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Francesca Alessandra Ambrosio

WORK EXPERIENCE

05/2022 – 11/2023
POSTDOCTORAL RESEARCHER UNIVERSITÀ DEGLI STUDI “MAGNA GRAECIA” DI CATANZARO

05/2021 – 30/04/2022
POSTDOCTORAL RESEARCHER UNIVERSITÀ DEGLI STUDI “MAGNA GRAECIA” DI CATANZARO

04/2020 – 03/2021 Catanzaro, Italy
POSTDOCTORAL RESEARCHER UNIVERSITÀ DEGLI STUDI “MAGNA GRAECIA” DI CATANZARO

01/2020 – 03/2020 Catanzaro, Italy
RESEARCHER NET4SCIENCE SRL

Researcher in medicinal chemistry

2020 – 2021 Cosenza, Italy
LECTURER IN "ASPETTI STRUTTURALI E MOLECOLARI DEI NUTRACEUTICI" FOR THE SECOND LEVEL MASTER "NUTRIZIONE ED INTEGRAZIONE NUTRACEUTICA" DIPARTIMENTO DI FARMACIA E SCIENZE DELLA SALUTE E DELLA NUTRIZIONE DELL'UNIVERSITÀ DELLA CALABRIA

2019 – 2020 Catanzaro, Italy
TEACHING ASSISTANT FOR THE DISCIPLINES RELATED TO THE SCIENTIFIC-DISCIPLINARY SECTOR OF PHARMACEUTICAL CHEMISTRY UNIVERSITÀ DEGLI STUDI “MAGNA GRAECIA” DI CATANZARO

2018 – CURRENT Catanzaro, Italy
APPOINTMENT OF SUBJECT EXPERT FOR SSD CHIM/08, PHARMACEUTICAL CHEMISTRY; CHIM/10, FOOD CHEMISTRY; AND CHIM/11, FERMENTATION CHEMISTRY UNIVERSITÀ DEGLI STUDI “MAGNA GRAECIA” DI CATANZARO

08/2015 – 03/2016
PHARMACIST “PARAFARMACIA SASCAL”, AEROPORTO INTERNAZIONALE OF LAMEZIA TERME

EDUCATION AND TRAINING

31/01/2020
TRAINING COURSE “NUTRIZIONE ED INTEGRAZIONE NUTRACEUTICA” Dipartimento di Farmacia e Scienze della Salute e della Nutrizione dell'Università della Calabria

03/10/2019
PHD IN LIFE SCIENCES Università degli Studi “Magna Graecia” di Catanzaro

08/2018 – 12/2018
VISITING PHD STUDENT Scripps Research Institute North Torrey Pines Road, California (Stati Uniti)

05/2017 Certosa di Pontignano, Siena, Italy
11TH EUROPEAN WORKSHOP IN DRUG DESIGN AND MU.TA.LIG. TRAINING SCHOOL

02/2017 Vienna, Austria
1ST TRAINING SCHOOL – MUTALIG COST ACTION Universitat Wien

31/03/2015
DEGREE IN PHARMACY WITH VOTE 110/110 Università degli Studi "Magna Graecia" di Catanzaro

06/2014 – 03/2015
EXPERIMENTAL THESIS AT THE COMPUTATIONAL CHEMISTRY LABORATORY (CCLAB)
Università degli Studi "Magna Graecia" di Catanzaro

07/2014 – 03/2015
PHARMACY PROFESSIONAL INTERNSHIPS

LANGUAGE SKILLS

Mother tongue(s): **ITALIAN**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	B2	B2	B2	B2	B2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

DIGITAL SKILLS

Microsoft Windows, MacOs, Linux, Unix

PUBLICATIONS

Cavalloro, V.; Marchesi, N.; Linciano, P.; Rossi, D.; Campagnoli, L.I.M.; Fossati, A.; Ahmed, K.M.; Malacrida, A.; Miloso, M.; Mazzeo, G.; Abbate, S.; Longhi, G.; Ambrosio, F.A.; Costa, G.; Alcaro, S.; Pascale, A.; Martino, E. Collina, S. Neurodegeneration: can metabolites from Eremurus persicus help? Front Pharmacol. 2024;15:1309766.

