Emanuele Scalone

Bergamo, Italy

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Scientific Experience

PhD Student, Università degli Studi di Milano , Italy
Expected graduation: Spring 2022

Oct 2019 - present

- Developed multi-eGO, a new structure-based model.
- Learned basics of coding in Python and Bash
- Performed simulations using PRACE supercomputers.
- Supervised 2 master's degree students.
- Presented at leading international conferences such as Gordon Research Conference of Computational Chemistry.

Visiting PhD Student, Vendruscolo Lab, University of Cambridge , United Kingdom

Mar 2022 - May 2022

- Developed an additional functionality of multi-eGO for drug discovery using data produced at Cambridge University.

Scholarship Holder, Italian National Research Council (CNR-IBF) , Italy

Oct 2018 - Sep 2019

- Expressed, purified and crystallized proteins involved in amyloidosis and cancer.
- Performed co-crystallization assays with small molecules and fragment-based crystallization.
- Biochemically characterized by actin assays.
- Analyzed in-silico and experimentally novel pharmacological chaperones.

Stage, Foundation Istituto Insubrico di Ricerca per la Vita , Italy

Apr 2015

- Tested on Hsp90 cells synthetic or extracted heterocyclic molecules prepared at University of Pavia laboratories.

Abroad Experience, Carl von Ossietzky University of Oldenburg , Germany

Feb 2012

- Performed the organic synthesis of different compounds.
- Purified and crystallized chemical compounds.
- Characterized using TLC, NMR, IR and melting point.

Education

PhD, Università degli Studi di Milano , Italy

Oct 2019 - present

Involved in the development of a force field aimed at simulating the process of protein aggregation. The project was published in PNAS: https://doi.org/10.1073/pnas.2203181119

Master's degree, Molecular Biotechnology and Bioinformatics, Università degli Studi di Milano, Italy

Oct 2016 - Oct 2018

Grade: 110/110 cum laude

The master's degree thesis was based on a first in-silico drug design by using Autodock4 suite. Chemical synthesis of the best predicted molecules. In-vitro characterization of the protein-ligand interaction. Studies of the activity in cell-based assays by using eucaryotic cells (Neuro2A). Work Published on Nature Communication: https://doi.org/10.1038/s41467-020-17524-7

Bachelor's Degree, Biotechnology, Univesità degli Studi di Pavia , Italy

Sep 2012 - Apr 2016

Grade 101/110

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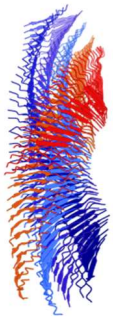

Skills and Interests

Languages	English, B2 Italian, native
Technologies	Python, Bash, git, numpy, pandas, GROMACS, UCSF Chimera, PyMol, VMD, Maestro, Office 365, Blender
Skills	Team work, problem solving, empathy
Interests	Gaming, Fantasy, Sci-Fi, Hiking, Cycling, Cooking, Design, 3D Rendering

List of publications :

1. Scalone, E., Broggini, L., Visentin, C., Erba, D., Bacic Toplek, F., Peqini, K., Pellegrino, S., Ricagno, S., Paissoni, C., & Camilloni, C. (2022). Multi-eGO: An in silico lens to look into protein aggregation kinetics at atomic resolution. *Proceedings of the National Academy of Sciences*, *119*(26). https://doi.org/10.1073/PNAS.2203181119
2. Rossi, E., Leccese, G., Baldelli, V., Bibi, A., Scalone, E., Camilloni, C., Paroni, M., & Landini, P. (2022). Inactivation of the Pyrimidine Biosynthesis pyrD Gene Negatively Affects Biofilm Formation and Virulence Determinants in the Crohn's Disease-Associated Adherent Invasive Escherichia coli LF82 Strain. *Microorganisms*, *10*(3). https://doi.org/10.3390/microorganisms10030537
3. Muzio, L., Sirtori, R., Gornati, D., Eleuteri, S., Fossaghi, A., Brancaccio, D., Manzoni, L., Ottoboni, L., Feo, L. de, Quattrini, A., Mastrangelo, E., Sorrentino, L., Scalone, E., Comi, G., Marinelli, L., Riva, N., Milani, M., Seneci, P., & Martino, G. (2020). Retromer stabilization results in neuroprotection in a model of Amyotrophic Lateral Sclerosis. *Nature Communications*, *11*(1), 3848. https://doi.org/10.1038/s41467-020-17524-7
4. de Rosa, M., Barbiroli, A., Bonì, F., Scalone, E., Mattioni, D., Vanoni, M. A., Patrone, M., Bollati, M., Mastrangelo, E., Giorgino, T., & Milani, M. (2019). The structure of N184K amyloidogenic variant of gelsolin highlights the role of the H-bond network for protein stability and aggregation properties. *European Biophysics Journal*. https://doi.org/10.1007/s00249-019-01409-9
5. Bollati, M., Scalone, E., Bonì, F., Mastrangelo, E., Giorgino, T., Milani, M., & de Rosa, M. (2019). High-resolution crystal structure of gelsolin domain 2 in complex with the physiological calcium ion. *Biochemical and Biophysical Research Communications*, *518*(1), 94–99. https://doi.org/10.1016/j.bbrc.2019.08.013