



I the undersigned asks to participate in the public selection, for qualifications and examinations, for the awarding of a type B fellowship at **Dipartimento di Scienze Farmaceutiche**

Scientist- in - charge: **Prof. Pedretti Alessandro**

Alessandra Riccio

CURRICULUM VITAE

PERSONAL INFORMATION

Surname	Riccio
Name	Alessandra

PRESENT OCCUPATION

Appointment	Structure
Unemployed	

EDUCATION AND TRAINING

Degree	Course of studies	University	year of achievement of the degree
Degree	Pharmaceutical Biotechnology	University Perugia	of April 2019
Specialization			
PhD	PhD in Pharmaceutical Sciences - Medicinal Chemistry and Pharmacoinformatics	University Perugia	of April 2023
Master			
Degree of medical specialization			
Degree of European specialization			
Other			



REGISTRATION IN PROFESSIONAL ASSOCIATIONS

Date registration	of	Association	City

FOREIGN LANGUAGES

Languages	level of knowledge
English	B2

AWARDS, ACKNOWLEDGEMENTS, SCHOLARSHIPS

Year	Description of award
2018	Prize for the best poster at the Merck and Elsevier Young Chemist Symposium (MEYSC)
2018	Invited as speaker by "Azienda Sanitaria Locale Regione Lazio" as part of the "Regional Prevention Plan (PRP) 2014-2019: Antibiotic Resistance and food safety. Veterinary drug management and control "
2019	Selection for short oral communication at Merck Young Chemists' Symposium (MYCS)
2020	Selection for oral communication at Winter school on Biotechnology
2020	Selection for oral communication at EUROPIN Summer school on Drug Design
2022	Selection for oral flash communication at XVII EFMC International Symposium on Medicinal Chemistry

TRAINING OR RESEARCH ACTIVITY

<p>My research activity primarily focused on the application of Computer-Aided Drug Design (CADD) methods to develop, identify, and optimize novel chemical modulators, including small molecules and peptidomimetics, targeting pharmacologically relevant proteins. This endeavor harnessed advanced computational techniques such as molecular docking, molecular dynamics simulations, virtual screening, and MM-GBSA (Molecular Mechanics with Generalized Born and Surface Area solvation) calculations. The overarching goal was to enhance the efficacy and selectivity of bioactive compounds. A particular emphasis was placed on exploring protein-protein interactions (PPIs). Each in-silico pipeline developed was rigorously validated, and corroborated by comprehensive biophysical and biological assays, underscoring its significance in the realms of drug discovery and development.</p>
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PROJECT ACTIVITY

Year	Project
2019	Computational studies for the development of chemical modulators against immune checkpoint targets, PhD project
2019	Participant in PRIN project titled "POLYMEDES: Sculpturing prenylated POLYphenols from MEditerranean plants by innovative integrated strategies to prevent age-related Diseases
2020	Participant in PROTECT project titled "Selection of Mpro inhibitors of SARS-CoV-



2 to find antiviral drugs against COVID-19”

PATENTS

Patent

CONGRESSES AND SEMINARS

Date	Title	Place
2022	How A Tumor Microenvironment Limitation Could Be Turned Into An Advantage	Nice, France, XXVII EFMC-ISMC
2022	Peptidomimetics inhibitors of protein-protein interactions as pioneering drugs in cancer immunotherapy	Urbino, 41st European School of Medicinal Chemistry
2021	Molecular Basis Of P85-P110 Interaction In Phosphatidylinositol 3-Kinase Disease-Relevant Variants	CDDD 7th Virtual Meeting
2021	Second Harmonic Generation Analysis Unveils Specific Ido1 Conformations Associated To Different Immunogenic Profiles Of Navoximod And Epacadostat	2nd NovAliX Virtual Conference
2021	How pH Could Affect The Interaction Strength During Pd-L1 Inhibitors Recognizing	XVI EFMC International Symposium on Medicinal Chemistry (EFMC-ISMC 2021) Virtual Meeting
2020	Unlocking structural aspects of ligand binding interactions for immune checkpoint targets	Perugia, Winter School on Biotechnology
2020	Computational and Biophysical studies for the development of chemical modulators against immune checkpoint targets	EUROPIN retreat, Virtual Event
2020	Molecular Recognition Properties of IDO1 Crystal Structures: Computational and Biophysical Studies	Italian-Young Medicinal Chemistry Virtual Meeting (I-YMCVMeet)
2020	In silico and biophysical approaches to shed light on molecular recognition of pd-1/pd-l1 inhibitors	EFMC-ISMC & EFMC-YMCS Virtual Meeting
2019	Insights into molecular recognition of PD-1/PD-L1 inhibitors combining in silico and biophysical methods	Rimini, Merck Young Chemists' Symposium (MYCS)
2019	Combining computational and biophysical methods to study PD-1/PD-L1 inhibitors	Rome, 6th Computationally Driven Drug Discovery (CDDD) Meeting
2018	Drug: mechanisms of action, antibiotic resistance	Palazzo Iacobucci Frosinone, Regional Prevention Plan (PRP) 2014-2019



2018	Insights into Molecular Recognition of PD-1/PD-L1 inhibitors	Rimini, Merck & Elsevier Young Chemists Symposium (MEYCS)
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PUBLICATIONS

Books
[title, place, publishing house, year ...]
[title, place, publishing house, year ...]
[title, place, publishing house, year ...]