Marchese, E.; Gallo Cantafio, M.E.; Ambrosio, F.A.; Torcasio, R.; Valentino, I.; Trapasso, F.; Viglietto, G.; Alcaro, S.; Costa, G.; Amodio, N. New Insights for Polyphenolic Compounds as Naturally Inspired Proteasome Inhibitors. Pharmaceuticals. 2023, 16(12):1712.

Della Volpe, S.; Listro, R.; Ambrosio, F.A.; Garbagnoli, M.; Linciano, P.; Rossi, D.; Costa, G.; Alcaro, S.; Vasile, F.; Hirsch, A.K.H.; Collina, S. Identification of HuR-RNA Interfering Compounds by Dynamic Combinatorial Chemistry and Fluorescence Polarization. ACS Med Chem Lett. 2023, 14(11):1509-1516.

Gratteri, C.; Ambrosio, F.A.; Lupia, A.; Moraca, F.; Catalanotti, B.; Costa, G.; Bellocchi, M.; Carioti, L.; Salpini, R.; Ceccherini-Silberstein, F.; Frazia, S.; Malagnino, V.; Sarmati, L.; Svicher, V.; Bryant, S.; Artese, A.; Alcaro, S. Molecular and Structural Aspects of Clinically Relevant Mutations of SARS-CoV-2 RNA-Dependent RNA Polymerase in Remdesivir-Treated Patients. Pharmaceuticals (Basel). 2023 Aug 12;16(8):1143. doi: 10.3390/ph16081143. PMID: 37631058; PMCID: PMC10459223.

Dichiara, M.; Ambrosio, F.A.; Lee, S.M.; Ruiz-Cantero, M.C.; Lombino, J.; Coricello, A.; Costa, G.; Shah, D.; Costanzo, G.; Pasquinucci, L.; Son, K.N.; Cosentino, G.; González-Cano, R.; Marrazzo, A.; Aakalu, V.K.; Cobos, E.J.; Alcaro, S. Amata, E. Discovery of AD258 as a Sigma Receptor Ligand with Potent Antiallodynic Activity. J Med Chem. 2023, 66(16):11447-11463.

Marchesi, N.; Linciano, P.; Campagnoli, L.I.M.; Fahmideh, F.; Rossi, D.; Costa, G.; Ambrosio, F.A.; Barbieri, A.; Collina, S.; Pascale, A. Short- and Long-Term Regulation of HuD: A Molecular Switch Mediated by Folic Acid? Int. J. Mol. Sci. 2023, 24, 12201.

Ambrosio, F.A.; Costa, G.; Romeo, I.; Esposito, F.; Alkhatib, M.; Salpini, R.; Svicher, V.; Corona, A.; Malune, P.; Tramontano, E.; Ceccherini-Silberstein, F.; Alcaro, S.; Artese, A. Targeting SARS-CoV-2 Main Protease: A Successful Story Guided by an In Silico Drug Repurposing Approach. J. Chem. Inf. Model. 2023, 63, 11, 3601–3613.

Romeo, I.; Brizzi, A.; Pessina, F.; Ambrosio, F.A.; Aiello, F.; Belardo, C.; Carullo, G.; Costa, G.; De Petrocellis, L.; Frosini, M.; Luongo, L.; Maramai, S.; Paolino, M.; Moriello, A.S.; Mugnaini, C.; Scorzelli, F.; Maione, S.; Corelli, F.;Di Marzo, V.; Alcaro, S.; Artese, A. In Silico-Guided Rational Drug Design and Synthesis of Novel 4-(Thiophen-2-yl)butanamides as Potent and Selective TRPV1 Agonists. J Med Chem. 2023 May 25;66(10):6994-7015. doi: 10.1021/acs.jmedchem.3c00447.

