. Gentile, M. Dichiarà, E. Amata, A. Rescifina, A. Marrazzo. Società Chimica

Italiana, Congresso Congiunto delle Sezioni Sicilia e Calabria 2019. 1–2 Mar 2019, Palermo, Italy.

2019 Cucurbit[7]uril: sintesi assistita da stampi molecolari ed applicazioni nelle reazioni di cicloaddizione 1,3-dipolare. V. Patamia, D. Gentile, G. Floresta, A. Rescifina. Società Chimica Italiana, Congresso Congiunto delle Sezioni Sicilia e Calabria 2019. 1–2 Mar 2019, Palermo, Italy.

2019 The interaction of synthetic cannabinoids and alcohol: an in-vitro evaluation. V. Abbate, O. Apirakkan, I. Gavrilovic, G. Floresta, C. Pierre, D. Cowan, L. Couchman. VI International Conference on Novel Psychoactive Substances. 8–9 April 2019, Maastricht, Netherlands.

2019 Development of NO-releasing sigma receptor hybrids as anticancer agents. M. Dichiarà, R. Acquaviva, A. La Mantia, C. Di Giacomo, E. Arena, G. Floresta, A. Marrasso, E. Amata and O. Prezzavento. Paul Ehrlich Euro-PhD Network & MuTaLig COST Action meeting. 13–15 June 2019 Catanzaro, Italy.

Posters

- 2015** Synthesis of 1,1-dioxido-6-oxohexahydro-2H-[1,2,5]thiadiazolo [2,3-a]-pirazin-2-yl hydroxamic acids as potential histone deacetylase inhibitors. G. Floresta, C. Zagni, M. A. Chiacchio, A. Corsaro, U. Chiacchio, G. Broggin. 16th Tetrahedron Symposium, Challenges in Bioorganic & Organic Chemistry 16–19 June 2015, Berlin, Germany.
- 2017** Resorcin[4]arene-Based Hexameric Capsule as Nanoreactor for 1,3-Dipolar Cycloadditions. P. La Manna, C. Talotta, C. Gaeta, A. Soriente, A. Rescifina, G. Floresta, M. De Rosa a, P. Neri. 9th International Symposium on Nano & Supramolecular Chemistry 4–7 Sep 2017, Napoli, Italy.
- 2018** Targeting the hydrophobic heme oxygenase-1 western region for the identification of novel and selective azole-based inhibitors. M. Dichiarà, M. Modica, C. Leonardi, F. Margani, V. Ciaffaglione, A. N. Fallica, G. Floresta, D. Gentile, J. Cosenza, V. Pittalà. Congresso Congiunto delle Sezioni Sicilia e Calabria SCI 2018. 9–10 Feb 2018, Catania, Italy.
- 2018** The Hexameric Resorcinarene Capsule as Nanoreactor for the Catalysis of Friedel-Crafts Reactions. P. La Manna, C. Talotta, G. Floresta, M. De Rosa, A. Soriente, A. Rescifina, C. Gaeta, P. Neri. 2nd Meeting on Porous Molecular Solids (PoMoS). Vietri sul Mare, 6–8 June 2018.
- 2018** Friedel-Crafts Reaction Promoted by Hexameric Resorcinarene Capsule. P. La Manna, C. Talotta, G. Floresta, M. De Rosa, A. Soriente, A. Rescifina, C. Gaeta, P. Neri. XXXVIII Convegno Nazionale della Divisione di Chimica Organica della Società Chimica Italiana. 9–13 Sep 2018, Milano, Italy.
- 2018** Rosmarinic acid amides: synthesis, α -glucosidase inhibition and enzyme binding mode. N. Cardullo, G. Catinella, G. Floresta, S. Rosselli, A. Rescifina, M. Bruno, C. Tringali. 12th World Congress on Polyphenols Applications: Bonn Polyphenols 2018. 25–28 Sep 2018, Bonn, Germany.
- 2019** Ammidi dell'acido rosmarinico come potenziali agenti antidiabetici. V. Muccilli, N. Cardullo, G. Catinella, G. Floresta, S. Rosselli, A. Rescifina, M. Bruno, C. Tringali. Società Chimica Italiana, Congresso Congiunto delle Sezioni Sicilia e Calabria 2019. 1–2 Mar 2019, Palermo, Italy.