Articles in reviews
“New Insights from Crystallographic Data: Diversity of Structural Motifs and Molecular Recognition Properties between Groups of IDO1 Structures,” ChemMedChem, Wiley-VCH, 2020, 15, 891-899, Mammoli A., Coletti A., Ballarotto M., <u>Riccio A.</u> , Carotti A., Grohmann U., Camaioni E., Macchiarulo A.
“Phenolic Acids from Lycium barbarum Leaves: In Vitro and In Silico Studies of the Inhibitory Activity against Porcine Pancreatic α -Amylase,” Process, MDPI, 2020, 8(11), 1388, Pollini L., <u>Riccio A.</u> , Juan C., Tringaniello C., Ianni F., Blasi F., Mañes J., Macchiarulo A., Cossignani L.
“The Stone Guest: How Does pH Affect Binding Properties of PD-1/PD-L1 Inhibitors?” ChemMedChem, Wiley-VCH, 2021, 16, 568-577, <u>Riccio A.</u> , Coletti A., Dolciami D., Mammoli A., Cerra B., Moretti S., Gioiello A., Ferlin S., Puxeddu E., Macchiarulo A.
“One Key and Multiple Locks: Substrate Binding in Structures of Tryptophan Dioxygenases and Hydroxylases,” ChemMedChem, Wiley-VCH, 2021 Sep 16;16(18):2732-2743, Mammoli A., <u>Riccio A.</u> , Bianconi E., Coletti A., Camaioni E., Macchiarulo A.
“Critical Assessment of a Structure-Based Screening Campaign for IDO1 Inhibitors: Tips and Pitfalls,” Int J Mol Sci, MDPI, 2022 Apr 2;23(7):3981, Mammoli A., Bianconi E., Ruta L., <u>Riccio A.</u> , Bigiotti C., Souma M., Carotti A., Rossini S., Suvieri C., Pallotta MT., Grohmann U., Camaioni E., Macchiarulo A.
“Turning a Tumor Microenvironment Pitfall into Opportunity: Discovery of Benzamidoxime as PD-L1 Ligand with pH-Dependent Potency,” Int J Mol Sci, MDPI, 2023 Mar 14;24(6):5535, Bianconi E., <u>Riccio A.</u> , Ruta L., Bigiotti C., Carotti A., Moretti S., Cerra B., Gioiello A., Ferlin S., Puxeddu E., Macchiarulo A.

Congress proceedings
“Insights into Molecular Recognition of PD-1/PD-L1 inhibitors”, in “Proceedings of the Merck & Elsevier Young Chemists Symposium (MEYCS 2018), Rimini, 2018
“Insights into molecular recognition of PD-1/PD-L1 inhibitors combining in silico and biophysical methods”, Merck Young Chemists' Symposium (MYCS), Rimini, 2019
“Peptidomimetics Inhibitors of Protein-Protein Interactions as Pioneering Drugs In Cancer Immunotherapy, European School of Medicinal Chemistry” (41st Advanced Course of Medicinal Chemistry and “E. Duranti” Seminar for PhD Students), Urbino, 2022
“In Silico And Biophysical Approaches To Shed Light On Molecular Recognition Of Pd-1/Pd-L1 Inhibitors”, EFMC-ISMC & EFMC-YMCS, Virtual Poster Session, 2020
“How pH Could Affect The Interaction Strength During Pd-L1 Inhibitors Recognizing”, XXVI EFMC-ISMC Virtual Event, 2021
“Beyond Conventional Anti-Cancer Agents In Immunotherapy: How A Tumor Microenvironment Limitation Could Be Turned Into An Advantage”, XXVII EFMC-ISMC, Nice, 2022



OTHER INFORMATION

Declarations given in the present curriculum must be considered released according to art. 46 and 47 of DPR n. 445/2000.

The present curriculum does not contain confidential and legal information according to art. 4, paragraph 1, points d) and e) of D.Lgs. 30.06.2003 n. 196.

Please note that CV WILL BE PUBLISHED on the University website and It is recommended that personal and sensitive data should not be included. This template is realized to satisfy the need of publication without personal and sensitive data.

Please DO NOT SIGN this form.

Place and date: Perugia, 05/10/2023