Dichiara, M.; Ambrosio, F.A.; Barbaraci, C.; González-Cano, R.; Costa, G.; Parenti, C.; Marrazzo, A.; Pasquinucci, L.; Cobos, E.J.; Alcaro, S.; Amata. Synthesis, Computational Insights, and Evaluation of Novel Sigma Receptors Ligands. ACS Chem. Neurosci. 2023, 14, 10, 1845–1858.

Ambrosio, F.A.; Costa, G.; Gallo Cantafio, M.E.; Torcasio, R.; Trapasso, F.; Alcaro, S.; Viglietto, G.; Amodio, N. Natural Agents as Novel Potential Source of Proteasome Inhibitors with Anti-Tumor Activity: Focus on Multiple Myeloma. Molecules 2023, 28, 1438.

Romeo, I.; Ambrosio, F.A.; Costa, G.; Corona, A.; Alkhatib, M.; Salpini, R.; Lemme, S.; Vergni, D.; Svicher, V.; Santoro, M.M.; et al. Targeting SARS-CoV-2 nsp13 Helicase and Assessment of Druggability Pockets: Identification of Two Potent Inhibitors by a Multi-Site In Silico Drug Repurposing Approach. Molecules 2022, 27, 7522.

Listro, R.; Malacrida, A.; Ambrosio, F.A.; Rossino, G.; Di Giacomo, M.; Cavalloro, V.; Garbagnoli, M.; Linciano, P.; Rossi, D.; Cavaletti, G.; et al. From Nature to Synthetic Compounds: Novel 1(N),2,3 Trisubstituted-5-oxopyrrolidines Targeting Multiple Myeloma Cells. Int. J. Mol. Sci. 2022, 23, 13061.

Alkhatib, M.; Salpini, R.; Carioti, L.; Ambrosio, F.A.; D'Anna, S.; Duca, L.; Costa, G.; Bellocchi, M.C.; Piermatteo, L.; Artese, A.; Santoro, M.M.; Alcaro, S.; Svicher, V.; Ceccherini-Silbersteina, F. Update on SARS-CoV-2 Omicron Variant of Concern and Its Peculiar Mutational Profile, Microbiology Spectrum, 2022, 10.

Alkhatib, M.; Svicher, V.; Salpini, R.; Ambrosio, F.A.; Bellocchi, M.C.; Carioti, l.; Piermatteo, l.; Scutari, R.; Costa, G.; Artese, A.; Alcaro, S., Shafer, R.; Ceccherini-Silberstein, F. SARS-CoV-2 variants and their relevant mutational profiles: update summer 2021, Microbiology Spectrum, 2021, 9, 3.

Malacrida, A.; Cavalloro, V.; Martino, E.; Costa, G.; Ambrosio, F.A.; Alcaro, S.; Rigolio, R.; Cassetti, A.; Miloso, M.; Collina, S. Anti-multiple myeloma potential of secondary metabolites from hibiscus sabdariffa—part 2, Molecules, 2021, 26, 6596.

Ambrosio, F.A.; Coricello, A.; Costa, G.; Lupia, A.; Micaelli, M.; Marchesi, N.; Sala, F.; Pascale, A.; Rossi, D.; Vasile, F.; Alcaro, S.; Collina, S. Identification of compounds targeting HuD. Another brick in the wall of neurodegenerative disease treatment. J Med Chem, 2021, 64 (14), 9989-10000.

Salpini, R.; Alkhatib, M.; Costa, G.; Piermatteo, l.; Ambrosio, F.A.; Di Maio, V.C.; Scutari, R.; Duca, l.; Berno, G.; Fabeni, l.; Alcaro, S.; Ceccherini-Silberstein, F.; Artese, A.; Svicher, V. Key genetic elements, single and in clusters, underlying geographically dependent SARS-CoV-2 genetic adaptation and their impact on binding affinity for drugs and immune control. J Antimicrob Chemother. 2021, 76(2):396-412.