Articles

1. U. Chiacchio, G. Broggin, R. Romeo, S. Gazzola, M.A. Chiacchio, S.V. Giofre, B. Gabriele, R. Mancuso, G. Floresta, C. Zagni, Intramolecular oxidative palladium-catalyzed diamination reactions of alkenyl sulfamates: an efficient synthesis of [1, 2, 5] thiadiazolo-fused piperazinones, *Rsc Adv* 6(62) (2016) 57521-57529.
2. C. Zagni, G. Floresta, G. Monciino, A. Rescifina, The search for potent, small-molecule HDACIs in cancer treatment: a decade after vorinostat, *Medicinal research reviews* 37(6) (2017) 1373-1428.
3. G. Floresta, C. Talotta, C. Gaeta, M. De Rosa, U. Chiacchio, P. Neri, A. Rescifina, γ -Cyclodextrin as a catalyst for the synthesis of 2-methyl-3, 5-diarylisoxazolidines in water, *The Journal of organic chemistry* 82(9) (2017) 4631-4639.
4. A. Rescifina, G. Floresta, A. Marrazzo, C. Parenti, O. Prezzavento, G. Nastasi, M. Dichiarà, E. Amata, Development of a Sigma-2 Receptor affinity filter through a Monte Carlo based QSAR analysis, *European Journal of Pharmaceutical Sciences* 106 (2017) 94-101.
5. G. Floresta, *JOCB Bulletin: Book Review "Simulating Enzyme Reactivity: Computational Methods in Enzyme Catalysis"* Editors: Inaki Tunon, Vicent Moliner, *Journal of Chemical Biology* 10 (2017) 151-155.
6. A. Rescifina, G. Floresta, A. Marrazzo, C. Parenti, O. Prezzavento, G. Nastasi, M. Dichiarà, E. Amata, Sigma-2 receptor ligands QSAR model dataset, *Data in Brief* 13 (2017) 514-535.
7. G. Floresta, V. Pistarà, E. Amata, M. Dichiarà, A. Marrazzo, O. Prezzavento, A. Rescifina, Adipocyte fatty acid binding protein 4 (FABP4) inhibitors. A comprehensive systematic review, *European journal of medicinal chemistry* 138 (2017) 854-873.
8. G. Floresta, A. Rescifina, A. Marrazzo, M. Dichiarà, V. Pistarà, V. Pittala, O. Prezzavento, E. Amata, Hyphenated 3D-QSAR statistical model-scaffold hopping analysis for the identification of potentially potent and selective sigma-2 receptor ligands, *European journal of medicinal chemistry* 139 (2017) 884-891.
9. G. Floresta, V. Pistarà, E. Amata, M. Dichiarà, A. Damigella, A. Marrazzo, O. Prezzavento, F. Punzo, A. Rescifina, Molecular modeling studies of pseudouridine isoxazolidinyl nucleoside analogues as potential