Artese, A.; Svicher, V.; Costa, G.; Salpini, R.; Di Maio, V.C.; Alkhatib, M.; Ambrosio, F.A.; Santoro, M.M.; Assaraf, Y.G.; Alcaro, S.; Ceccherini-Silberstein, F. Current status of antivirals and druggable targets of SARS CoV-2 and other human pathogenic coronaviruses. Drug Resistance Updates, 2020, 53, 100721.

Costa, G.; Maruca, A.; Rocca, R.; Ambrosio, F.A.; Berrino, E.; Carta, F.; Mesiti, F.; Salatino, A.; Trapasso, F.; Artese, A.; Alcaro, S.; Supuran, C.T. In Silico Identification and Biological Evaluation of Antioxidant Food Components Endowed with Human Carbonic Anhydrase IX and XII Inhibition. Antioxidants, 2020, 9, 775.

Scumaci, D.; Olivo, E.; Fiumara, C.V.; La Chimia, M.; De Angelis, M.T.; Mauro, S.; Costa, G.; Ambrosio, F.A.; Alcaro, S.; Agosti, V.; Costanzo, F.S.; Cuda, G. Dj-1 Proteoforms in Breast Cancer Cells: The Escape of Metabolic Epigenetic Misregulation. Cells, 2020, 9,1968.

Della Volpe, S.; Listro, R.; Parafioriti, M.; Di Giacomo, M.; Rossi, D.; Ambrosio, F.A.; Costa, G.; Alcaro, S.; Ortuso, F.; Hirsch, A.K.H.; Vasile, F.; Collina, S.BOPC1 enantiomers preparation and HuR interaction study. From molecular modeling to a curious DEEP-STD NMR application. ACS Medicinal Chemistry Letters, 2020,11(5): 883–888.

Lupia, A.; Moraca, F.; Bagetta, D.; Maruca, A.; Ambrosio, F.A.; Rocca, R.; Catalano, R.; Romeo, I.; Talarico, C.; Ortuso, F.; Artese, A.; Alcaro, S. Computer-based techniques for lead identification and optimization II: Advanced search methods. Physical Sciences reviews, 2020, 5(5), 20180114

Bagetta, D.; Maruca, A.; Lupia, A.; Mesiti, F.; Catalano, R.; Romeo, I.; Moraca, F.; Ambrosio, F.A.;Costa, G.; Artese, A.; Ortuso, F.; Alcaro, S.; Rocca, R. Mediterranean products as promising source of multi-target agents in the treatment of metabolic syndrome. European Journal of Medicinal Chemistry, 2020, 186, 111903.

Khoury, L.E.; Santos-Martins, D.; Sasmal, S.; Eberhardt, J.; Bianco, G.; Ambrosio, F.A.; Solis-Vasquez, L.; Koch, A.; Forli, S.; Mobley, D.L. Comparison of affinity ranking using AutoDock-GPU and MM-GBSA scores for BACE-1 inhibitors in the D3R Grand Challenge 4. J. Comput Aided Mol Des, 2019, 33(12), 1011-1020.

Santos-Martins, D.; Eberhardt, J.; Bianco, G.; Solis-Vasquez, L.; Ambrosio, F.A.; Koch, A.; Forli, S. D3R Grand Challenge 4: prospective pose prediction of BACE1 ligands with AutoDock-GPU. J Comput Aided Mol Des, 2019, 33(12), 1071–1081.

Esposito F.; Ambrosio F.A .; Maluddu R.; Costa G.; Rocca R.; Maccioni E.; Catalano R.; Romeo I.; Eleftheriou P.; Karia D.C.; Tsirides P.; Godvani N.; Pandya H.; Corona A.; Alcaro S.; Artese A.; Geronikaki A.; Tramontano E. Chromenone derivatives as a versatile scaffold with dual mode of inhibition of HIV-1 reverse transcriptase-associated Ribonuclease H function and integrate activity. European Journal of Medicinal Chemistry, 2019, 182, 111617.

Maruca A.; Catalano R.; Bagetta D.; Mesiti F.; Ambrosio F.A.; Romeo I.; Moraca F.; Rocca R.; Ortuso F.; Artese A.; Costa G.; Alcaro S.; Lupia A. The Mediterranean Diet as source of bioactive compounds with multi-targeting anti-cancer profile. European Journal of Medicinal Chemistry, 2019, 181, 111579.