- inhibitors of the pseudouridine 5'-monophosphate glycosidase, *Chemical biology & drug design* 91(2) (2018) 519-525.
10. M. Dichiara, E. Amata, A. Rescifina, O. Prezzavento, G. Floresta, C. Parenti, V. Pittalà, A. Marrazzo, Synthesis and evaluation of haloperidol metabolite II prodrugs as anticancer agents, *Future medicinal chemistry* 9(15) (2017) 1749-1764.
 11. M.G. Varrica, C. Zagni, P.G. Mineo, G. Floresta, G. Monciino, V. Pistarà, A. Abbadessa, A. Nicosia, R.M. Castilho, E. Amata, DNA intercalators based on (1, 10-phenanthroline-2-yl) isoxazolidin-5-yl core with better growth inhibition and selectivity than cisplatin upon head and neck squamous cells carcinoma, *European journal of medicinal chemistry* 143 (2018) 583-590.
 12. P. La Manna, M. De Rosa, C. Talotta, C. Gaeta, A. Soriente, G. Floresta, A. Rescifina, P. Neri, The hexameric resorcinarene capsule as an artificial enzyme: ruling the regio and stereochemistry of a 1, 3-dipolar cycloaddition between nitrones and unsaturated aldehydes, *Org Chem Front* 5(5) (2018) 827-837.
 13. E. Arena, M. Dichiara, G. Floresta, C. Parenti, A. Marrazzo, V. Pittalà, E. Amata, O. Prezzavento, Novel Sigma-1 receptor antagonists: from opioids to small molecules: what is new?, *Future medicinal chemistry* 10(02) (2018) 231-256.
 14. L. Salerno, E. Amata, G. Romeo, A. Marrazzo, O. Prezzavento, G. Floresta, V. Sorrenti, I. Barbagallo, A. Rescifina, V. Pittalà, Potholing of the hydrophobic heme oxygenase-1 western region for the search of potent and selective imidazole-based inhibitors, *European journal of medicinal chemistry* 148 (2018) 54-62.
 15. P. La Manna, C. Talotta, G. Floresta, M. De Rosa, A. Soriente, A. Rescifina, C. Gaeta, P. Neri, Mild Friedel-Crafts Reactions inside a Hexameric Resorcinarene Capsule: C-Cl Bond Activation through Hydrogen Bonding to Bridging Water Molecules, *Angewandte Chemie International Edition* 57(19) (2018) 5423-5428.
 16. G. Floresta, E. Amata, M. Dichiara, A. Marrazzo, L. Salerno, G. Romeo, O. Prezzavento, V. Pittalà, A. Rescifina, Identification of Potentially Potent Heme Oxygenase 1 Inhibitors through 3D-QSAR Coupled to Scaffold-Hopping Analysis, *ChemMedChem* 13(13) (2018) 1336-1342. This article also appears in: *MedChemSicily 2018*
 17. K.F. Greish, L. Salerno, R. Al Zahrani, E. Amata, M.N. Modica, G. Romeo, A. Marrazzo, O. Prezzavento, V. Sorrenti, A. Rescifina, G. Floresta, S. Intagliata and V. Pittalà, Novel Structural Insight into Inhibitors of

- Heme Oxygenase-1 (HO-1) by New Imidazole-Based Compounds: Biochemical and In Vitro Anticancer Activity Evaluation, *Molecules* 23(5) (2018), 1209.
18. G. Floresta, V. Pittalà, V. Sorrenti, G. Romeo, L. Salerno and A. Rescifina, Development of new HO-1 inhibitors by a thorough scaffold-hopping analysis, *Bioorganic Chemistry* 81 (2018) 334–339.
 19. G. Floresta O. Apirakkan, A. Rescifina and V. Abbate, Discovery of High-Affinity Cannabinoid Receptors Ligands through a 3D-QSAR Ushered by Scaffold-Hopping Analysis, *Molecules* 23(9) (2018), 2183.
 20. G. Floresta, A. Rescifina, Metyrapone- β -cyclodextrin supramolecular interactions inferred by complementary spectroscopic/spectrometric and computational studies, *J Mol Struct* 1176 (2019) 815-824.
 21. V. Sorrenti, V. Pittala, G. Romeo, E. Amata, M. Dichiarà, A. Marrazzo, R. Turnaturi, O. Prezzavento, I. Barbagallo, L. Vanella, A. Rescifina, G. Floresta, D. Tibullo, F. Di Raimondo, S. Intagliata, L. Salerno, Targeting heme Oxygenase-1 with hybrid compounds to overcome Imatinib resistance in chronic myeloid leukemia cell lines, *Eur J Med Chem* 158 (2018) 937-950.
 22. G. Floresta, E. Amata, C. Barbaraci, D. Gentile, R. Turnaturi, A. Marrazzo, A. Rescifina, A Structure- and Ligand-Based Virtual Screening of a Database of "Small" Marine Natural Products for the Identification of "Blue" Sigma-2 Receptor Ligands, *Mar Drugs* 16(10) (2018), 384.
 23. G. Floresta, A. Cilibrizzi, V. Abbate, A. Spampinato, C. Zagni, A. Rescifina, 3D-QSAR assisted identification of FABP4 inhibitors: An effective scaffold hopping analysis/QSAR evaluation, *Bioorganic Chemistry* 84 (2019) 276-284.
 24. G. Floresta, V. Pistara, K.E. Christensen, E. Amata, A. Marrazzo, D. Gentile, A. Rescifina, F. Punzo, A Pseudouridine Isoxazolidinyl Nucleoside Analogue Structural Analysis: A Morphological Approach, *Molecules* 23(12) (2018), 3381.
 25. G. Floresta, A. Cilibrizzi, V. Abbate, A. Spampinato, C. Zagni, A. Rescifina, FABP4 inhibitors 3D-QSAR model and isosteric replacement of BMS309403 datasets, *Data in Brief*, 22, (2019), 471–483.
 26. A. Cilibrizzi, G. Floresta, V. Abbate, M.P. Giovannoni, iVS analysis to evaluate the impact of scaffold diversity in the binding to cellular targets relevant in cancer, *J Enzyme Inhib. Med. Chem.* 34(1) (2019) 44-50.