Costa G.; Carta F.; Ambrosio F.A.; Artese A.; Ortuso F.; Moraca F.; Rocca R.; Romeo I.; Lupia A.; Maruca A.; Bagetta D.; Catalano R.; Vullo D.; Alcaro S.; Supuran C.T. A computer-assisted discovery of novel anti-obesity compounds as selective carbonic anhydrase VA inhibitors. European Journal of Medicinal Chemistry, 2019, 181, 111565.

Arcon J.P.; Modenutti C.P.; Avendano D.; Lopez E.D.; Defelipe L.A.; Ambrosio F.A.; Turjanski A.G.; Forli S.; Marti M.A. AutoDock Bias: improving binding mode prediction and virtual screening using known protein-ligand interactions. Bioinformatics, 2019, 35(19), 3836-3838.

Maruca A.; Ambrosio F.A.; Lupia A.; Romeo I.; Rocca R.; Moraca F.; Talarico C.; Bagetta D.; Catalano R.; Costa G.; Artese A.; Alcaro, S. Computer-based techniques for lead identification and optimization I: Basics. Physical Science Review, 2019, 4(6), 20180113

Della Volpe S.; Nasti R.; Queirolo M.; Unver M.Y.; Jumde V.K.; Domling A.; Vasile F.; Potenza D.; Ambrosio F.A.; Costa G.; Alcaro S.; Zucca C.; Provenzani A.; Di Giacomo M.; Rossi D.; Hirsch A.K.H.; Collina S. Novel Compounds Targeting the RNA-Binding Protein HuR. Structure- Based Design, Synthesis, and Interaction Studies. ACS Medicinal Chemistry Letters, 2019, 10(4), 615-620

Pouga L.; Santoro M.M.; Charpentier C.; Di Carlo D.; Romeo I.; Artese A.; Alcaro S.; Antinori A.; Wirden M.; Perno C.F.: Ambrosio F.A.; Calvez V.; Descamps D.; Marcelin A.G.; Ceccherini-Silberstein F.; Lambert-Niclot S. New Resistance Mutations to Nucleoside Reverse Transcriptase Inhibitors at Codon 184 of HIV-1 Reverse Transcriptase (M184L and M184T). Chemical Biology & Drug Design, 2019, 93(1), 50-59.

Costa G.; Rocca R.; Corona A.; Grandi N.; Moraca F.; Romeo I.; Talarico C.; Gagliardi M.G.; Ambrosio F.A.; Ortuso F.; Alcaro S.; Distinto S.; Maccioni E.; Tramontano E.; Artese A. Novel natural non-nucleoside inhibitors of HIV-1 reverse transcriptase identified by shape- and structure-based virtual screening techniques. European Journal of Medicinal Chemistry, 2019, 161, 1-10.

Vasile F.; Della Volpe S.; Ambrosio F.A.; Costa G.; Unver M.Y.; Zucal C.; Rossi D.; Martino E.; Provenzani A.; Hirsch A.K.H.; Alcaro S.; Potenza D.; Collina S. Exploration of ligand binding modes toward the identification of compounds targeting HuR: a combined STD-NMR and MolecularModelling approach. Scientific Reports, 2018, 8(1), 13780.

Malet I.; Ambrosio F.A.; Subra, F.; Herrmann, B.; Leh, H.; Bouger, M.C.; Artese, A.; Katlama, C.; Talarico, C.; Romeo, I.; Alcaro, S.; Costa, G.; Deprez, E.; Calvez, V.; Marcelin, A.G.; Delelis, O. Pathway involving the N155H mutation in HIV-1 integrase leads to dolutegravir resistance. Journal of Antimicrobial Chemotherapy, 2018, 73(5),1158-1166

CONFERENCES AND SEMINARS

Autumn Meeting for Young Chemists in Biomedical Sciences - AMYC-BIOMED 2022, October 17-19 2022, Naples, Italy

Virtual Screening studies for the discovery of new proteasome inhibitors

18th Hellenic Symposium on Medicinal Chemistry, 25-27 February 2021, online symposium.