27. G. Floresta, M. Dichiara, D. Gentile, O. Prezzavento, A. Marrazzo, A. Rescifina, E. Amata, Morphing of Ibogaine: A Successful Attempt into the Search for Sigma-2 Receptor Ligands. *Int. J. Mol. Sci.* 2019, 20(3), 488.
28. L. Salerno, G. Floresta, V. Ciaffaglione, D. Gentile, F. Margani, R. Turnaturi, A. Rescifina, V. Pittalà, Progress in the development of selective heme oxygenase-1 inhibitors and their potential therapeutic application. *European journal of medicinal chemistry* 167 (2019) 439–453.
29. G. Floresta, E. Amata, D. Gentile, G. Romeo, A. Marrazzo, V. Pittalà, L. Salerno, A. Rescifina. Fourfold Filtered Statistical/Computational Approach for the Identification of Imidazole Compounds as HO-1 Inhibitors from Natural Products. *Mar. Drugs*, 17 (2019), 113.
30. N. Cardullo, G. Catinella, G. Floresta, V. Muccilli, S. Rosselli, A. Rescifina, M. Bruno, C. Tringali. Synthesis of Rosmarinic Acid Amides as Antioxidative and Hypoglycemic Agents. *J. Nat. Prod.* (2019), 82 (3), 573–582.
31. S. Gambaro, M. De Rosa, A. Soriente, C. Talotta, G. Floresta, A. Rescifina, C. Gaeta, P. Neri. The Hexameric Resorcinarene Capsule as a Hydrogen Bonding Catalyst in the Conjugate Addition of Pyrroles and Indoles to Nitroalkenes. *Org. Chem. Front.* (2019), 6, 2339-2347.
32. G. Floresta, A. Rescifina, V. Abbate. Structure-Based Approach for the Prediction of Mu-opioid Binding Affinity of Unclassified Designer Fentanyl-Like Molecules. *Int. J. Mol. Sci.* (2019), 20(9), 2311.
33. G. Floresta, F. Punzo, A. Rescifina. Supramolecular host-guest interactions of pseudoginsenoside F11 with β - and γ -cyclodextrin: Spectroscopic/spectrometric and computational studies. *J. Mol. Struct.* (2019) 1195, 387–394.
34. O. Apirakkan, I. Gavrilović, G. Floresta, C. Pierre, A. Canaert, C.P. Stove, P.I. Dargan, D.A. Cowan, L. Couchman, V. Abbate. Evidence of enzyme-mediated transesterification of synthetic cannabinoids with ethanol: potential toxicological impact. *Forensic Toxicology*. *In press*. DOI: 10.1007/s11419-019-00491-0.