Identification of natural antioxidants endowed with human carbonic anhydrase IX and XII inhibition.

Italian young medinal chemistry virtual meeting, 22-24 July 2020.

Preparation and HuR interaction studies of BOPC1 enantiomers combining deep-STD NMR and molecular modeling analysis

Carbonic anhydrases 2019 - the IV satellite meeting, 14- 17 November 2019, Parma, Italy.

In-silico approaches for anticancer multi-target drug discovery.

Paul Ehrlich Euro-PhD Network & Mutalig Cost Action Meeting 2019, 13th 15th June 2019, Catanzaro, Italy.

Compounds targeting the RNA-binding protein HuR. Structure-based design, synthesis and interaction studies

Mutalig cost action, 3rd WG-Meeting 2019. 23-24 February 2019, Paris, France

Exploration of ligand binding modes towards the identification of compounds targeting HuR: a combined STD-NMR and molecular modelling approach.

2nd WG Meeting – status of WG activities of the Mutalig Cost action. 15-16 March 2018, Tenerife, Spain

In silico approaches for antiviral multi-target drugs discovery.

International workshop CAT-ICBCS 2017 catalysis with ions, complexes, biological systems, clusters and surfaces. 3-4 November 2017, Cosenza, Italy

Dynophores: a molecular dynamics pharmacophore approach to identify telomerase ten domain promising binders.

International workshop CAT-ICBCS 2017 catalysis with ions, complexes, biological systems, clusters and surfaces. 3-4 November 2017, Cosenza, Italy

In silico identification of chikungunya virus nsp2 protease inhibitors from natural sources.

Epichembio (cm1406) and Mutalig cost (ca15135) actions joint meeting university of porto. 22-24 September 2017, Porto, Portugal

Cabotegravir, a new integrase inhibitor: drug stability evaluation

11th EWDD European workshop in drug design & Mu.Ta.Lig training school (XI EWDD). 21-26 May 2017, Siena, Italy

Analysis of new allosteric pockets on the HIV-1 integrase and hit identification of novel selective ligands by virtual screening techniques.

3rd innovative approaches for novel antiviral agents summer school. September 28th-October 3rd 2016, Pula, CA, Italy.

In silico identification of new natural ligands as potential HIV-1 integrase agents.

HONOURS AND AWARDS

12/2022
Premio Bernardino Telesio 2021 – Congresso Congiunto Sicilia - Calabria

10/2022
Best Poster Presentation – Autumn Meeting for Young Chemists in Biomedical Sciences (AMYC - BIOMED) 2022

26/07/2021
PhD Award of excellence - Paul Ehrlich Award

28/07/2021
Runner-Up best oral Communication

ORAL COMMUNICATION

Targeting HuD with Natural Compounds - Invited Speaker

NANOINNOVATION 2021, 21-24 September 2021, Rome.

Molecular modeling studies on antiviral targets: drug resistance mechanisms and rational drug design

MedChem 2021 - PaulErlich Virtual Meeting, July 26th-28th, 2021.

A computer-assisted discovery of novel potential anti-obesity compounds as selective carbonic anhydrase va inhibitors.

VI Congresso della Divisione di ChimicaTeorica e Computazionale della Società Chimica Italiana. 19-20 September 2019, Università della Calabria, Cosenza, Italy.

Induced fit docking protocol applied to the in silico evaluation of antiviral hiv-1 integrase resistance

2nd WG meeting – Status of WG actvities of the MuTaLig COST Action. 15- 16 March 2018, Instituto Universitario de Bio-Orgánica “Antonio González”, Universidad de La Laguna, Tenerife-Spain.

Pathway involving the n155h mutation in hiv-1 integrase leads to dolutegravir resistance.

7th meeting of the Paul Ehrlich MedChem Euro-PhD Network. 25-27, August 2017 Vienna, University of Technology, Vienna-Austria